

8 November 1996

HIGHLIGHTS

- Global oil demand has been increased by 0.1 mb/d to 73.8 mb/d in 4Q96 but is unchanged at 74.7 mb/d in 1Q97. Demand for 1997 has been revised upwards by 0.1 mb/d to 73.7 mb/d, equivalent to a growth of 1.9 mb/d or 2.6% versus an unchanged 1996 demand of 71.8 mb/d.
- Part of the supply growth that had been anticipated for September shifted into October as maintenance activities and technical difficulties inhibited September production. Only slightly more than half of the 0.8 mb/d increase in non-OPEC supply that had been anticipated in September occurred, resulting in a September total world supply of 72.0 mb/d. October supply is estimated to have reached 72.9 mb/d, with non-OPEC accounting for 44.2 mb/d of the total. Increases in the North Sea, where several new fields have started up over the last two months, in offshore China and in Latin America were thought to be the largest contributors to the gain.
- In October, OPEC production exceeded 26 mb/d for the first time since 1980 due to higher production by the non-Gulf OPEC countries. Indonesian and Nigerian production increased by 70 kb/d and 50 kb/d respectively to lead a net 95 kb/d gain. OPEC NGL production was 25 kb/d lower due to maintenance at the Nigerian Oso condensate facility.
- There is some evidence that the period of downward revisions in non-OPEC supply estimates may be coming to an end. New field start-ups in the North Sea, Brazil, the Gulf of Mexico and elsewhere are beginning to offer more positive than negative surprises and technical difficulties in the UK Forties system, offshore Australia and in Alaska may have now been fully factored into the forecasts.
- The call on OPEC crude plus stock change for winter 1996/97 is little changed, with a 0.1 mb/d increase to 26.0 mb/d in 4Q96 more than offset by a 0.2 mb/d reduction to 26.5 mb/d in 1Q97.
- The OECD industry stockbuild in September is provisionally assessed at 0.1 mb/d. As a result of this low stockbuild, coupled with a significant downward revision in the preliminary estimate of stocks at the end of August, the 3Q96 stockbuild is estimated at only 0.4 mb/d. The stock shortfall at the end of September versus a year earlier was 91 mb, 49 mb of which was distillates, with European and North American distillate stocks lower by 14% and 10% respectively. Due to the historically high stockdraw of 1.2 mb/d in 4Q95 and an anticipated sharp increase in non-OPEC supply in 4Q96, the shortfall of total OECD stocks is anticipated to decrease appreciably by the end of the year.
- Crude oil prices continued to rise significantly during the first three weeks of October to new post-Gulf War highs, mainly supported by strong gasoil markets in the Atlantic Basin and political developments in Russia and northern Iraq. However, market sentiment changed when eroding gasoil prices combined with signs of abating supply tightness in North Sea crude markets and easing tensions between Kurdish factions, causing crude prices to decrease sharply in the last ten days of October.
- The extraordinary increase in Atlantic Basin gasoil prices (which was linked to the low distillate stock levels) came to an end in the second week of October and prices began to decline when high production rates led to rising supplies in key markets. In the second half of the month, gasoline prices briefly gained contraseasonal support from refinery problems in the US and Venezuela, and strong demand from the UK.
- Refinery margins were volatile during October in all major refining centres due to the steep changes in relative crude and product prices. Average refinery margins increased in the US, Singapore and Northwest Europe while remaining unchanged in the Mediterranean. However, hydroskimming margins decreased in Singapore.
- In September, the aggregate refinery throughputs in OECD countries remained unchanged at 33.3 mb/d. Increases in Europe, North America and Australasia were offset by a decrease in Japan. Preliminary indications for October suggest that throughputs were lower in Japan and, to a lesser extent, in Europe and the US. In November, refinery maintenance is expected to be concentrated in the Arabian Gulf and Asia, and to remain low in the US and Europe.

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PROSPECTS FOR DISTILLATES IN THE ATLANTIC BASIN

It seems clear that the strong rise in oil prices in the Atlantic Basin in September and early October was primarily driven by distillates, with the gas oil/Brent price differential reaching \$9.75/bbl in early October, more than double the level in mid-August. The discussion below briefly analyses some of the main reasons for this rise and subsequent fall, and discusses the prospects for the coming winter.

Factors Contributing to the Recent Strength of Distillate Prices

Oil prices in general have been supported by perceptions of a tighter global oil balance in 4Q96 than had been previously assumed due to the indefinite deferral of limited Iraqi exports in September and delays in the build-up of non-OPEC oil production. Over the past two months, market psychology has been affected to a varying extent by political events in northern Iraq, the West Bank and Russia. That distillate prices rose so much more strongly than those of crudes is primarily due to the historically low level of distillate stocks. At the end of September, as discussed in the OECD stocks section on page 31, European distillate stocks were 14% lower than the relatively high level reached a year earlier and North American stocks were 10% lower. Although these low stocks are related to the so-called "just-in-time" inventory policy, the magnitude of the distillate/crude price spread suggests that distillate stocks were lower than the market perceived to be adequate. (As discussed in the section on price seasonality below, the origins of the current low stocks can be traced back for at least a year). European Union stock levels were also affected by the changeover to 0.05% sulphur diesel fuel on 1 October that required the running down of all 0.2% sulphur diesel stocks throughout the supply chain. In addition, distillate prices were supported by futures buying and, in early October, market psychology was affected by political reactions to the low level of heating oil stocks on the US East Coast.

Reasons for the Declines in October

The high price differentials between gasoil and both crude oil and other products provided a substantial incentive for refiners to maximise distillate yields at the expense of other products, while high European prices encouraged gasoil imports and decreased heating oil demand. The resultant easing of the distillate supply tightness led to lower prices and, at the end of the month, reduced tension in northern Iraq reduced oil prices further. Distillate developments in September and October are strongly reminiscent of gasoline developments in March/April when low stocks stimulated sharply higher prices, a similar supply/demand response and a similar price decline. In both cases, the price rise and subsequent decline were reinforced by developments on the futures market.

Prospects for the Coming Winter

Future distillate price developments are clearly most uncertain but it may be useful to summarise the main factors which could lead prices to rebound or fall further.

Looking first at the factors which might lead to a rebound in prices, the main ones are the possibility of higher-than-expected demand due to colder-than-normal weather, and physical supply disruptions. Unscheduled refinery outages could, as seen recently, lead to temporary surges in prices as suppliers that lack a sufficient safety margin on stocks scramble to cover demand. However, in considering the possibility of refinery capacity limitations, it should be noted that not only is the amount of refinery capacity that is being taken out of service for maintenance less than normal this quarter but also the amount of available capacity is probably understated as a result of "capacity creep." (The latter is the slow increase in refinery capacity, due to improvements in operations and minor investments, that tend not to be captured in refinery capacity reporting.) Of more concern could be the sparing of refinery capacity should refining margins decrease and a high level of backwardation discourage stockbuilding. Political uncertainty in producing countries could also continue to lead to temporary price spikes, while any action by consumer governments to increase distillate stocks would clearly be equivalent to a short-term increase in demand and hence put upward pressure on prices.

Turning to factors which could lead to lower prices, milder-than-normal weather could result in lower demand. Any move towards a surplus of crude oil could clearly depress oil prices in general, including gasoil prices. On the supply side, there has been a surge of crude arrivals in the Atlantic Basin. Non-OPEC crude supplies have been increasing rapidly (see graph on page 19) and this trend is expected to accelerate as discussed in the Supply section. There is clearly uncertainty about what may be agreed at this month's OPEC meeting. Finally, the sale of additional volumes of crude from the US Strategic Petroleum Reserve (SPR) is proceeding. On the demand side, while the requirement for crude oil has been high due to the distillate situation, it can be expected to weaken in the second half of the quarter in preparation for the US refinery maintenance period in 1Q97.

Prospects for Future Price Seasonality

It is of interest to question whether the increased seasonality of first gasoline and then gasoil prices that have been seen this year is likely to continue. In last month's Report the seasonality of demand was discussed. Basically, this seasonality of demand for oil products is met through a combination of seasonal adjustments to refinery output, net trade and stock levels. As illustrated below, differences in the individual product's shares of total demand and their relative seasonalities explain the differences among the regions in the seasonality of refinery throughput and the extent to which stocks change seasonally.

There are clearly substantial annual variations in product demand seasonality and how it is met each year. However, for illustrative purposes the following table shows how the seasonal change or swing in oil product deliveries between winter and summer has, *on average*, been met by changes in refinery output, net imports and stock changes in North America, Europe and Japan. Demand in the eight winters from 4Q87/1Q88 to 4Q94/1Q95 has been aggregated and compared with demand in the corresponding summer quarters. In addition, the swing in refinery throughput is shown to illustrate the extent to which increased production is the result of increased crude runs rather than a change in refinery yield.

How Seasonal Variations in Deliveries Have Been Met[†]

	North America *		Europe		Japan	
Crude Refinery Throughputs						
Swing (%)	-3.7		2.8		17.9	
Swing (kb/d)	-526		314		600	
Motor Gasoline						
Swing (%)	-4.6		-6.5		-2.7	
Swing (kb/d)	-373		-195		-21	
Met by:	%	kb/d	%	kb/d	%	kb/d
Refinery Output	35.0	-130	44.0	-86	-13.5	3
Net Imports	32.0	-119	-20.4	40	66.2	-14
Stock Change	24.2	-90	60.7	-118	-5.9	1
Statistical Difference	8.8	-33	15.6	-30	53.3	-11
Jet/Kerosene						
Swing (%)	6.4		-6.8		113.9	
Swing (kb/d)	97		-50		463	
Met by:	%	kb/d	%	kb/d	%	kb/d
Refinery Output	60.3	58	70.2	-35	39.7	184
Net Imports	-29.2	-28	15.0	-8	5.5	25
Stock Change	59.9	58	5.2	-3	51.7	240
Statistical Difference	8.9	9	9.7	-5	3.1	14
Gasoil						
Swing (%)	14.6		14.0		17.2	
Swing (kb/d)	466		597		176	
Met by:	%	kb/d	%	kb/d	%	kb/d
Refinery Output	29.8	139	38.4	229	89.9	158
Net Imports	-9.1	-43	3.7	22	-14.3	-25
Stock Change	76.9	358	58.6	350	23.3	41
Statistical Difference	2.5	12	-0.7	-4	1.1	2
Residual Fuel Oil						
Swing (%)	12.8		14.8		9.7	
Swing (kb/d)	167		300		80	
Met by:	%	kb/d	%	kb/d	%	kb/d
Refinery Output	43.9	73	51.6	155	160.4	128
Net Imports	24.6	41	11.2	34	-66.9	-53
Stock Change	51.5	86	49.9	150	5.3	4
Statistical Difference	-20.0	-33	-12.8	-38	1.2	1

* Excludes US Territories

† Data are aggregated winter demand compared with aggregated summer demand over the 1987-95 period.

Swing represents (winter demand/demand next summer) -1* 100 (thus a negative figure means that demand etc. is higher in the summer than in the winter).

Japan has the largest seasonal variation in demand, with total winter demand being significantly higher than that in the summer and the critical product being the highly seasonal kerosene. To assist in meeting this seasonality, the seasonality of crude throughput has been much higher than in North America or Europe. To further increase the seasonality of kerosene production, the yield of jet/kerosene has been varied significantly between summer and winter months. In spite of the combined effect of changes in refinery throughput and yields, the seasonality of kerosene production has met only about 40% of the seasonality of demand and, as shown in the table, over half the seasonality has been met by seasonal stock changes. The seasonality of fuel oil demand is significantly less than that of jet/kerosene and the seasonality of fuel oil production actually exceeded that of demand, leading to *lower* net Japanese imports in the winter than the summer.

In Europe, the dominant seasonal products are gasoil and fuel oil. It can be seen in the table that increasing yields of gasoil in the winter at the expense of jet/kerosene and gasoline (the demand for both of which peaks in the summer) has resulted in the seasonality of the gasoil yield being quite high in relation to the very limited seasonality of refinery throughputs. Nonetheless, almost 60% of the gasoil seasonality has been met by seasonal stock changes. It will be noted that, despite refinery throughput being higher in the winter and the ability to use less butane in gasoline in the summer (due to more restrictive RVP specifications), gasoline production is higher in the summer than the winter. This was achieved by raising gasoline yields at the expense of gasoil in primary distillation and conversion operations and the use of by using spare naphtha reforming capacity preferentially in the summer. As a result of this and a seasonal stockbuild in winter, European gasoline exports on average have been somewhat higher in the summer than the winter.

While the dominant products from a seasonality standpoint in Japan and Europe are those for which demand peaks in the winter, the reverse is true in North America. Gasoline (which represents 43% of total demand compared to 21% in Europe and 15% in Japan) is the dominant product from a refining standpoint and, consistent with this, average North American refinery throughputs have been higher in the summer rather than the winter. However, despite the increase in the production of gasoline components at the expense of distillate in the summer, lower use of butane and oxygenates has contributed to gasoline yields on average being *lower* in the summer than the winter, dampening the effect of higher refinery throughput. As a result, higher refinery production has met only about a third of the seasonality of gasoline demand, with substantial contributions being made by seasonality of imports and stock levels. Although North American crude runs have been lower in the winter, gasoil production has been higher, reflecting the flexibility to increase gasoil yields in the winter at the expense of other products. Nonetheless, the seasonal increase is less than in Europe (where crude runs are higher in the winter) and about three-quarters of the seasonality of gasoil demand has been met by the seasonality of stocks.

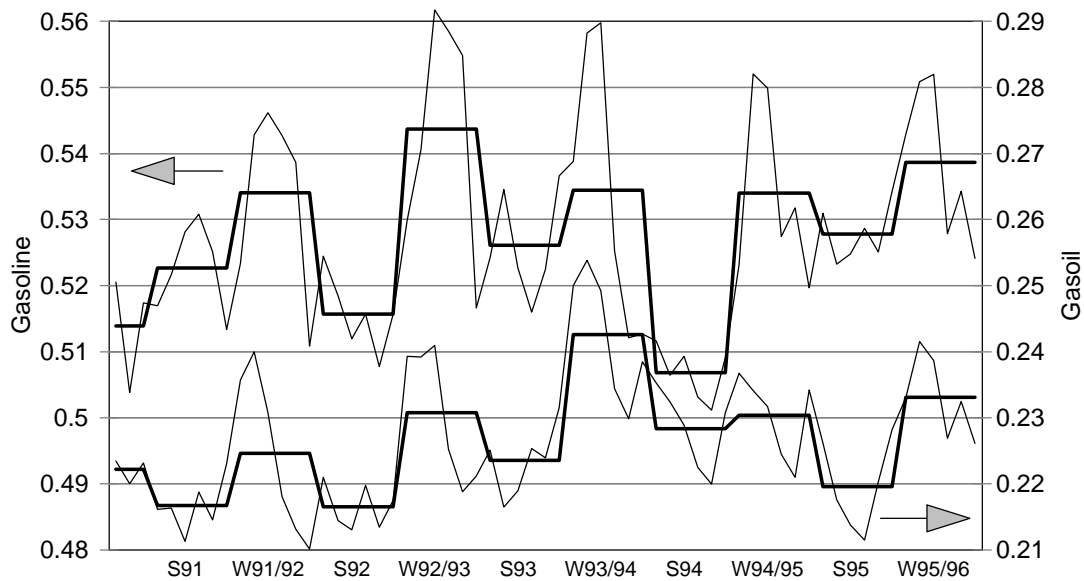
The seasonality of refinery throughputs discussed above has, of course, largely been achieved by the timing of maintenance turnarounds. For example, in Japan the majority of turnarounds have taken place in May/June while in the US they have tended to be in February/March and October.

In conclusion, it should be stressed that this analysis is based on averages over an eight-year period and as such is not representative of any individual year. More importantly, we may see very different patterns in future if the trend towards holding lower inventories continues. For example this year, the seasonal builds in gasoline stocks in North America and gasoil stocks in Europe have been lower than in previous years, leading to changes in the seasonality of cargo market prices. It is instructive to consider what the alternatives are if the extent of seasonal storage is reduced. Since total demand is higher in the winter than in the summer, less seasonality of stocks could result in increased seasonality of refinery throughput. This would only transfer some of the seasonality of product stocks to increased seasonality of crude oil stocks (unless OPEC countries were to return to seasonal production). However, to the extent that refinery flexibility permits the seasonality of yields to be increased, raising gasoline production at the expense of distillate in the summer and vice versa in the winter, it is possible to reduce both seasonal stocks of distillate and seasonal stocks of gasoline without affecting the seasonality of crude stocks or production.

The graph below shows the seasonality of US refinery production of gasoil and gasoline, and demonstrates this process working in practice. Comparisons between successive winters or summers and complicated due to changes in refinery conversion capacity, the amount of feedstocks used in place of crude, the level of oxygenates used in gasoline blending etc. However, it will be seen that in the cold winters, W93/94 and W95/96, the yield of gasoil was increased in response to higher demand, leading in W93/94 to gasoline yields being lower than in the previous winter. In S95, growing US gasoline demand resulted

in gasoline yields being only slightly lower than in W94/95, lowering yields of gasoil and hence increasing the need to raise gasoil yields in W95/96 to compensate for lower stocks at the beginning of the winter as well as the higher demand. This contributed to a lower gasoline stockbuild during W95/96 which, in turn, contributed to a need to increase gasoline yields this summer and hence to the lower Atlantic Basin gasoil stockbuild. The low Atlantic Basin stocks led to exceptionally high gasoil/gasoline price differentials at the beginning of October and have resulted in a combination of higher refinery yields and throughputs to compensate for the reduced potential to draw stocks. It is price *differentials* that drive the swings in refinery operations and the discussion above suggests that, if product stocks continue to be at low levels in future, there may be not only higher price volatility but also increased seasonality of product prices.

The Seasonality of US Gasoline and Gasoil Production (%Vol on Crude)

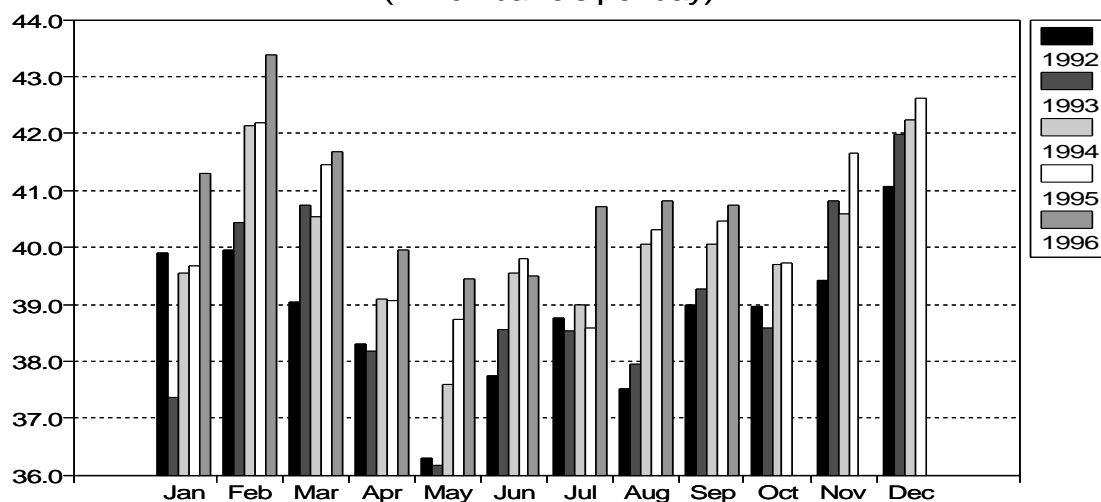


DEMAND

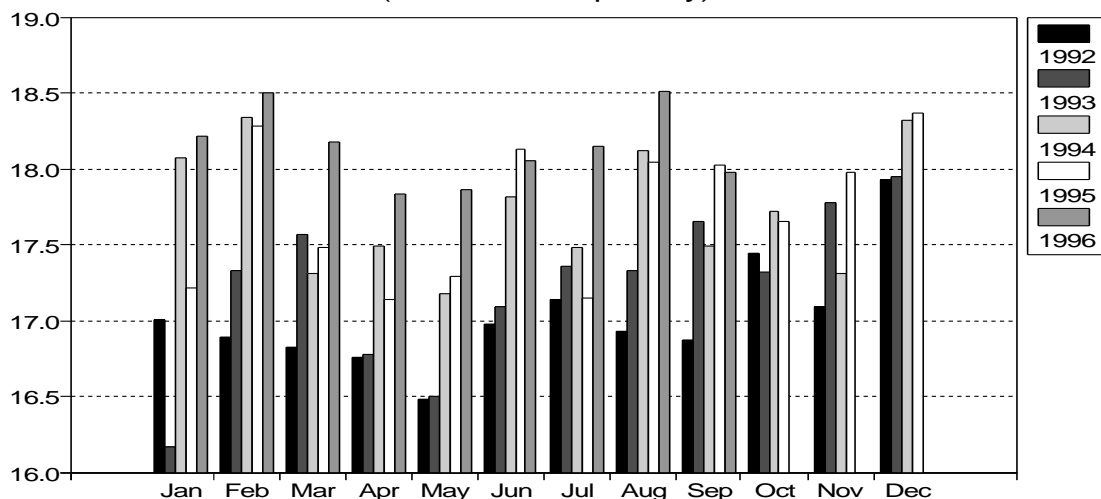
Summary

- In September, US oil demand declined by 0.3% from a year earlier, with increases in diesel and jet/kerosene deliveries insufficient to offset declines for all other major products. In Europe, oil use in the four largest oil-consuming countries increased by 2.7%, with particularly strong heating oil demand growth somewhat dampened by reductions in gasoline and residual fuel oil deliveries. In Japan, oil demand declined by 1.0%, marked by a large decrease in residual fuel oil deliveries that more than offset increases in gasoline, LPG and jet/kerosene deliveries.
- OECD demand in 3Q96 has been revised upwards by 0.1 mb/d from last month's Report to 40.8 mb/d, with upward revisions to North American and European demand of 0.10 mb/d and 0.08 mb/d respectively partly offset by a 0.10 mb/d downward revision to Pacific demand. OECD demand in 4Q96 is projected to increase by 0.6 mb/d or 1.5% to 42.0 mb/d, a 0.1 mb/d upward adjustment from last month's Report, primarily due preliminary estimates of greater-than-expected demand in the US in October. The projection remains sensitive to revision, given remaining uncertainties about the weather in the remainder of the quarter and secondary/tertiary stockbuilding, particularly in Europe.
- OECD demand in 1996 is projected to increase by 0.8 mb/d or 1.9% to 41.1 mb/d, essentially unchanged from last month's Report. Pacific demand in 1996 has been revised downwards by 0.1 mb/d to 6.7 mb/d, primarily due to adjustments to Japanese demand in 3Q96 and indications of lower economic growth. OECD demand in 1997 is forecast to increase by 0.6 mb/d or 1.5% to 41.7 mb/d, unchanged from last month's Report.
- Non-OECD oil demand in 1996 is expected to increase by 0.9 mb/d or 3.1% to 30.7 mb/d, unchanged from last month's Report. In 3Q96, FSU apparent demand has been revised downwards slightly due to the combination of higher exports and lower production in September. Non-OECD demand in 1997 is anticipated to increase by 4.2% or 1.3 mb/d to 32.0 mb/d. The underlying assumptions affecting the projection of non-OECD demand in 1997 remain unchanged from last month's Report, 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 3Q96 and 4Q96 has been revised upwards by 0.2 mb/d and 0.1 mb/d respectively to 70.8 mb/d and 73.8 mb/d. However, rounded global oil demand in 1996 is unchanged from last month's Report, increasing by 1.7 mb/d or 2.4% to 71.8 mb/d. Demand in 1997 is expected to increase by 1.9 mb/d or 2.6% to 73.7 mb/d. Although the forecast of incremental demand remains unchanged, due to slightly higher demand in 1996 and to rounding, absolute demand in 1997 has been revised upwards by 0.1 mb/d from last month's Report.

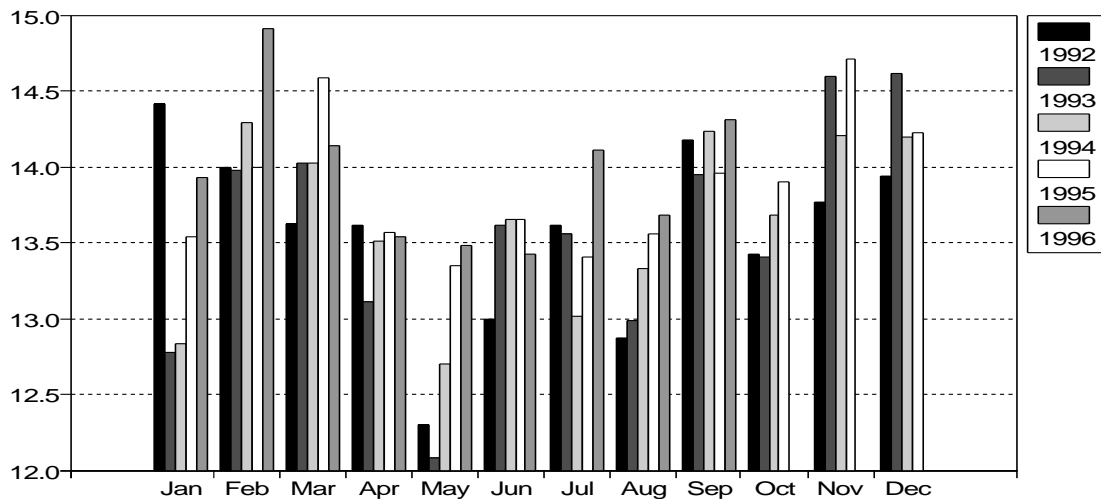
OECD Oil Demand 1992-1996
(million barrels per day)



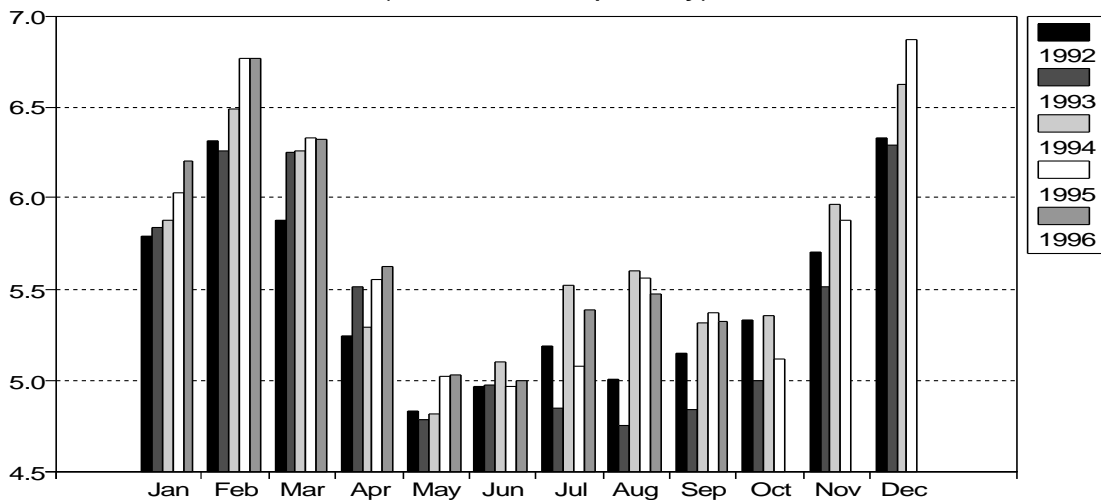
US Oil Demand 1992-1996 (million barrels per day)



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



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



OECD

Demand in September 1996

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

Preliminary Inland Deliveries - September 1996¹

	Motor Gasoline		Jet/Kerosene		Diesel		Other Gasoil		Residual Fuel Oil		Total Products ²	
	mb/d	% change	mb/d	% change	mb/d	% change	mb/d	% change	mb/d	% change	mb/d	% change
US ³	7.77	-0.3	1.62	+5.0	2.34	+10.0	1.00	-14.0	0.81	-3.9	17.96	-0.3
Canada	0.60	-3.1	0.11	+6.7	0.36	-2.4	0.06	-1.6	0.08	-27.7	1.48	-2.0
Japan	0.90	+1.7	0.36	+1.1	0.78	-1.8	0.43	+1.4	0.64	-8.5	4.87	-1.0
France	0.34	-4.4	0.11	+3.9	0.49	+2.8	0.35	+19.5	0.06	-13.9	1.81	+2.6
Germany	0.70	-2.8	0.14	+5.5	0.57	+0.9	0.84	+23.3	0.13	-4.9	2.90	+4.8
Italy	0.41	-3.6	0.07	+4.5	0.30	-13.0	0.14	+10.0	0.46	+1.2	1.78	-2.1
UK	0.51	+1.2	0.26	+3.6	0.30	+6.5	0.17	+8.6	0.12	+4.5	1.66	+4.5
European Four	1.96	-2.3	0.58	+4.2	1.67	-0.5	1.50	+19.2	0.77	-0.8	8.16	+2.7
Total	11.22	-0.6	2.67	+4.4	5.15	+3.7	2.98	+2.9	2.30	-5.3	32.48	+0.3

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

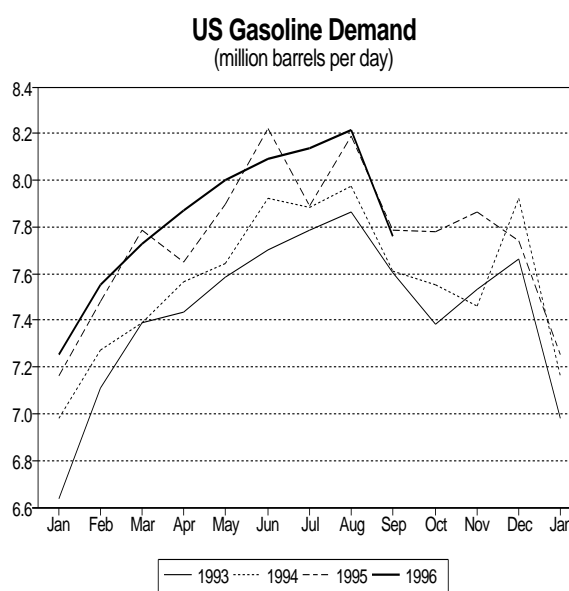
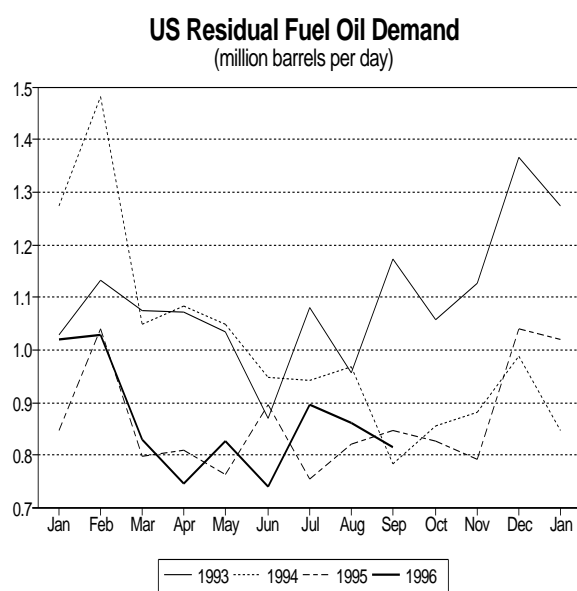
¹ excludes refinery fuel and bunkers (except US)

² includes other products not shown and direct use of crude oil

³ fifty states only. Diesel is estimated from preliminary indications of low sulphur gasoil deliveries

Percentage change is calculated versus September 1995

In September, total US deliveries declined by some 50 kb/d or 0.3%, with strong demand for jet/kerosene and diesel being insufficient to offset declines for all other major oil products. Motor gasoline deliveries decreased by some 25 kb/d, partly due to strong demand last year. However, gasoline deliveries in recent months have been weaker than anticipated, with the impact of higher retail prices on demand somewhat offsetting increased use due to higher economic activity. (In September prices were some 12.9% higher than a year earlier). Jet/kerosene deliveries increased by almost 80 kb/d or 5.0%, close to the 6.0% increase in the year-to-date, reflecting the economic growth and lower airfares this year that have contributed to greater commercial air traffic.



Diesel deliveries increased by more than 210 kb/d or 10.0%, slightly more than the 8.1% increase in the year-to-date. This growth was partly offset by a 160 kb/d or 14.0% decline in heating oil deliveries leading to an overall 1.6% or 50 kb/d increase in gasoil deliveries. Residual fuel oil deliveries decreased

by more than 30 kb/d, in part due to the continuing, unfavourable price differential between fuel oil and natural gas and higher hydroelectric availability. (In New York, the price of 1% sulphur residual fuel oil averaged some \$0.77/mmBtu higher than natural gas). Weather conditions, and the requirement for space heating and cooling, were similar to last September and are therefore thought not to have contributed to any significant change in electricity demand.

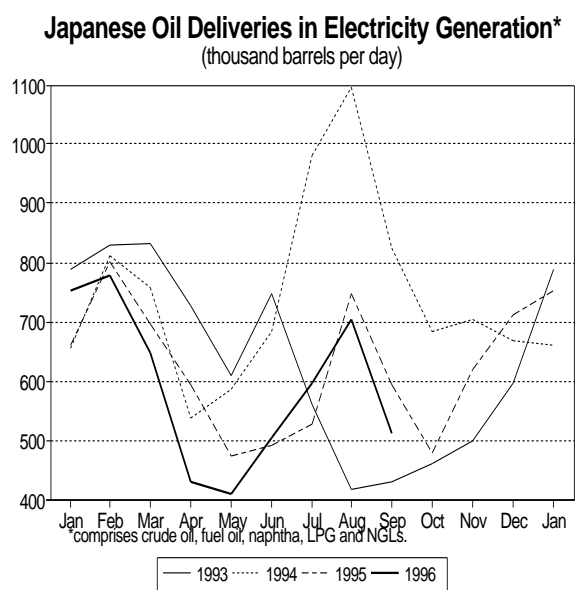
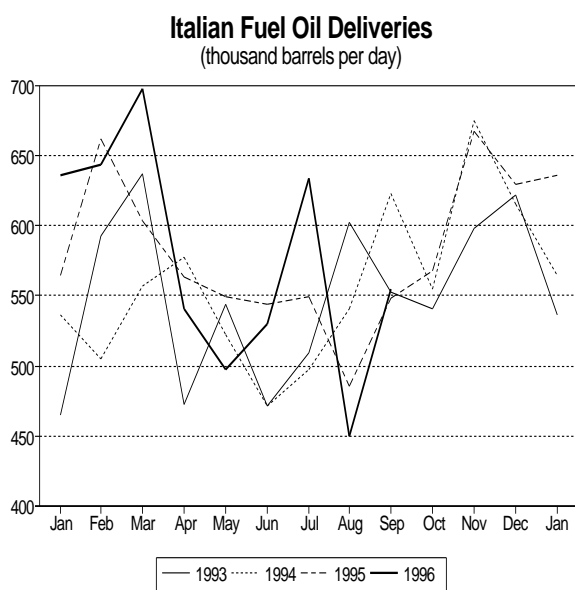
In **Europe**, heating oil deliveries in the four largest European oil-consuming countries increased by 240 kb/d or 19.2%, primarily due to strong demand in Germany and France, as consumers continued to replenish their low stocks. This was partly offset by weak gasoline, diesel and residual fuel oil deliveries. Jet/kerosene deliveries continued to increase strongly while in the UK, increased purchases of petrochemical feedstocks more than offset declines in LPG and naphtha deliveries in other countries.

In **France**, demand increased for the third successive month, primarily due to a 19.5% or 58 kb/d increase in heating oil deliveries. The strength in heating oil deliveries was partly due to weak demand last September following significant purchases in July ahead of pre-announced tax increases in August. Nonetheless, total deliveries of heating oil in 3Q96 increased by 14.6% or 49 kb/d compared with the same period last year, possibly indicating a larger-than-normal replenishment of stocks in the third quarter. Gasoline deliveries declined by slightly more than the year-to-date reduction of 4.1%, despite particularly weak demand last September, when deliveries declined by 8.0%. In volume terms, the decline in gasoline deliveries was almost offset by a 2.8% increase in diesel deliveries. Despite a 19.8% increase last September, naphtha deliveries declined by only 2.4%, compared with a 15.7% decrease in the year-to-date. The decline in naphtha deliveries was offset by an 8.0% increase in LPG deliveries, probably reflecting fuel switching in the petrochemical sector. Residual fuel oil deliveries decreased, with a 75.3% decrease to the power generation sector more than offsetting a 1.5% increase to industry.

In **Germany**, oil demand increased by the highest percentage since February. Heating oil deliveries increased by 23.3% or almost 160 kb/d, in part 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 11 million barrels lower than last year compared with 17 million barrels at the start of the month. Demand was weak for all other oil products except naphtha and jet/kerosene which contributed only 11 kb/d to incremental demand. Gasoline deliveries declined by 20 kb/d or 2.8%, consistent with the 1.5% decline in deliveries in the year-to-date. Residual fuel oil demand declined for the twelfth successive month but by less than in the year-to-date, reflecting continuing substitution in the industrial and power generation sectors and prices that were 15.3% higher than a year ago.

UK oil demand increased strongly, partly due to weak demand last year, with demand increasing for all major products. Among major oil products, gasoline deliveries increased by the smallest proportion, despite particularly weak demand last year when deliveries declined by 6.7%. The modest increase in residual fuel oil deliveries was mainly attributable to an unusually large decrease a year earlier (-21.2%) and to higher natural gas prices this year, which may have limited the extent of fuel switching. However, fuel oil deliveries in the year-to-date have declined by 14.0%, reflecting continuing fuel substitution. The 6.5% increase in diesel deliveries in September possibly indicates 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 both increased strongly, by 6.5% and 7.8% respectively, continuing the recent trend and possibly indicating stronger petrochemical activity than in neighbouring countries (see below).

The decline in **Italian** oil demand was largely attributable to a 13.0% or 45 kb/d reduction in diesel deliveries, although smaller decreases in gasoline and LPG demand also occurred. The demand weakness for diesel was unexpected, given comparatively weak demand last September, and no tax changes either this year or last that would have affected the timing of deliveries. Weak diesel demand in recent months may reflect a slowdown in the Italian economy, partly due to the strengthening of the lira that may have affected manufacturing output. Jet/kerosene demand increased strongly, although by a slower rate than the 5.9% increase in the year-to-date, reflecting unusually strong demand last September. The 1.2% or 5 kb/d increase in residual fuel oil deliveries was less than the year-to-date increase of 2.4%, and was less than expected, given an 11.8% decline in deliveries last year. Electricity consumption declined by 0.9% but, with hydroelectric output and electricity imports declining by 7.8% and 4.4% respectively, residual fuel oil use by utilities is believed to have increased.



In **Japan**, oil demand declined for the second successive month, by almost 50 kb/d or 1.0%, leaving year-to-date growth at 0.9%. Demand increased for gasoline, LPG and jet/kerosene but was slightly more than offset by a significant decline in deliveries of residual fuel oil and crude for direct use. Deliveries of residual fuel oil and crude to the power generation sector decreased by 19.3% and 11.3% respectively, resulting in a combined reduction of almost 90 kb/d. In the power generation sector, the decline in the consumption of crude oil and oil products was less than the decrease in deliveries and the resulting stockdraw contributed to stocks being 2.3% lower at the end of the month than a year earlier. Electricity consumption increased by 2.4%, despite one less working day and slightly milder temperatures compared with normal weather last year. Oil's share of the generation mix declined, partly due to increased use of LNG, coal and hydro, which more than offset a 6.2% decline in nuclear output. A 2.4% increase in LPG deliveries almost offset a 2.0% decline in naphtha deliveries, primarily reflecting essentially unchanged demand from the petrochemical sector but also a certain degree of fuel switching. For the second successive month, road transport oil demand was almost constant, with the increase in gasoline deliveries offset by a decline in diesel deliveries. The weakness in diesel use may be largely attributable to one less working day and retail prices that were more than 10.3% higher than a year earlier.

Demand in 3Q96

OECD demand in 3Q96 has been revised upwards by 0.1 mb/d from last month's Report to 40.8 mb/d, with upward revisions to North American and European demand of 0.10 mb/d and 0.08 mb/d respectively partly offset by a 0.10 mb/d downward revision to Pacific demand. As most of the revision to European demand relates to upward revisions to Spanish demand in both 3Q95 and 3Q96, the rate of OECD demand growth in 3Q96 remains essentially unchanged at 2.4%.

Third Quarter OECD Oil Demand by Region

	(million barrels per day)		Change	
	3Q95	3Q96	mb/d	%
North America	19.8	20.4 ^r	0.5	2.7
Europe	13.6	14.0 ^r	0.4	2.9
Pacific	6.3	6.3 ^r	0.0	0.6
Total	39.8^r	40.8^r	1.0	2.4

^r revised since last Report

North American demand has been revised upwards by 0.1 mb/d due to an upward adjustment to preliminary US demand data in August only partially offset by less-than-expected US demand in September. US demand in August has been revised upwards by 460 kb/d and is now estimated to have increased by 2.6% compared with essentially no growth, as originally reported by the US DOE. Demand

was revised upwards for all products except jet/kerosene and the largest adjustment was made to "other product" demand which is now estimated to have increased by 4.2% compared to a decline of 1.8%, as originally reported. (The adjustment to "other product" demand alone contributed almost 55% of the total adjustment). The decline in US demand in September was less than indicated in preliminary data in last month's Report for four weeks up to the 27 September. However, these demand data were not fully incorporated into last month's estimate of North American demand in 3Q96, as it was assumed that the preliminary data would be subject to significant upward revision. The extent to which these preliminary data have been revised upwards was not as great as anticipated, however, and the net effect is a downward adjustment to our estimate of September demand used in last month's Report. The combined effect of this adjustment and the revision to August demand is a net 0.10 mb/d upward adjustment to North American demand in 3Q96.

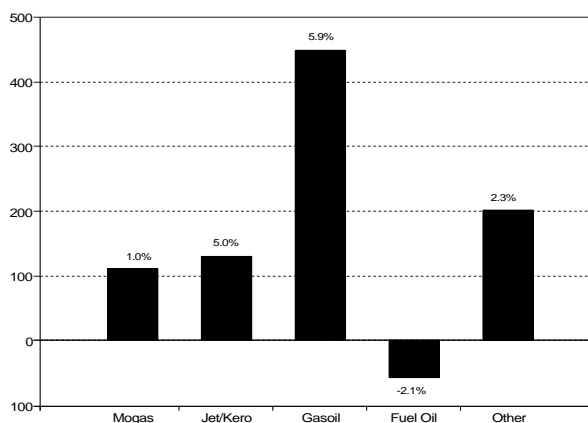
European demand in 3Q96 has been revised upwards by 85 kb/d although, as demand data in September are unavailable for many smaller countries, the estimate remains subject to revision. Preliminary demand data for the four largest European oil-consuming countries in August have been revised upwards by 60 kb/d with downward revisions to French and Italian data of between 40-50 kb/d partly offset by a 20 kb/d upward adjustment to Italian demand. Spanish demand in 1996 has been adjusted upwards due to revisions to demand throughout 1995 combined with an unchanged estimate of demand growth in 1996. Although the adjustments have led to an upward revision to average demand in 1995 of only 30 kb/d, a 60 kb/d adjustment has been made to 3Q95 and 3Q96 demand. In addition, Belgian and Swedish demand in July and August respectively was greater than anticipated, contributing some 50 kb/d to the upward revision to European demand in the quarter.

In the **Pacific** Region, oil demand in 3Q96 has been revised downwards by 0.1 mb/d from last month's Report and is estimated to have increased by 0.6% to 6.3 mb/d. Japanese demand in August has been revised downwards by 80 kb/d, due to downward adjustments to most products, most significantly gasoline, which is now reported to have declined by 0.9% compared to an increase of 1.0%, as originally reported. The last Report's projection of Australian demand in August now appears to have been too high and the 3.0% decline in deliveries has contributed some 15 kb/d to the downward revision to the region in 3Q96.

Although September delivery data are preliminary and some product data remain aggregated, it is possible to make a preliminary review of demand changes in 3Q96 for the four major products and the seven leading oil-consuming countries that represent 80-85% of total OECD demand (see table below). Gasoil was the fastest growing oil product and contributed more than one half of total incremental demand in the seven countries combined. Jet/kerosene deliveries also increased strongly in most countries, largely reflecting increased aviation traffic while residual fuel oil deliveries declined in five of the seven countries, consistent with lower use in the power generation sector, due either to lower electricity demand or to the increased availability of competitively-priced fuels in the power generation sector. Weak gasoline demand reflects continued dieselisation in Europe and higher retail prices in the US. (As excise duty forms a smaller proportion of retail gasoline prices in the US compared with other countries, higher commodity prices have had a greater impact on US retail prices of gasoline than in most other OECD countries).

Changes in 3Q96 Oil Product Demand in the Seven Leading Oil-Consuming OECD Countries (% per annum)

	Gasoline	Jet/Kero	Gasoil	Fuel Oil	Other	Total
USA	1.1	5.2	5.6	6.3	2.1	2.7
Canada	1.6	11.2	4.2	4.9	1.7	2.9
Japan	1.4	2.2	1.1	-8.8	4.8	1.0
France	-2.7	4.4	9.4	-13.9	-2.8	1.9
Germany	-0.8	3.2	11.8	-8.8	-0.3	4.4
Italy	1.2	9.7	-2.2	3.5	3.8	1.8
UK	2.8	5.9	8.7	-14.5	3.1	3.1
European 4	0.1	5.4	8.5	-4.1	0.5	3.0
Total 7	1.0	5.0	5.9	-2.1	2.3	2.5
Change kb/d	112	130	449	-57	202	835



Demand in 4Q96

OECD demand in 4Q96 is projected to increase by 0.6 mb/d or 1.5% to 42.0 mb/d, a 0.1 mb/d upward adjustment from last month's Report, primarily due to greater-than-expected US demand in October. The projection remains sensitive to revision, given remaining uncertainties about the weather and secondary/tertiary stockbuilding policy, particularly in Europe.

Fourth Quarter OECD Oil Demand by Region

	(million barrels per day)		Change	
	4Q95	4Q96	mb/d	%
North America	20.1	20.4	0.3	1.7
Europe	14.3	14.5	0.2	1.3
Pacific	6.9	7.0	0.1	1.3
Total	41.3	42.0 ^r	0.6	1.5

^r revised since last Report

In **North America**, US oil demand data for the four weeks up to 25 October are estimated to have increased by 4.9% or 0.87 mb/d, with gasoil demand increasing by 10.4% and contributing some 37% of total incremental demand. Gasoline deliveries increased by 1.8%, at a rate greater than that in the year-to-date. Residual fuel oil deliveries are estimated to have declined by 12.7% or 0.10 mb/d while demand for "other products" is estimated to have increased by 8.3% or 370 kb/d. The demand strength for gasoil is consistent with indications of colder-than-normal weather in the northeastern seaboard of the US where demand for heating oil is highest and, possibly, due to decreasing prices. On a heating-oil-weighted basis, New England and the Mid-Atlantic Region (including New York) experienced 5% more heating degrees days than normal and 41% more than last year. The decline in residual fuel oil is consistent with an unfavourable price differential to natural gas that is likely to have limited residual fuel oil deliveries. (In New York, the price of 1% sulphur residual fuel oil averaged some \$1.26/mmBtu higher than natural gas in October). Given that the weekly US data have recently been subject to significant revision, the preliminary data for October have been only partially incorporated into the forecast of North American demand in 4Q96. While the projection of North American demand in 4Q96 remains at 20.4 mb/d, a minor upward adjustment to the demand projection has contributed to a 0.1 mb/d upward revision to OECD demand to 42.0 mb/d.

In **Europe**, preliminary data suggest that the weather in October was milder than the milder-than-normal weather experienced last year. German tertiary heating oil stocks are lower than last year but may well remain below last year's levels for the rest of the year. However, the projection of European oil deliveries remains highly sensitive to weather and the changing perception of future prices. Indications of lower-than-expected economic growth in Germany and Italy in the second half of 1996 further support the anticipated slowdown in the growth of European oil demand in 4Q96.

In the **Pacific** region, oil demand in 4Q96 remains highly sensitive to oil use in the Japanese power generation sector and kerosene consumption for residential space heating. Preliminary weather data for the 30 days to 4 November show that Tokyo experienced 60% less heating degree days than normal, similar to the mild weather experienced last October. There are some indications that Japanese economic activity could slow down through the middle of the year after strong growth in 1Q96. Despite indications of an economic slowdown, Pacific oil demand in 4Q96 is projected to increase by 1.3%, at a rate slightly greater than for the year as a whole, due to particularly weak demand from the power generation sector in 4Q95.

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, essentially unchanged from last month's Report. Pacific demand in 1996 has been revised downwards by 0.1 mb/d to 6.7 mb/d, primarily due to adjustments to Japanese demand in 3Q96.

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	1.0
2Q96	20.0	0.5	13.5	-0.0	6.2	0.0	39.6	0.4
3Q96	20.4 ^r	0.5	14.0 ^r	0.4	6.3 ^r	0.0	40.8 ^r	1.0
4Q96	20.4	0.3	14.5	0.2	7.0	0.1	42.0 ^r	0.6
1996	20.3	0.5	14.1	0.2	6.7 ^r	0.1	41.1	0.8
1Q97	20.5	0.1	14.4 ^r	0.1	7.6	0.2	42.5	0.4
2Q97	20.1	0.2	13.8	0.3	6.3	0.1	40.3	0.6
3Q97	20.8 ^r	0.4	14.1	0.1	6.4 ^r	0.1	41.4 ^r	0.6
4Q97	20.8	0.4	14.7	0.3	7.1	0.1	42.6 ^r	0.7
1997	20.6 ^r	0.3	14.3	0.2	6.9	0.1	41.7	0.6

^r revised since last Report
* mb/d year-on-year change

OECD demand in 1997 is forecast to increase by 0.6 mb/d or 1.5% to 41.7 mb/d, unchanged from last month's Report. North American demand in 3Q97 has been revised upwards marginally in line with a similar change in 1996, which, due to rounding, has also led to a 0.1 mb/d upward revision to North American demand in 1997 to 20.6 mb/d. European demand in 1997 has been revised in line with adjustments to historical Spanish demand, which, due to rounding, has led to a 0.1 mb/d downward revision to European demand in 1Q97 to 14.4 mb/d. Similarly, Pacific demand in 3Q97 has been revised downwards by 0.1 mb/d in line with weaker-than-expected demand in 3Q96.

Non-OECD

Non-OECD Economic Growth Projections

The IMF's latest historical data and forecast of GDP growth, adjusted to the same non-OECD regional definitions as used in the Report, are shown in the table below. Regional totals are weighted on a purchasing power parity basis. The contributions of four OECD members, Mexico, the Czech Republic, Hungary and Poland, to regional and total economic activity have been included within the non-OECD data. Changes between the latest and the previous projections (published in October 1996 and May 1996 respectively) are also shown in the table. Total non-OECD economic growth is expected to accelerate in 1996 and 1997 but at a lower rate than previously anticipated. In 1996, downward revisions to projected growth have been made all regions except the Middle East.

Non-OECD Real GDP Growth 1992-1997

(weighted on a purchasing power parity basis)

	% per annum						% point difference compared with May 1996					
	1992	1993	1994	1995	1996	1997	1992	1993	1994	1995	1996	1997
FSU	-18.6	-12.5	-15.7	-5.3	-2.0	3.5	0.0	0.0	0.1	0.1	-3.3	0.3
Europe	-4.0	1.0	4.2	5.3	4.4	4.7	0.0	0.1	0.0	-0.2	-0.2	0.1
China	14.2	13.5	12.6	10.4	9.7	8.9	0.0	0.0	0.8	0.2	-0.3	-0.1
Other Asia	5.5	5.5	6.6	7.2	6.7	6.5	0.2	-0.3	0.0	0.1	-0.1	-0.2
Latin America	2.8	3.2	4.7	0.9	3.0	4.0	-0.1	0.1	0.0	0.0	-0.1	-0.8
Middle East	6.5	3.2	1.9	2.5	3.7	3.4	0.0	0.7	-0.2	-0.2	0.6	-0.5
Africa	0.8	0.9	2.9	3.0	5.0	5.0	0.1	0.2	0.5	-0.2	-0.3	0.5
Total Non-OECD	3.1	4.0	5.0	4.5	5.6	5.9	0.0	-0.2	0.1	-0.5	-0.4	-0.3

Total Non-OECD includes Mexico, Czech Republic, Hungary and Poland for the purpose of this analysis.
Source: IMF World Economic Outlook May 1996 and October 1996

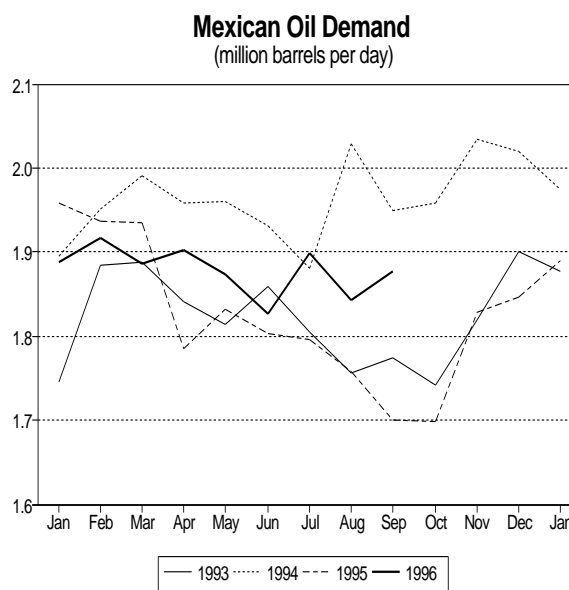
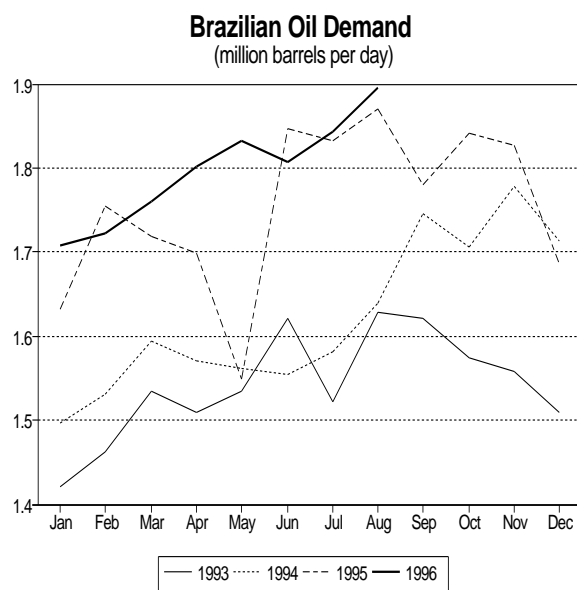
The previously-anticipated economic recovery in the **FSU** in 1996 is now projected not to occur until 1997, but then to be at a greater rate than originally reported. (This forecast contrasts with recent comments by Mr Vladimir Potanin, Russia's deputy prime minister, that the country's economy would not start growing until 1998, with tight budgetary conditions and high interest rates continuing to restrain growth in 1997, despite an increase in investment). With estimates of **Chinese** and **Other Asian** economic growth revised upwards in 1995 and adjusted downwards in 1996 and 1997, the anticipated deceleration in the two regions' economic growth is now greater than previously expected. **Latin American** economic growth is still expected to accelerate in 1996 and 1997, primarily due to the recovery of the Mexican economy, but at a lower rate than previously projected. The economies of the **Middle**

East are forecast to grow more quickly than previously reported, largely due to higher oil prices, while growth in **Eastern Europe** in 1995 and 1996 is slightly lower than previously estimated, in part due to a slowdown in exports that have been highly sensitive to the business cycles in the main export markets of western Europe.

The minor changes to the projection of non-OECD economic activity have not led to revisions to oil demand in 1996 and 1997. In some cases, for example the FSU, the latest economic forecast offers further support for revisions to oil demand that have been incorporated in recent editions of the Report.

Mexican Demand in September 1996

Preliminary data published by PEMEX indicate that inland oil deliveries (excluding refinery fuels) increased by 12.7% in September, the sixth successive month of demand increases. Including estimates of bunkers and refinery fuel use and an adjustment to calibrate the monthly data to the historical series, Mexican demand in September is estimated to have grown slightly more slowly than inland deliveries, increasing by 180 kb/d to 1.9 mb/d. Demand has increased in the year-to-date by only 2.5%, mainly due to a 3.8% decline in 1Q96. In August, demand grew for all products except LPG (which declined by 1.2%) and most significantly for residual fuel oil, which increased by 47.7% or 147 kb/d and represented more than 90% of incremental inland deliveries. The strong growth was caused mainly by lower natural gas supplies following an explosion at the country's main gas processing facility and 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. Current fuel oil deliveries are still some 50 kb/d lower than in 1994, when a severe drought constrained hydroelectric output and led to increased fuel oil use in the power generation sector. Diesel deliveries increased by 5.5%, reflecting weak demand last year and higher manufacturing output this August, but motor gasoline demand increased by only 1.3%, consistent with continuing constraints on discretionary private income. In the year-to-date, demand has grown for all products except gasoline, which has declined by 0.7%, while diesel has been the greatest source of demand growth, increasing by 5.7%.



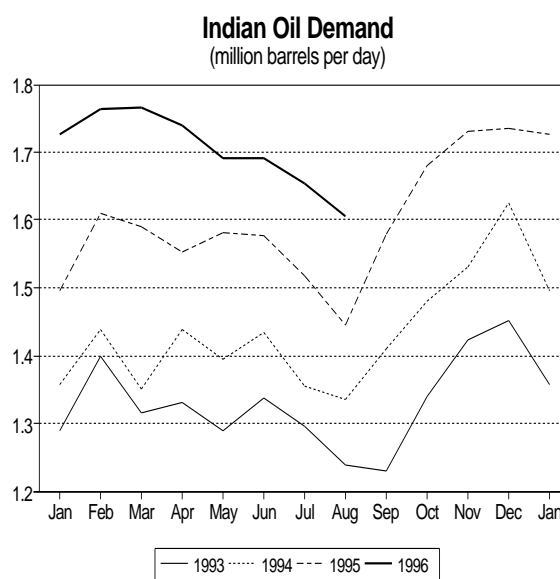
Brazilian Demand in August 1996

Preliminary data published by *Brazil Energy* indicate that inland oil deliveries increased by 1.3% in August, continuing the recent trend of moderate demand increases compared to strong demand growth in the earlier part of the year. Demand in the year-to-date has increased by 3.4%, with the weak demand in recent months largely attributable to particularly strong growth (14.0%) in August 1995. This August, strong increases in demand for gasoline (5.1%), alcohol used as a substitute for gasoline (6.8%) and residual fuel oil (12.5%) were largely offset by declines in demand for LPG, gasoil and other products. The strong demand for gasoline and alcohol occurred despite strong growth last August of 37.8% and 6.2% respectively. Residual fuel oil deliveries increased strongly for the sixth successive month, despite growth of 13.4% last August, which most likely reflects increased deliveries to the power generation

sector. Brazilian demand growth in 3Q96 is expected to be significantly weaker than in 2Q96 (mainly due to particularly strong demand in 3Q95) but then to accelerate in 4Q96, reflecting the slowdown in growth in 4Q95.

Indian Demand in August 1996

Data published by the Indian Ministry of Petroleum and Natural Gas indicate that Indian inland deliveries increased in August by 11.1%. Including estimates of bunkers and refinery fuel use, Indian demand in July is estimated to have grown by almost 160 kb/d to 1.6 mb/d. Demand has increased by some 10.2% in the year-to-date, with the faster rate of growth this August largely attributable to lower growth last August compared with earlier in 1995. This August, demand increased for all products, with increases in high speed diesel and gasoline demand of 10.2% and 7.9% respectively contributing some 42% of total incremental demand. Naphtha deliveries increased by 29.4% or 27 kb/d, despite a similar rate of demand growth last year. However, year-to-date naphtha demand has grown by only 1.9%, reflecting particularly strong demand in the earlier part of 1995. LPG deliveries increased by 13.5%, slightly more than the 11.5% growth in the year-to-date and consistent with price subsidies and improved availability which have encouraged LPG's increased use. Kerosene deliveries increased by 3.7% in August, a rate similar to the 4.7% rise in the year-to-date. The comparatively modest growth in kerosene in recent years reflects continuing substitution by LPG and electricity in the residential sector, 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, despite some minor adjustments to regional demand. **Other Asian** demand in 1Q96 has been revised upwards marginally, following recent receipt of Indonesian demand data, which had been estimated in previous Reports. **Latin American** and total non-OECD demand in 2Q96 has been adjusted upwards following receipt of demand data for Argentina. Latin American demand in 3Q96 and 4Q96 has been adjusted upwards marginally, reflecting a reassessment of Mexican demand, which, due to rounding, has contributed to revisions to global demand (see below). In 3Q96, **FSU** apparent demand has been revised downwards slightly due to the combination of higher exports and lower production in September.

Non-OECD demand in 1997 is expected to increase by 4.2% or 1.3 mb/d to 32.0 mb/d. The underlying assumptions affecting the projection of non-OECD demand in 1997 remain unchanged from last month's Report, with the expected acceleration in the rate of demand growth in 1997 largely attributable to the assumed slowdown in the decline in FSU demand.

Non-OECD 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	-0.5	1.5	0.1	3.4	0.2	8.8 ^r	0.6	6.2	0.0	4.1	0.0	2.2	0.1	30.8	0.6
2Q96	4.1	-0.3	1.4	0.1	3.6	0.3	8.3	0.5	6.3	0.3	4.0	0.1	2.2	0.1	30.1 ^r	0.9
3Q96	4.2 ^r	-0.3	1.3	0.1	3.6	0.2	8.1	0.6	6.4	0.3	4.2	0.1	2.1	0.1	30.0	1.0
4Q96	4.8	0.1	1.4	0.1	3.7	0.2	9.0	0.6	6.4	0.3	4.2	0.1	2.2	0.1	31.8	1.3
1996	4.5	-0.3	1.4	0.1	3.6	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	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	0.2	9.0	0.7	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	6.6	0.2	4.3	0.1	2.2	0.1	31.2	1.2
4Q97	4.8	-0.0	1.5	0.1	3.9	0.2	9.7	0.6	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	0.2	9.2	0.6	6.6	0.2	4.2	0.1	2.3	0.1	32.0	1.3

* year-on-year change (mb/d)
r revised since last Report

Global Demand in 1996 and 1997

Global demand in 3Q96 and 4Q96 has been revised upwards by 0.2 mb/d and 0.1 mb/d respectively to 70.8 mb/d and 73.8 mb/d. However, global oil demand in 1996 remains essentially unchanged from last month's Report and is projected to increase by 1.7 mb/d or 2.4% to 71.8 mb/d.

Global oil demand in 1997 is expected to increase by 1.9 mb/d or 2.6% to 73.7 mb/d. Although the projection of incremental demand remains unchanged, due to slightly higher demand in 1996 and to rounding, absolute demand in 1997 has been revised upwards by 0.1 mb/d. 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

- October OPEC crude oil production is estimated to have exceeded 26 mb/d for the first time since 1980. Increases in Indonesia, Nigeria and Iran led to a 95 kb/d monthly increase, about 25 kb/d of which was offset by a maintenance-related decline in Nigerian condensate production. There were also small gains in Algeria and Qatar. Production from the other OPEC countries was stable or down slightly.
- Revisions to September estimates lowered the monthly non-OPEC supply gain to 445 kb/d, about half last month's estimate. OECD oil production is estimated to have risen by 470 kb/d, primarily in the North Sea and non-OECD countries are believed to have produced 315 kb/d more than in September. Production from the Former Soviet Union was slightly lower in October as declines in Russia offset gains in Kazakhstan.
- Despite the downward revisions to supply in September, the expected 4Q96 supply increase appears to have begun in October with several new field start-ups and seasonal upturns in existing fields in North America and the North Sea. World oil supply was nearly 73 mb/d in October, 0.9 mb/d higher than in September.
- FSU net exports are estimated to have increased from 2.70 mb/d in September to 2.89 mb/d in October, with product exports 0.33 mb/d higher than a year earlier.

Non-OPEC Oil Supply

(million barrels per day)

	1995	1996 ^f	1997 ^f	3Q95	4Q95	1Q96	2Q96	3Q96 ^p	4Q96 ^f
CRUDE OIL									
North America	8.06	8.03	7.96	7.98	8.04	8.05	7.97	7.99	8.12
United States	6.54	6.49	6.40	6.44	6.51	6.51	6.47	6.42	6.54
Canada	1.52	1.55	1.56	1.54	1.52	1.54	1.50	1.57	1.58
Europe	5.84	6.34	7.00	5.75	6.23	6.17	6.12	6.13	6.93
North Sea	5.42	5.91	6.55	5.34	5.81	5.75	5.70	5.69	6.48
UK*	2.42	2.52	2.95	2.39	2.53	2.45	2.38	2.34	2.89
Norway	2.77	3.14	3.32	2.71	3.04	3.07	3.09	3.09	3.32
Other North Sea**	0.23	0.25	0.28	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	0.44	0.45
Pacific	0.56	0.60	0.70	0.58	0.53	0.56	0.60	0.61	0.64
Australia	0.51	0.56	0.65	0.53	0.48	0.52	0.55	0.56	0.60
Other Pacific	0.04	0.05	0.05	0.05	0.04	0.04	0.05	0.05	0.05
Total OECD	14.46	14.97	15.65	14.31	14.79	14.77	14.69	14.73	15.69
Latin America	5.31	5.77	6.12	5.51	5.17	5.69	5.73	5.75	5.92
Asia (inc. China)	4.92	4.94	5.01	4.95	4.99	4.93	4.93	4.89	4.99
Africa (inc. Gabon)	2.33	2.46	2.73	2.35	2.36	2.37	2.42	2.47	2.57
Other Middle East	1.84	1.86	1.94	1.85	1.85	1.84	1.85	1.87	1.89
Central and Eastern Europe	0.24	0.24	0.25	0.24	0.24	0.24	0.24	0.24	0.24
Total Non-OECD (ex. FSU)	14.64	15.27	16.05	14.89	14.60	15.06	15.16	15.22	15.61
Russia	5.98	5.84	5.86	5.99	5.87	5.83	5.83	5.88	5.80
Other Republics	0.82	0.90	0.98	0.84	0.85	0.87	0.87	0.90	0.94
Total FSU	6.79	6.73	6.84	6.83	6.72	6.70	6.71	6.78	6.74
NGLS & OTHER									
United States	2.07	2.09	2.14	2.06	2.05	2.03	2.12	2.04	2.16
Canada	0.87	0.91	0.94	0.83	0.91	0.91	0.87	0.88	0.97
North Sea	0.42	0.42	0.47	0.38	0.45	0.43	0.39	0.38	0.48
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	1.64
Total NGLs and Other	5.05	5.17	5.47	4.96	5.16	5.14	5.13	4.98	5.42
Processing Gains	1.46	1.52	1.57	1.44	1.49	1.52	1.50	1.50	1.55
Total Non-OPEC Supply	42.40	43.66	45.59	42.44	42.75	43.19	43.20	43.21	45.01

p preliminary

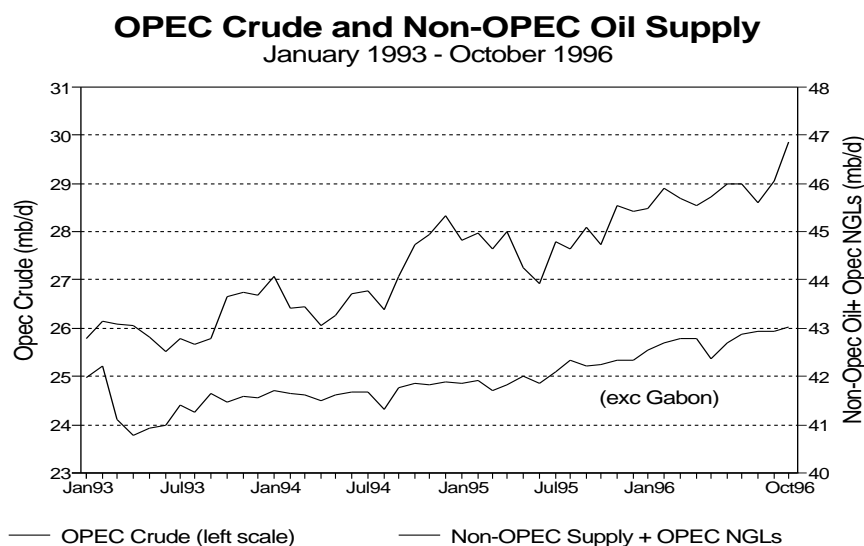
f forecast

* excluding on-shore production

** Denmark, offshore Netherlands and offshore Germany

Overview of Supply Developments and Revisions

World oil supply is estimated at 72.9 mb/d in October versus a revised 72.0 mb/d in September. The largest growth occurred in the UK North Sea, where four new fields started up in late September through late October. Higher offshore output in China following a weather-related decline in September and a continuing recovery in Mexican production after the explosion this summer at its largest gas-processing plant provided a total of over 200 kb/d of incremental supply. Production from offshore Brazil is in the process of a rapid expansion as new converted drilling rigs and converted tankers are put into service as production systems on giant Marlim, Albacora and Barracuda fields in the Campos Basin. Significant increases are also believed to be occurring in Canada and the US, with smaller contributions from Angola, Colombia, Denmark and the smaller West African offshore producers.



Revision and Outlook

Non-OPEC supply for 3Q96 has been revised downwards by 0.3 mb/d, of which 0.2 mb/d was in OECD and 0.1 mb/d in Latin America, but the aggregate 4Q96 is unchanged from last month's Report. The 3Q96 OECD revisions resulted from downward adjustments in July Canadian data, technical problems at the Australian Wanaea-Cossack complex and underperformance in September by a number of older North Sea fields. The Latin American adjustment reflected a slower than expected recovery in NGL production following the explosion at the Cactus gas processing plant in late July. For 4Q96, an upward revision in North Sea projections for Denmark and Norway offsets a downward revision in the Egyptian production forecast. Despite the relatively large downward revision to the 3Q96 supply estimates, upward revisions have been made to the first three quarters of 1997.

After the seemingly uninterrupted series of downward revisions in supply, which started a year ago with the Gulf of Mexico hurricanes and an unexpectedly slow start-up of the Norwegian Heidrun field, this month may represent a watershed. Fields in the North Sea are again beginning to exceed expectations in terms of both timing, speed of early production escalation and the level of the initial peak. It is too early to decide whether there will be a return to the experience of the 1993-1995 period when production from new fields tended to start earlier and to grow more quickly to higher levels than expected, but the signs are that the period of uniformly downward revisions may be over. The experience outside of the North Sea is generally positive as well, with offshore Brazil (see table on page 27), West Africa and the US Gulf of Mexico as prime examples. Although offshore China and Australia have had a checkered experience this year, upside potential has been demonstrated in both areas and each has a menu of additional prospects ready for near-term development.

OECD

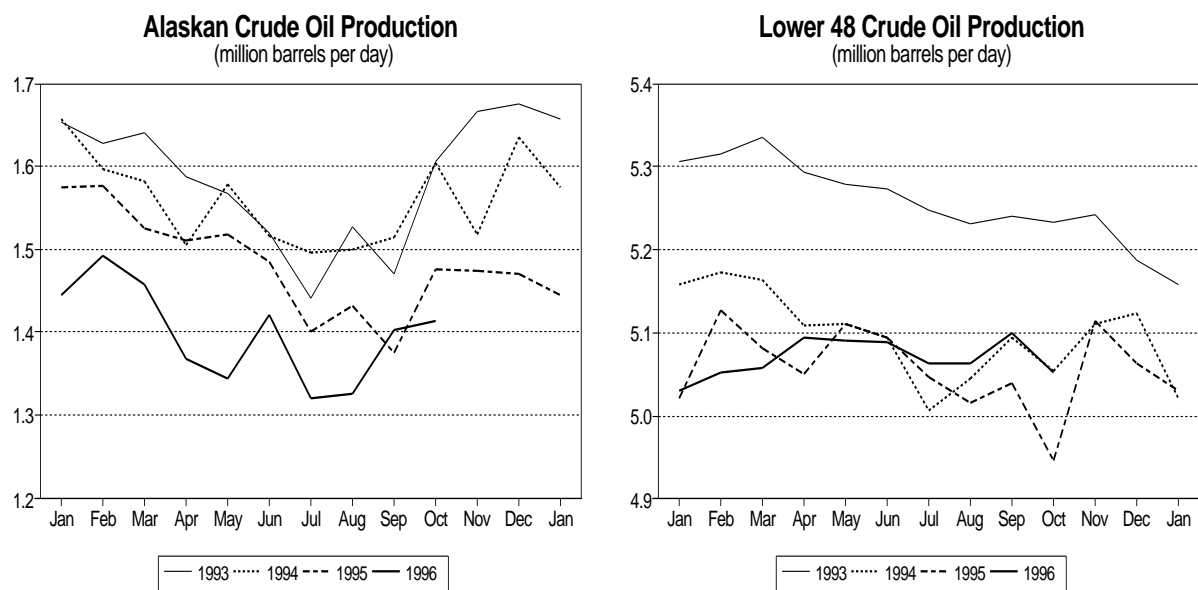
North America

North American production is estimated to have risen by 320 kb/d over the last three months, with gains of about 80 kb/d in August, 140 kb/d in September and 100 kb/d in October. The increases in the first and last month were primarily in Canada, but the largest increase was a 150 kb/d gain in the US in September,

more than half in Alaska and the remainder spread between the Gulf of Mexico, NGLs, Other Hydrocarbons and an atypical increase in the Lower 48 Onshore. Canadian production is thought to have decreased slightly in September following a sharp rise in reported NGL production in August. Three-quarters of October's estimated rise was in Canada, with seasonal NGL increases and higher synthetics output accounting for the largest share.

On the basis of weekly data from the US Department of Energy and the State of Alaska for the first three weeks of October, total US oil output was 8.59 mb/d in October, about 25 kb/d higher than in September. Additional increases expected in November and December result in a 4Q96 average of 8.70 mb/d, 235 kb/d above 3Q96 levels and 10 kb/d higher than last month's forecast. The 1997 forecast has been raised by a similar amount to 8.54 mb/d, but recent positive results in the Lower 48 onshore areas, particularly onshore Louisiana, give considerable upside sensitivity to the forecast. Higher cash flow, primarily due to higher oil prices, allowing increased drilling effort and improved productivity, appear to be reducing the decline rate in mature onshore areas.

Alaskan crude oil production increased by 10 kb/d to 1414 kb/d in October from upwardly revised September levels. Full month data for September led to a 10 kb/d upward revision affecting mostly Prudhoe Bay but with a small adjustment to Pt. McIntyre field output. Even with the increase and the September revision, Alaskan production in October was 25 kb/d below expectations as seasonal increases at Prudhoe Bay failed to materialise and the Endicott field continued to underperform, producing 75 kb/d versus a capacity of 90 kb/d. Prudhoe Bay production rose by only 2 kb/d versus an anticipated 18 kb/d increase and Milne Point production, where a 9 kb/d increase had been envisioned, remained at 54 kb/d. Conversely, the Pt. McIntyre and Niakuk fields were 15 kb/d and 10 kb/d above expectations.



October production in the Lower 48 rose by about 15 kb/d from September. Expected increases of 45 kb/d from new fields in the Gulf of Mexico and 40 kb/d due to higher seasonal NGL production imply a decline in onshore Lower 48 production of over 90 kb/d, much larger than in recent months. It is suspected that lags in inclusion of production reports from many of the producing states may be causing a downward bias in the US DOE supply estimates. In particular, anecdotal evidence suggests that production from Southern Louisiana onshore fields has been increasing. As mentioned above, the current forecasts for 4Q96 and 1997 which assume annual decline rates of 10-15% for Lower 48 onshore areas (excluding California) may be too conservative.

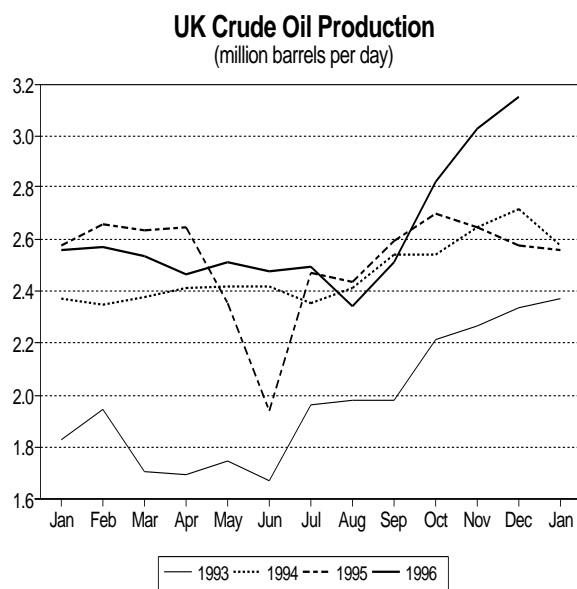
Canadian oil production in August was 2476 kb/d according to preliminary data from Statistics Canada, an increase of 78 kb/d from July. July figures were revised downwards by 46 kb/d to 2398 kb/d, with all major components shown in Table 4A (except Alberta bitumens and heavy oils) each reduced by 10-22 kb/d each. The August growth was greater than expected but due to the reduced July base, the

August level was 19 kb/d below last month's forecast. Growth in Saskatchewan crude oil production and a sharp increase in NGL production dominated the August gain, with monthly increases of 14 kb/d and 49 kb/d respectively. Synthetics production rose by 11 kb/d and there was a small increase in other conventional crude, primarily in British Columbia. Data from the Alberta Electric Utility Board show September synthetics production to have been about equal to August's level, but well below expectation. The Syncrude plant produced 224 kb/d and the Suncor facility yielded 65 kb/d, including about 8 kb/d of distillates for direct sale. NGL production is thought to have given back about 20 kb/d of the unexpected August gain while crude oil production was about 10 kb/d higher than in August. Production in 3Q96 benefited from increased production in Saskatchewan and the lack of extensive maintenance at the synthetics plants, which contributed to a rise in total Canadian oil production of 75 kb/d versus 2Q96. Alberta bitumen and heavy oil output also exceeded 2Q96 levels.

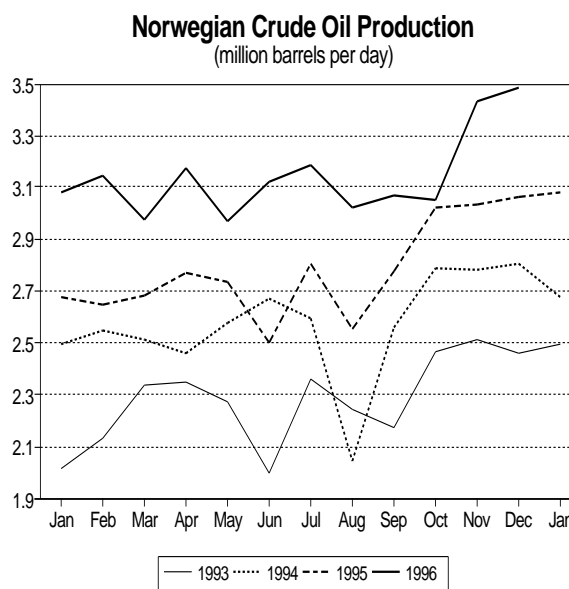
Canadian production in 4Q96 is projected to increase by nearly 100 kb/d, a downward revision of about 10 kb/d from last month's Report offsetting the upward revision in the 4Q96 US forecast. An increase of 45 kb/d is projected for next year versus an increase of 50 kb/d expected previously. As with the US, the level of drilling activity in western Canada and the impact of horizontal drilling and other technical advances on well productivity are causes for optimism. Also by the end of 1997, Canada's first major offshore project, Hibernia, should be in production and is expected to add 125 kb/d to 1998 Canadian oil supply. With slowly expanding synthetic output and a reduced decline rate in older fields, Canadian oil supply is projected to increase by 45 kb/d in 1997 and 120 kb/d in 1998.

North Sea

North Sea production rose from 6.12 mb/d in September to 6.48 mb/d in October, with both the UK and Norwegian sectors producing over 3 mb/d in the latter month. Danish production is reported to have grown to a record 220 kb/d in September and is thought to have increased further in October as the new Svend field continued to increase output. Norwegian production in October reached nearly 3.2 mb/d, despite maintenance at the Gullfaks and Tordis fields that lowered Statfjord-Gullfaks area production by 195 kb/d. An even larger rise, of over 600 kb/d to more than 7 mb/d, is projected for November as production expands at several new fields started up in September and October.



Note: October 1996 preliminary, November and December 1996 estimated



Note: November and December 1996 estimated

As in August, UK production in September presented a large number surprises, mostly negative. Total offshore oil production was 2.65 mb/d, an increase of 200 kb/d from August but about 115 kb/d below expectations. As with the August revisions, the shortfall was spread out across the major systems, with several oil fields contributing to the underperformance in each system. The Forties system was 36 kb/d lower than anticipated as the Scott, Tiffany, Arbroath, and Bruce fields each fell 10-20 kb/d below expectation. In the Flotta system, Ivanhoe/Rob Roy, Piper and Highlander were lower than projected leading to a 22 kb/d reduction from the initial estimate. The Lyell field in the Ninian system did not

produce during the month, whereas output of 12 kb/d had been expected. Surprisingly, the Ninian system Magnus field exceeded expectations by 8 kb/d. The performance of the Brent system was more mixed, with system-wide output within 2 kb/d of last month's estimate. Higher than expected production from Pelican, the Brent field (despite the Brent Bravo platform being down unexpectedly for three days) and South Cormorant nearly balanced underperformance at Tern, Hudson, Osprey and Eider.

For the other systems and the offshore-loaded fields, production was about 10 kb/d below expectation, but positive surprises at the Harding, Douglas and Beryl fields may be more significant for 4Q96 prospects. The Harding field averaged 67 kb/d versus 57 kb/d in August, while production at the Liverpool Bay Douglas field more than doubled to 40 kb/d. The flare tip on the Douglas platform has been adjusted to allow for higher production levels and output could reach 50 kb/d in 4Q96. It is also possible that the pipeline leak that has shut-in the Lennox field will be repaired before the end of the year, permitting a small amount of production from the field. New field production from the Fife field's Fergus satellite and the Ninian Columba B reservoir added modestly to September output.

October developments appear to have a much more positive tone with production increasing to 3.0 mb/d, setting the stage for the expected rally in UK production in 4Q96. The Telford/Marmion, Thelma and South Nevis satellite fields were successfully started-up and the Brent Charlie platform returned to service on 21 October. Telford, a Forties system Scott field satellite, was not expected until January and the production target of 30 kb/d by the end of the year is higher than the initially-anticipated peak. The timing of the T-Block Thelma satellite start up was about as expected, but the reported peak production of 50 kb/d early next year is higher than previously anticipated, as is Brent Charlie's 80 kb/d end-of-year target. Commissioning of the Teal-Guillemot area *Anasuria* FPSO is progressing well and production of 60 kb/d is expected by December. The higher production from the new fields is projected to more than compensate for downward revisions in several of the older fields, resulting in a net upward revision to 4Q96 UK offshore production of about 10 kb/d to 3210 kb/d versus 3198 kb/d shown in last month's Report.

Norwegian oil production averaged just under 3.2 mb/d in September and October according to data for the first month from the Norwegian Petroleum Directorate (NPD) and preliminary company estimates for October. Both months were below expectation due to maintenance programmes that were more extensive than anticipated at Heidrun in September and Gullfaks-Tordis in October. Production in September was also affected by lower Yme-Yme Beta East output, which fell back to 28 kb/d following a sharp increase to 53 kb/d in August. The September increase of 32 kb/d was primarily the result of the return of the main Statfjord field and its two satellites, Statfjord East and Statfjord North, following a combined 143 kb/d decline in August due to maintenance. September production for the three fields was 155 kb/d higher than in August. The Oseberg area Veslefrikk field similarly recovered nearly all of its 20 kb/d August maintenance decline. Offsetting much of these increases was a 131 kb/d reduction in Heidrun field production in September as the result of maintenance. The new Sleipner West condensate field, which began production at the end of August, is thought to have raised production in September to about 15 kb/d, but since the streams from the Sleipner East and Sleipner West fields are mixed together before piping to the NPD "fiscal metering point" at Kårstø, data on the individual fields are not broken out.

In October, the Gullfaks field and its Tordis satellite experienced maintenance reductions of 199 kb/d and 44 kb/d respectively, both larger than expected, reductions were also slightly greater than the combined effects of the return of the Heidrun field, an unexpected increase in Ekofisk area output to over 300 kb/d and the step-up in East Troll liquids production following the start-up of the main Troll contract on 1 October. These three events are estimated to have added 120 kb/d, 35 kb/d and 10 kb/d respectively. Heidrun production was reduced at the end of the month when a problem with its gas flare led to a platform shutdown on the night of 30 October and production was not resumed until 4 November. Owing to the loss of almost four days of production in November, average output from Heidrun for the month is expected to be limited to about 235 kb/d versus capacity of almost 260 kb/d. With no planned maintenance and relatively full utilisation of capacity, Norwegian production is projected to rise to 3.56 mb/d in November and 3.63 kb/d in December, both slightly higher than last month's estimate, primarily due to the assumed continuation of the better-than-expected Ekofisk performance seen in October. Projected 4Q96 average Norwegian production remains at 3.46 mb/d.

The **Danish** Energy Agency reported that September oil production increased to a record 224 kb/d, 5 kb/d above August's production, as the Svend field continued to outperform expectations. Svend production exceeded 27 kb/d and may not have yet reached its peak. Production from this year's other new field, the

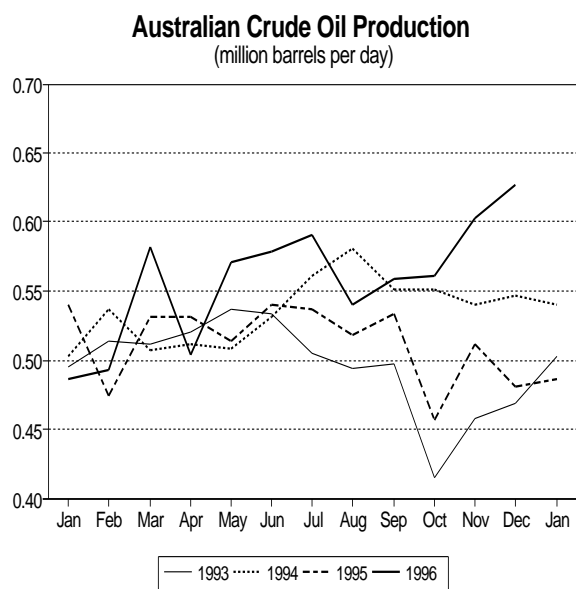
Roar field that started up in January, also continued to increase, with oil production of nearly 7 kb/d in August and natural gas production reaching 185 mmcf/d, making Roar Denmark's second largest gas field. The Gorm field also surpassed expectations, with production of 53 kb/d representing the first time the field's output has exceeded 50 kb/d. Recent work to increase compression and intensify water injection is expected to allow production to be maintained at these higher levels for the next few years. With the better performance at Svend and Gorm, the 4Q96 and 1997 estimates for Danish oil production have been raised by 23 kb/d and 24 kb/d respectively.

Dutch oil production increased by 5 kb/d in September to 37 kb/d. Production from the P18 condensate field rose by 3 kb/d and the Logger and F3-FB fields accounted for the remainder of the gain. Additional small increases are projected for the last three months of the year, due primarily to seasonal increases in natural gas production. December production is expected to average just under 40 kb/d.

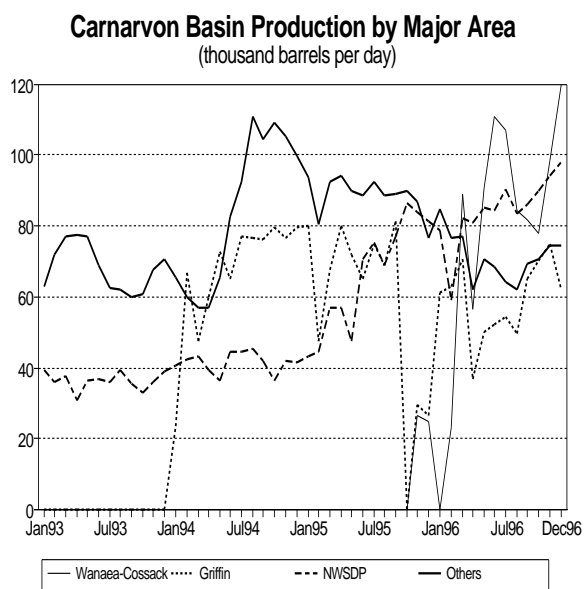
Pacific

Australia produced 611 kb/d of crude, condensates and NGLs in August, 51 kb/d less than in July and 115 kb/d less than expected. The failure of Carnarvon Basin fields to reach capacity accounted for most of the shortfall. The Wanaea-Cossack complex averaged 84 kb/d for the month, more than 30% below capacity and 22 kb/d lower than in July, due to continuing problems with the gas export system. Production from the 80 kb/d Griffin and Goodwyn fields dropped under 50 kb/d. Goodwyn's high for the year is only 52 kb/d (achieved in July), while Griffin field production exceeded 70 kb/d in March. Production from the offshore Gippsland Basin and the onshore Cooper-Eromanga Basin declined by 8 kb/d and 3 kb/d respectively.

Estimated production in both September and October was 631 kb/d, with increased output from the Griffin field the primary component of the 20 kb/d September increase and the loss of the Jabiru field to extended maintenance in mid-October offset by small increases in several Carnarvon Basin fields. Part of the processing capacity on the *Cossack Pioneer* was taken out of service on 12 October to facilitate repairs on the gas export system, restricting output to 60 kb/d. The field is expected to be brought back up to 90 kb/d on 8 November and to full capacity soon after. With the repairs, capacity is thought to have been expanded to 135 kb/d from 115 kb/d. With relatively full output from Wanaea-Cossack, and Griffin and Goodwyn over 60 kb/d in December, Australian output is projected to reach 687 kb/d. However, due to the downward revisions to October and November, the 4Q96 estimate has been lowered by 21 kb/d to 662 kb/d.



Note: September-December 1996 estimated



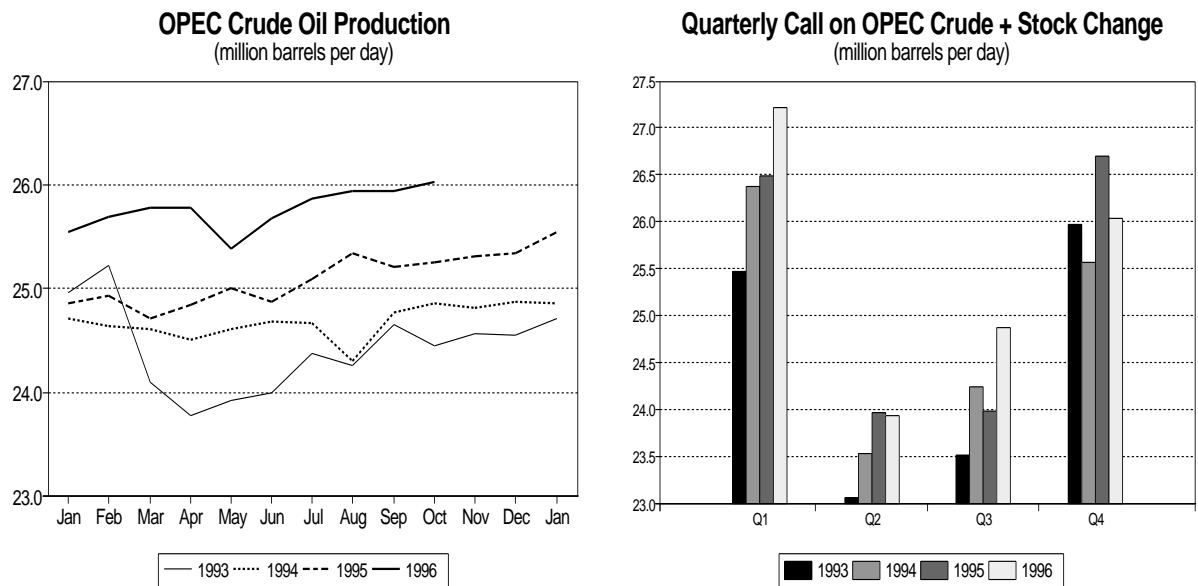
Note: September- December 1996 estimated

One of the distinctive aspects of recent oil supply developments has been the volatility of Australian offshore production from the Carnarvon Basin area off Northwest Australia. The right-hand graph above depicts the source of the volatility; the erratic performance of the two largest areas, Wanaea-Cossack and

Griffin, and the interplay of opposing trends, upwards for the initial Northwest Shelf Development Project (NWSDP-Goodwyn, North Rankin and North Rankin West condensate fields) and downwards for the other older producing areas (Thevenard Island, Harriet, Airlee, Barrow Island and Wandoo). The Griffin field began producing at the end of 1994 and since then has been producing at or near its 80 kb/d capacity about one-third of the time. Production was affected by maintenance outages in January 1995 and October-November 1995, and storms in April-May 1996. The Wanaea-Cossack project (the crude oil phase of the NWSDP) commenced production from the *Cossack Pioneer* FPSO in November 1995 but was taken out of service in mid-December and did not return until mid-February. Since then, monthly average output has varied from under 60 kb/d to over 100 kb/d due to problems with a gas export pipeline. However, with the recent debottlenecking of the gas processing system mentioned above, Wanaea-Cossack output is projected to reach 120 kb/d in December and should be at its 135 kb/d full capacity in 1Q97.

OPEC

OPEC crude oil production is estimated to have increased by about 95 kb/d in October to 26.03 mb/d. There were highs for Qatar and Algeria and continued Neutral Zone production above 500 kb/d combined with recoveries in Indonesia and Nigeria (following unexpected reductions in September) and a moderate increase in estimated Iranian production.



As in September, the perception of increased availability of **Saudi Arabian** crude is not borne out in tanker tracking data which suggest a decline in Saudi production on the order of 50 kb/d in October, although exports in the last week of the month are consistent with a production level of 8.6 mb/d. However, with the second week of the month at just over 7.0 mb/d and the other two weeks under 8.0 mb/d, the calculated average is just over 7.8 mb/d. Averaging first and last week data and smoothing the monthly changes results in a 50 kb/d decline from 7.95 mb/d to 7.90 mb/d versus a decline in the unadjusted data of 300 kb/d. Consequently, the 7.90 mb/d figure is considered to be more representative of the underlying Saudi production trends.

Indications are that October **Kuwaiti** and **Neutral Zone** production are each about the same as in September, at 1795 kb/d and 505 kb/d respectively. For the Neutral Zone, a 15 kb/d decline in Khafji production about equalled offshore gains at Hout and continued increases in onshore production (to 210 kb/d). An additional 15 kb/d decline at Khafji that is anticipated to occur in November is not expected to be offset by gains elsewhere, reducing Neutral Zone output to just below 500 kb/d. October **UAE** production also appears to have matched September's level (2185 kb/d). Offsetting changes of around 20 kb/d, upwards at Umm Shaif and downwards for Lower Zakum, resulted in the two fields each producing 220 kb/d. Murban production remained at 900 kb/d, while a small decrease in other Abu Dhabi fields equalled a small increase for Dubai.

The start-up of **Qatar's**, al-Rayyan field on 10 October only appears to have added about 5 kb/d to the October monthly average, although to a record 515 kb/d, as some of the al-Rayyan increase was offset by lower production from existing oil fields, particularly the Maydam-Mahzam field where maintenance began on 15 October and was completed on 4 November. Expanding liquids extraction from increased natural gas production is estimated to have raised Qatar's NGL production by 10 kb/d in October to 135 kb/d. **Iranian** production returned to 3.70 mb/d after dropping below 3.67 mb/d in September. Half of the monthly averages so far this year have been at 3.7 mb/d or above and half below, contrary to 1995 when only three months averaged 3.7 mb/d or better. Increased offshore capacity is believed to have been responsible.

The largest estimated increase in OPEC production in October occurred in **Indonesia**, where problems in the Belida field had been reported to restrict production to 1.35 mb/d in September, although tanker tracking data indicated a much sharper decline in September (to under 1.25 mb/d). It is believed that production increased by 70 kb/d to 1.42 mb/d in October. It is possible that movements in and out of inventories during refinery maintenance affected the normal relationship between exports and production used to impute domestic output from the tanker data.

Nigerian crude oil production recovered in October, primarily due to higher Qua Iboe output, which reached a new high of 450 kb/d following a decline to under 420 kb/d in September. Maintenance at the nearby offshore Oso condensate complex reduced Nigerian NGLs by 45 kb/d to 65 kb/d (onshore Nigerian NGLs of 50-70 kb/d are included with crude oil). In addition to the Qua Iboe gain, an increase of 10 kb/d in the Bonny and Forcados areas (to 940 kb/d) and smaller gains in the Odudu and Pennington areas raised total crude output to above 2.2 mb/d for the first time this year, despite the continued uncertainties about the government's policy towards foreign companies. (The latest proposal is a partial sell-off of the government's interest in the various joint-ventures operating in the upstream sector and in its four underutilised refineries.)

Decreases of 15 kb/d in **Libya** and 5 kb/d in **Venezuela** reflect normal variations around a static production level of 1.4 mb/d in the first case and around an upward trend in the second case. The upward trend in **Algerian** production continued with the eighth consecutive 5-15 kb/d monthly increase of the year based on increased output from new fields being developed by foreign joint-ventures.

Former Soviet Union (FSU)

Production

Russian production in September was 85 kb/d below August's level. Crude oil production averaged 5.8 mb/d versus 5.9 mb/d in August. Russian NGL production rose from 155 kb/d to 165 kb/d. Most of the Russian "New Companies" had lower output in September but Lukoil's 55 kb/d was by far the largest decline. Sidanco, Yukos and Noyabr'sk all had production about 10 kb/d lower than the previous month.

Production is estimated to have fallen an additional 30 kb/d in October, but is expected to hold steady in November and increase slightly in December, partly due to seasonal increases in NGL production. For October, lower joint-venture output and a decline in Gazprom crude production is expected to exceed recoveries in production from Lukoil and Noyabr'sk.

September production from **Kazakhstan** is reported to have been 461 kb/d, a decline of 13 kb/d from August. The Tengizchevroil joint-venture maintained its output at 104 kb/d, but production from the Uzen and Atktyubinsk areas each decreased by 5 kb/d and Karachaganak condensate production was only 33 kb/d, well below capacity and only a little more than half production in 1Q96. With both Karachaganak and Uzen new ownership arrangements are being worked out.

Net Exports

FSU total net exports increased in October to 2.89 mb/d. The growth contrasts with the autumn decline seen in the past few years. Exports through the Baltic Sea were 910 kb/d, some 240 kb/d higher than the previous month or 260 kb/d higher than the same month last year. Total product exports were 330 kb/d higher than those of October last year, with fuel oil exports 175 kb/d higher at 335 kb/d and gasoil exports 120 kb/d higher at 350 kb/d.

1994-1996 Net FSU Exports

(million barrels per day)

	1994	1995	1996 ^f	1Q96 ^f	2Q96 ^f	3Q96 ^p	Jun ^f	Jul ^f	Aug ^f	Sept ^f	Oct ^p
Black Sea Exports*	1.04	0.98	†	1.02	1.27	1.19	1.28	1.15	1.23	1.18	1.10
Baltic Exports	0.56	0.61	†	0.65	0.84	0.80	0.90	1.00	0.73	0.67	0.91
Total Seaborne	1.60	1.59	†	1.67	2.11	1.99	2.18	2.16	1.96	1.84	2.01
Druzhba Pipeline**	0.81	0.83	†	0.75	0.77	0.87	0.80	0.85	0.87	0.90	0.93
Total Exports	2.41	2.42	†	2.43	2.88	2.86	2.98	3.00	2.82	2.75	2.94
Imports	0.03	0.04	†	0.03	0.03	0.05	0.06	0.06	0.04	0.05	0.05
Net FSU Exports	2.39	2.39	2.52	2.39	2.85	2.81	2.92	2.94	2.79	2.70	2.89
NB: Crude Oil	1.91	1.91	†	1.92	2.12	2.17	2.13	2.23	2.16	2.13	2.20
Oil Products	0.47	0.48	†	0.48	0.74	0.64	0.80	0.71	0.63	0.58	0.69

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

† Data not available

f Forecast

** Crude oil only

p Preliminary

r Revised

Reportedly, the Russian government is likely to impose a tariff on fuel oil exports during the winter, starting 1 November, as it did last winter when exports were reduced to below 100 kb/d. Only five out of 28 Russian refineries are said to be able to produce low sulphur gasoil that meets the stricter EU specification that became effective on 1 October. However, high sulphur Russian gasoil is used as heating oil in Europe and total gasoil exports were strong as mentioned above.

Russian Oil Production 1994-1997

(thousand barrels per day)

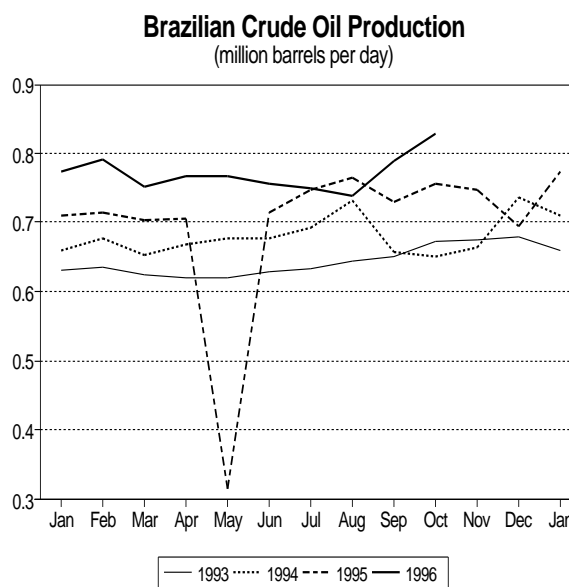
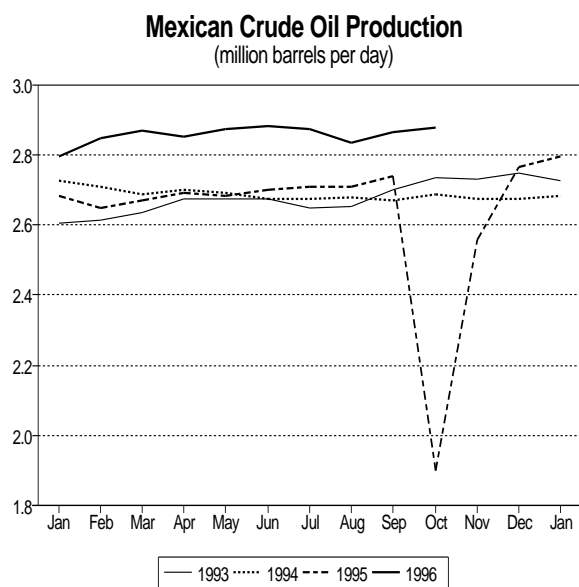
	1994	1995	1Q96	2Q96	3Q96	4Q96	1996	1997	Chg 96-97
"New Companies"									
Lukoil	1106	1110	1084	1068	1059	1073	1071	1111	+40
YUKOS	716	707	706	703	702	681	698	680	-18
Surgut	685	667	653	668	666	642	657	614	-43
Sidanco	533	453	419	420	413	404	414	400	-14
Tyumen Oil Co.	473	451	426	426	430	432	428	397	-31
Sibneft (Noyabr'sk)	454	407	377	376	373	393	380	401	+21
Slavneft.	252	259	260	261	255	260	259	273	+14
East Oil Co.	206	218	224	227	224	220	224	219	-5
ONAKO	148	148	150	153	160	149	153	146	-7
Sibero-Uralskaya	6	5	1	0	0	0	0	2	+2
Regional Companies									
Tatneft	462	500	501	501	496	511	502	534	+32
Bashneft	376	358	333	325	328	332	329	345	+15
KomiTek	139	89	86	84	90	97	89	109	+19
Yunko	25	12	21	6	3	4	8	19	+11
State Enterprises									
Rosneft	257	255	259	250	262	255	256	240	-17
Gasprom & Other State Cos.	97	79	67	63	78	65	68	62	-6
Joint-Ventures	221	257	264	302	343	283	298	305	+7
Total Crude Oil	6154	5975	5831	5833	5881	5800	5836	5855	+19
Condensates	174	179	176	158	158	180	168	203	+35
Total Russian Oil	6328	6154	6007	5991	6038	5980	6004	6058	+54

Other Non-OPEC

Latin America

Mexican crude oil production increased by 32 kb/d to 2862 kb/d in September according to data from the state oil company PEMEX. The increase was larger than expected and made up for a large part of the 50 kb/d production lost in July and August due to the disruption of gas injection operations after the Cactus plants main processing unit exploded in late July. However, NGL production has not recovered

as fast as expected, increasing only 12 kb/d in September. It was thought that other units at the Cactus site and higher utilisation of other plants would have allowed a quicker recovery than has occurred so far. Exports increased by twice as much as crude oil production, with the heavy Maya crude oil stream representing the vast majority of the incremental crude exports. Exports to the US increased by 77 kb/d, while exports to Europe were up by 15 kb/d.



Data from Petrobras show August **Brazilian** production continuing to be constrained by technical problems in the Campos Basin that held offshore output from the Rio de Janeiro Province to 507 kb/d versus 550 kb/d in February, and 529 kb/d in July. Half of the Campos decline was made up for by the return of Bahia Santos offshore production to nearly 20 kb/d from under 9 kb/d in July and 12-14 kb/d over the first six months of the year. August production fell about 15 kb/d short of expectations, with all of the shortfall in the Campos Basin. However, onshore production exceeded expectations, particularly in the Rio Grande do Norte and Bahia Provinces. Aggregate production is reported to have increased sharply in September, with crude oil rising 60 kb/d to 789 kb/d plus another 35 kb/d of NGLs. Most of the gain is believed to have occurred in the Campos Basin where the new P-25 floating production system was started up in August and problems at the Marlim field were alleviated. Output is estimated to have increased another 40 kb/d in October and Petrobras expected to average 900 kb/d in November, consisting of 865 kb/d of crude oil and 35 kb/d of NGLs.

Major Brazilian Offshore Projects 1996-1998

Petrobras Designation	Type*	Start-up Date	Field	Water Depth	Former Name**	Oil (kb/d)	Gas (mcm/d)	Estimated Cost
P-25	FPS	August 1996	Albacora	1898	Zapata Arctic (s)	104	3,200	\$97M
P-19	FPS	May 1997	Marlim	2310	Starwinner (s)	100	2,000	\$165M
P-32	FPSO	June 1997	Albacora	2640	Cairu (t)	100	2,000	\$93M
P-34	FPSO	June 1997	Barracuda	2640	Morais (t)	45	1,000	\$115M
P-31	FPSO	Sep/Oct 1997	Albacora	1980	Vidal de Negreiros (t)	100#	3,000	\$163M
P-26	FPS	September 1997	Marlim	3201	Illiad (s)	100	2,000	\$177M
P-33	FPSO	February 1998	Marlim	2574	Henrique Dias (t)	50	1,500	\$155M
P-35	FPSO	April 1998	Marlim	2838	Jose Bonifacio (t)	100	3,000	\$155M
P-27	FPS	First Half 1998	RJS-377/403	na	Penrod 71 (s)	40	1,800	\$100M
P-37	FPS/FPSO	April 1999	Marlim	2970	?	100	na	na

* FPS denotes floating production system, generally a converted jack-up rig or semisubmersible drilling rig; FPSO denotes floating production storage and offloading vessel, normally a converted tanker

** (s) is converted semisubmersible, (t) is converted tanker

production capacity, processing capacity is planned to be 200 kb/d to allow development of surrounding fields

Source: Based on information from Petrobras that appeared in *Brazil Energy*, October 1996

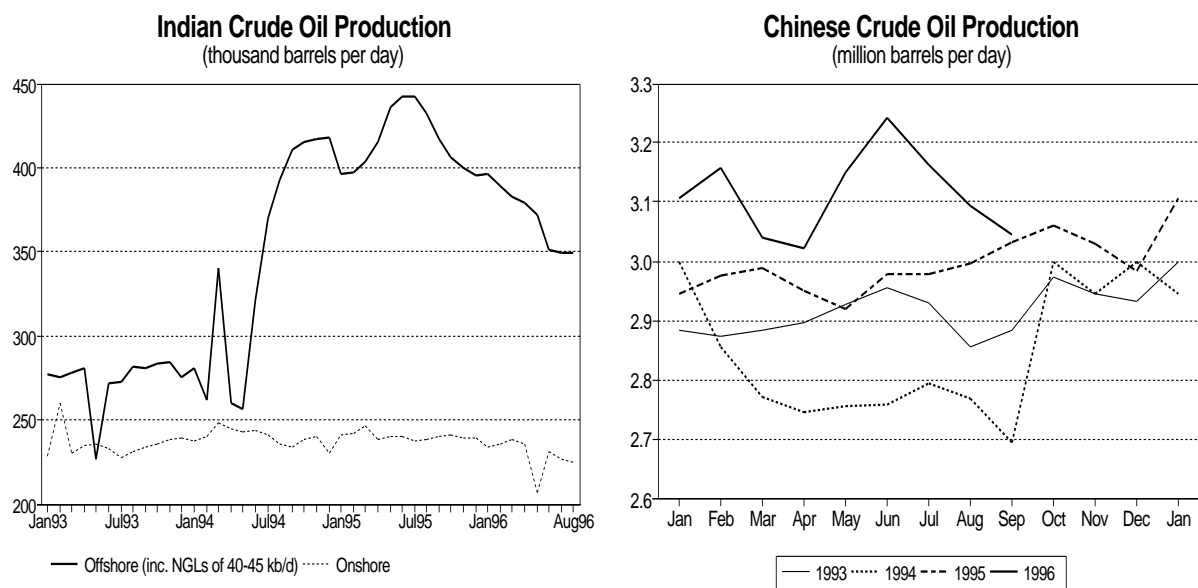
The table above illustrates the aggressiveness of the development plans now underway in the Campos Basin. The projects listed here represent as much production capacity as the current total Brazilian onshore and offshore production. Half of the projects relate to the Marlim field where production of over 500 kb/d is likely before the turn of the century. Albacora production could be at least half that amount. Several additional prospects have been recently identified both in the Campos Basin and elsewhere. The Marlim Sul (South) field has seen three recent successful exploration wells, one in over 5600 feet of water, completed in October and two others just announced on 1 November. Another large discovery in the offshore area adjacent to Sergipe Province was announced just in early October. A critical question is the ability of Petrobras to fund these projects. However, government commitments to pay its past debts to Petrobras and the opening up of the upstream sector to joint-venture and foreign participation makes it appear at this point as if funding will not be a problem.

Argentina produced 797 kb/d of crude oil in August according to the Instituto Argentino del Petroleo, an increase of 6 kb/d versus July and 80 kb/d above August 1995. Natural gas production fell by 8% after reaching a peak of 3.92 bcf/d in July suggesting an early start for seasonal decreases in NGL production. Nonetheless, Argentine gas production was still 6% above last August's level. **Colombian** production fell in August to 625 kb/d from 640 kb/d in July as the result of lower Cusiana field production. **Peru's** oil production increased in September to a yearly high of 124 kb/d from 121 kb/d in August.

Asia

India's oil production fell again in August, to 630 kb/d (including 55 kb/d of NGLs), due to lower onshore production. Offshore output held steady at 350 kb/d, while onshore crude oil production was 2 kb/d lower in Gujarat State for the second successive month, after having increased sharply in June. The cause appears to be chronic problems with electric power outages and water incursion in two of the region's primary fields, Gandhar and Ankleshwar. Production from the northern Nagaland and Arunchal areas and the southern Tamil Nadu region each equalled July levels, but are lower than year-earlier levels by a combined 15 kb/d and are all below production targets. Although not declining, offshore production was more than 10% below last year level as the Neelam and Bombay High areas continue to have problems with unexpectedly high gas and water contents in well flows from key reservoirs. The Indian state oil company, ONGCL, is still in the process of formulating a plan to rectify the problems at Bombay High, but has recently submitted a proposal to the government to bring in foreign oil companies (probably on a joint-venture or other profit-sharing basis) to deal with the problems at the smaller Neelam field.

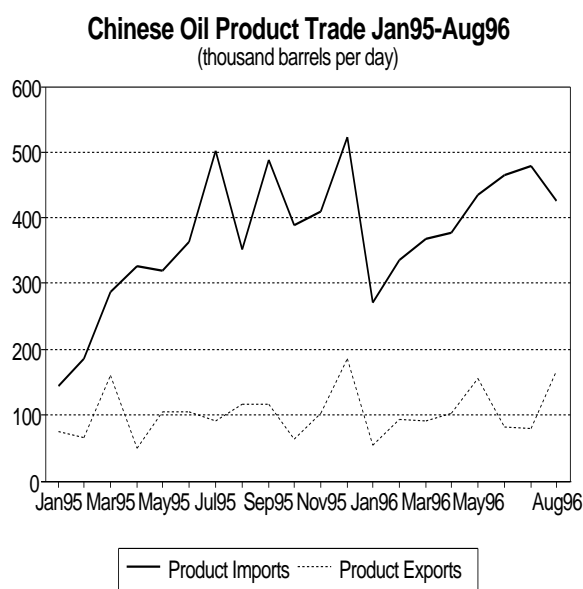
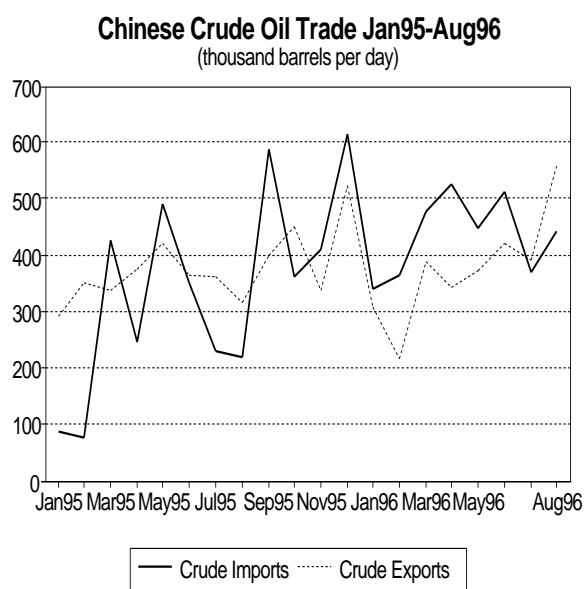
The efforts at the two principal offshore fields are not expected to have a major effect over the next six months, however. Consequently, the 4Q96 and 1Q97 Indian production forecast has been revised downwards by 20-30 kb/d. As mentioned in last month's Report, some near-term increases are expected, reflecting production escalation at the Bay of Bengal Ravva field.



Chinese oil production was declined in September versus August by nearly 50 kb/d to 3050 kb/d as the recovery in onshore was not as strong as expected and storm related outages in the Chinese offshore were much greater than initially thought. The largest monthly increase occurred in the Tarim Basin where output nearly doubled from 35 kb/d to just under 70 kb/d, following flash flooding in the region in August. Gains of 5-10 kb/d were seen at Daqing and Changqing and output from ten of the other twenty producing areas increased while eight remained essentially unchanged. Only the Shengli and Qinghai areas recorded small declines.

A decrease in offshore production of about 30 kb/d was expected due to the impact of Typhoon Sally on East China Sea production early in the month. However, further storms prevented the FPSOs from being reconnected to the fields and September offshore production averaged only 211 kb/d, a drop of 107 kb/d from August. The September decrease notwithstanding, Chinese offshore production has far exceeded government targets and new fields are being discovered and developed in all three Chinese offshore areas; the South China Sea, the Bohai Gulf and the Beibu Gulf. (For a detailed discussion of the Chinese and other offshore prospect see *Global Offshore Oil Prospect to 2000* details of which are to be found at the back of this Report). Recent successful wells at the Boxi oil field in the Bohai Gulf and the Huizhou 32-5 discovery in the East China Sea are expected to lead to additional offshore production in 1997 and 1998.

Chinese total net imports of oil in August at 143 kb/d were the lowest of this year. About 300 kb/d of the 560 kb/d total crude exports went to Japan. Product imports continued steady with diesel oil imports at 119 kb/d and fuel oil at 157 kb/d, 1.5% and 20.3% above the last year's level respectively.



Africa and Other Middle East

Egyptian crude oil production is reported to have fallen to 827 kb/d in September from 842 kb/d in August and 887 kb/d in September 1995. Ageing Gulf of Suez fields are experiencing losses of reservoir pressure and problems with well performance in some key fields. The latter difficulty is thought to be correctable with planned well workover projects. New satellite fields in the southern Gulf of Suez and continuing growth in Western Desert production are expected to lead to a turnaround in Egyptian production before the end of the year which is projected to continue into 1997. Nonetheless, the 3Q96 estimate for total Egyptian oil production has been lowered slightly from 919 kb/d to 912 kb/d (including 67 kb/d of NGLs), while the 4Q96 projection has been reduced by 40 kb/d to 922 kb/d.

Crude oil production in **Oman** rose to just below 900 kb/d in September and October from 875 kb/d in July and 885 kb/d in August as output from fields operated by the Petroleum Directorate of Oman surpassed its 850 kb/d target level. Other operators produce about 45 kb/d, but their output has been declining slowly from close to 50 kb/d at the beginning of the year.

OECD Trade

The tables below show net crude oil and product imports by OECD region for 1Q96 and 2Q96 compared with data for 1Q95 and 2Q95. (It will be noted that, due to inconsistencies in import and export data reported by governments, the trade between OECD regions does not exactly balance and, in some instances, there are significant volumes from unspecified sources). The main feature of net crude oil imports to North America was the continuing growth in supplies from Latin America (as production increased). As a result of this growth, imports from the Middle East were lower than a year earlier in 1Q96 and represented only 16% of the incremental net imports in 2Q96. Imports from the Middle East to Europe increased in 1Q96. However, they decreased in 2Q96 when the increase in European crude runs of 470 kb/d was largely met by increased North Sea production and imports from the FSU and Africa. Pacific region crude runs in both 1Q96 and 2Q96 were marginally lower and there was no consistent pattern in the small changes of imports from the different regions.

Net Crude Oil Imports by OECD Regions

	North America				Europe				Pacific			
	1Q96		2Q96		1Q96		2Q96		1Q96		2Q96	
	kb/d	change*	kb/d	change*	kb/d	change*	kb/d	change*	kb/d	change*	kb/d	change*
Total Net Imports	6930	234	7713	577	6588	327	6552	-12	5139	-20	4335	-123
Sources:												
<i>OECD</i>												
North America	---	---	---	---	-989	33	-1080	-267	-7	33	-24	0
Europe	750	-17	939	23	---	---	---	---	0	7	-6	-6
Pacific	-73	-5	-33	28	0	0	0	0	---	---	---	---
<i>Non-OECD</i>												
Latin America	2973	310	3326	449	303	-35	316	-46	71	-2	77	-22
Non-OECD Europe	0	0	0	0	-76	-8	-56	61	0	0	0	0
FSU	0	0	26	26	1125	34	1415	225	0	0	0	-0
Middle East	1616	-78	1768	93	3534	317	3424	-171	3996	-128	3466	54
Asia (excl. China)	65	-8	95	34	0	0	-39	-42	766	38	609	-99
China	61	14	25	-18	0	17	0	0	242	-9	201	-32
Africa	1537	56	1536	-73	2544	288	2388	182	78	39	23	-13
Non-Specified	0	-39	32	15	147	-320	184	46	-7	4	-10	-4

* kb/d year-on-year change

North American net product imports increased in the first half of 1996, mainly due to the recovery of gasoline imports from Europe from the decreased level in the previous year. Fuel oil imports from Africa also recovered. In Europe, a decrease in fuel oil imports from Latin America (Venezuela) in 1Q96 was offset in volumetric terms by an increase in gas oil imports from the FSU. The increase in Pacific net product imports in the first half of the year was mainly kerosene, gasoil and fuel oil from Asia. Kerosene imports from North America in 1Q96 and naphtha imports from Asia in 2Q96 also boosted the total net imports.

Net Product Oil Imports by OECD Regions

	North America				Europe				Pacific			
	1Q96		2Q96		1Q96		2Q96		1Q96		2Q96	
	kb/d	change*	kb/d	change*	kb/d	change*	kb/d	change*	kb/d	change*	kb/d	change*
Total Net Imports	-39	125	157	201	249	15	487	-67	1215	170	1263	204
Sources:												
<i>OECD</i>												
North America	---	---	---	---	-160	-145	-135	-60	131	58	122	29
Europe	15	131	45	79	---	---	---	---	2	-3	3	0
Pacific	-107	-6	-115	-33	-2	2	-0	3	---	---	---	---
<i>Non-OECD</i>												
Latin America	37	-75	107	61	-1	-119	-12	42	9	-2	6	6
Non-OECD Europe	-8	-0	4	-0	-125	-0	-82	-0	3	-0	0	-0
FSU	5	6	-0	-4	320	128	417	54	5	-4	10	2
Middle East	-8	13	4	13	85	55	53	3	755	14	713	20
Asia (excl. China)	-132	31	-67	2	-77	-42	-54	-13	315	101	392	152
China	-6	-2	-3	0	0	-0	0	0	-22	3	-22	-5
Africa	168	18	184	65	228	-75	197	-75	11	3	24	1
Non-Specified	-3	9	0	18	-19	210	103	-21	5	-0	15	-0

* kb/d year-on-year change

OECD STOCKS

Industry Stock Changes in September and 3Q96

Preliminary estimates suggest that OECD industry stocks increased by only 0.1 mb/d in September. As shown in the table below, distillate stocks continued to build seasonally in North America and the Pacific but fell in Europe. Crude stocks decreased in all three regions.

As a result of the low stockbuild in September and the major downward revision to preliminary August stock data (discussed below), the 3Q96 stockbuild was only 0.4 mb/d. The average stockbuild for the northern hemisphere summer period (2Q96 plus 3Q96) was 0.7 mb/d compared with 0.6 mb/d in 1995 and there was thus only a very slight narrowing of the year-on-year shortfall over the six-month period.

Preliminary Industry Stock Changes in September
(million barrels per day)

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

* includes other products, feedstocks, NGLs and other hydrocarbons

Industry Stock Levels at the End of August and September

The preliminary end of August total OECD industry stock data shown in last month's Report has been revised downwards by 48 mb, with downward revisions occurring in all three regions. The largest revision of 35 mb was in Europe and 27 mb of this was in France, reflecting a 23 mb revision by the French government to the allocation of stocks between industry and government. This re-allocation has affected stocks throughout the period covered by this Report with a 19-23 mb reduction in industry stocks and a corresponding increase in government stocks.

Total OECD industry stocks at the end of September were 2429 mb, 91 mb lower than a year earlier, equivalent to three days lower in terms of days of forward demand. In comparing this year's stock profile with last year's, it should be borne in mind that the 4Q95 stockdraw was exceptionally high and there is the potential for an appreciable reduction in the year-on-year shortfall by the end of the year.

As shown in Table 5, 49 mb of the 91 mb decrease compared with a year earlier was in distillate. Pacific stocks were higher than a year before, while in Europe and North America they were lower by 14% and 10% respectively. Crude stock levels were appreciably higher in Europe, were essentially unchanged in North America but were some 12% lower in the Pacific region.

Regional Stock Developments in September

The sharp fall in crude oil imports more than offset the slight rise in production and **North American** crude oil stock levels declined by 0.3 mb/d to end the month close to the previous year's levels. Gasoline stocks increased as a result of seasonally lower demand and higher production. As shown in the graph on page 33, gasoline stocks have followed a very similar pattern this year to previous years but reaching a much lower first quarter peak. At the end of the month they were only 2% lower than a year earlier. In spite of seasonally higher demand and exports to Europe, distillate stocks continued to build from the low point reached at the end of March. Fuel oil stocks rose slightly but remained below previous years' levels. SPR stock levels continued to decline as a result of sales made by the US government, with the reduction over the June-September period totalling 13 mb.

USDOE weekly statistics indicate that total stocks decreased by 0.4 mb/d during the first 25 days of October. Distillate stocks increased by 0.2 mb/d and fuel oil stocks by less than 0.1 mb/d, while crude oil stocks were essentially unchanged and gasoline stocks fell by 0.3 mb/d. On 25 October, distillate (including jet/kerosene), gasoline and crude were estimated to have been lower than a year earlier by 8.8%, 4.0% and 2.4% respectively. It should be noted that the shortfall in distillate stocks compared with a year

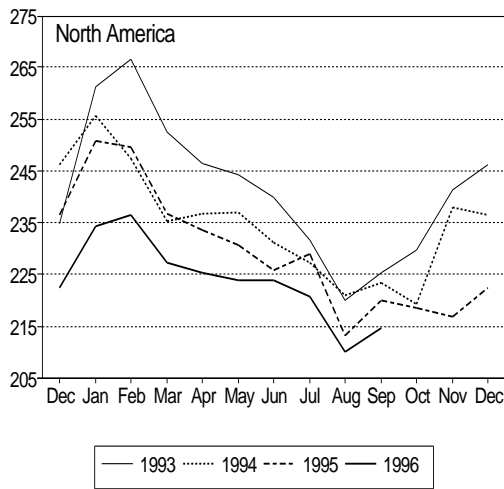
earlier was concentrated in the higher sulphur gasoil used for heating purposes. Stocks of this grade were 23.5% lower while stocks of the low sulphur grade used as diesel fuel were essentially unchanged (in spite of exports to Europe) and jet/kerosene stocks were 4.3% higher. This sharp contrast between low heating oil stocks and comfortable jet/kerosene stocks does much to explain the current low price differential between the two grades.

In Europe, despite sharply higher production, which more than offset the increase in refinery throughputs, crude stock levels continued to decline. It should be noted that the majority of the 29 mb increase in stock levels was in Norway and Turkey as discussed in previous Reports. Following the decline in August, gasoline stock levels increased to end the month essentially unchanged from a year earlier. Despite higher production and distillate imports from other regions, distillate stock levels decreased, reflecting strong demand. (It is of interest to note that distillate stocks decreased in September in 1992, 1993 and 1994 and that the end of September stock levels in 1995, against which comparisons are normally made, was the highest end of September level since 1991).

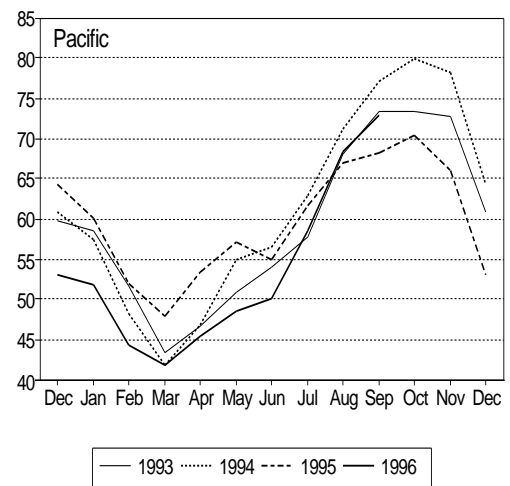
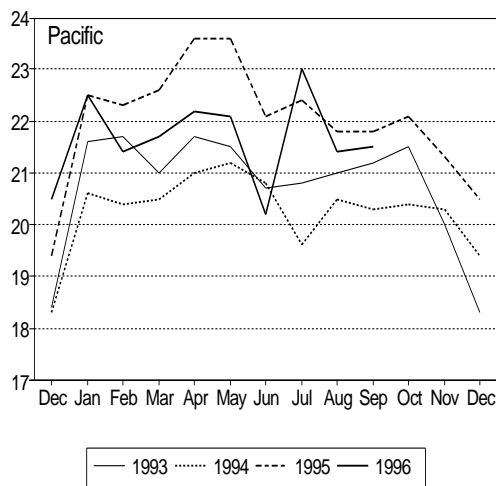
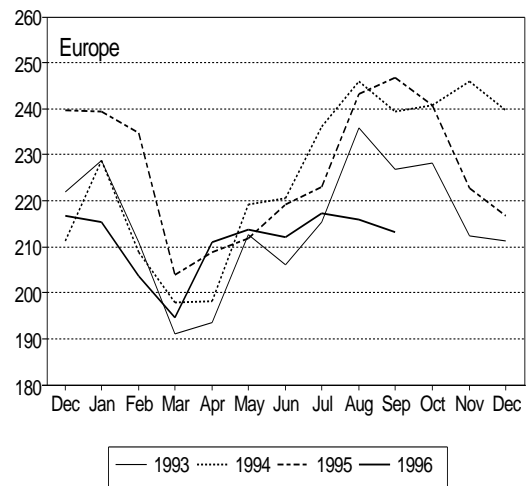
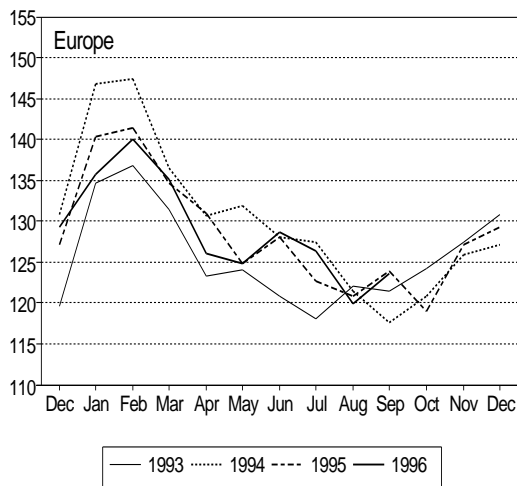
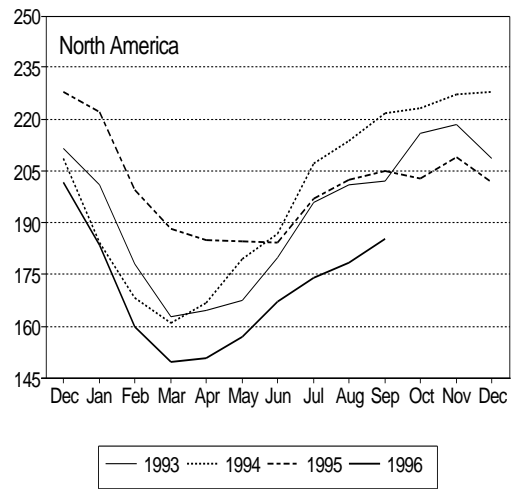
In the **Pacific** region, a sharp reduction in crude oil imports more than offset reductions in refinery throughputs and crude deliveries to the power generation sector, resulting in a 0.2 mb/d decrease in crude stocks. At the end of the month stocks were 12% lower than a year earlier. The reduction in gasoline production and imports was offset by lower demand, leaving stock levels little changed. As a result of lower production and somewhat higher demand, the rate of the distillate stockbuild slowed, following the typical seasonal pattern (see graph on page 33). At the end of the month, distillate stocks ended the month 7% higher than a year earlier. Lower fuel oil production led to a small reduction in fuel oil stocks, which ended the month unchanged from a year earlier.

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

Gasoline

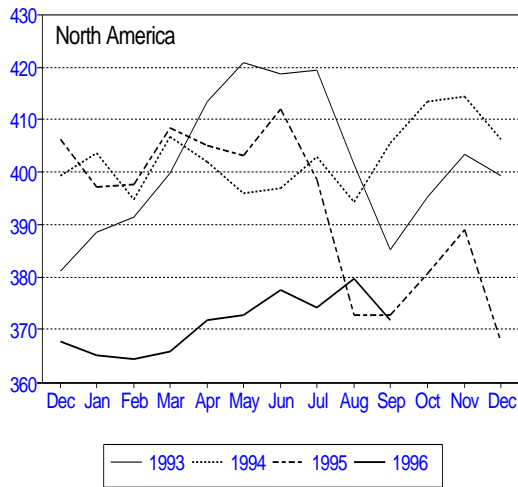


Middle Distillates

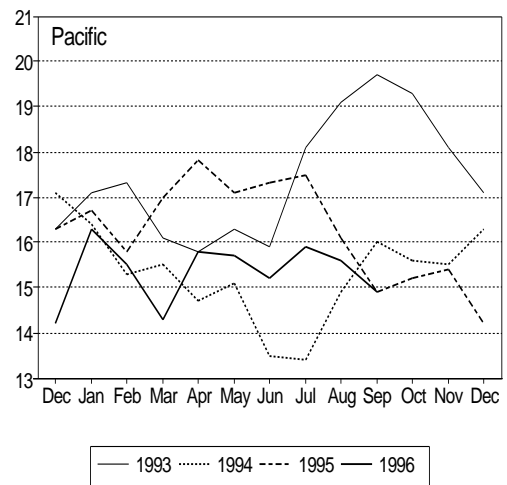
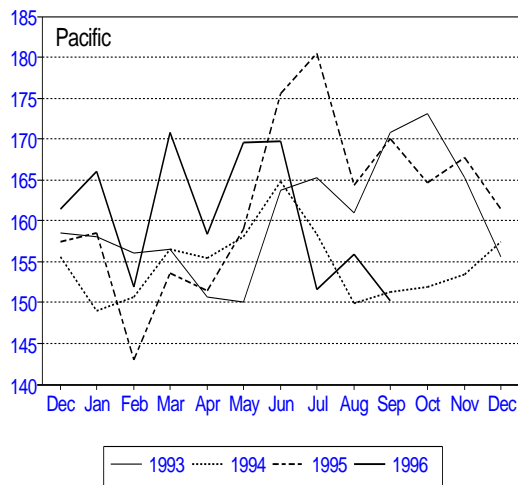
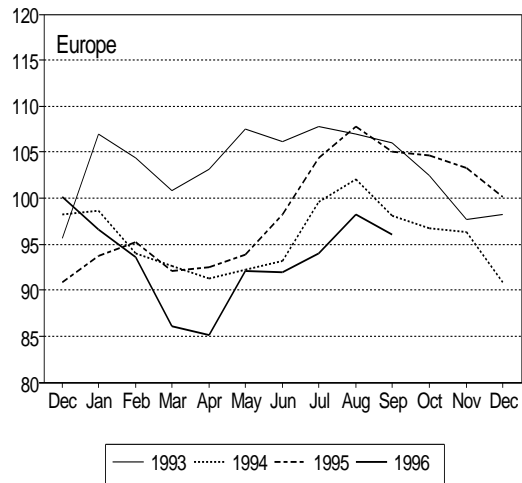
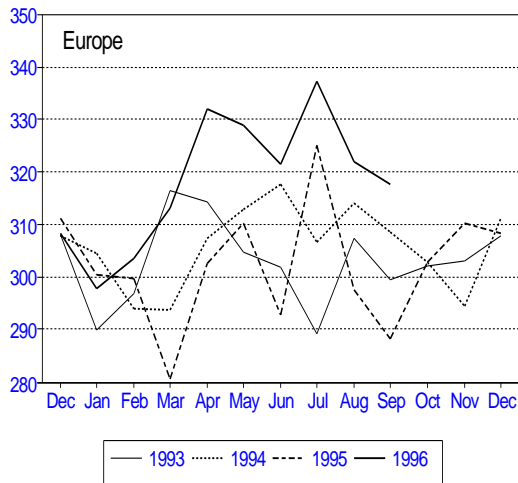
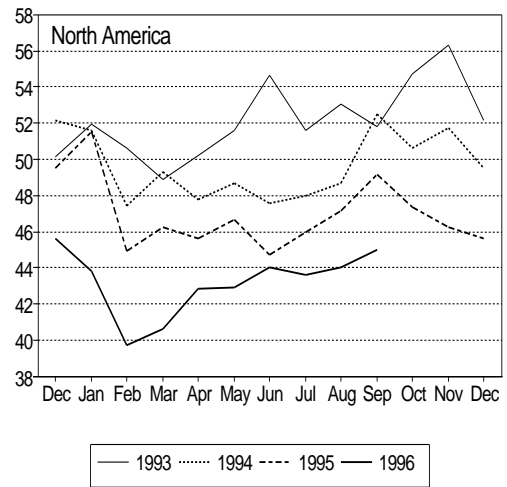


Regional OECD Industry End-Month Stocks: Crude Oil and Fuel Oil (million barrels)

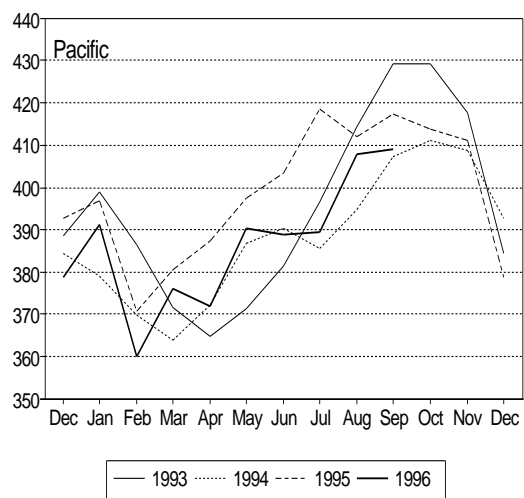
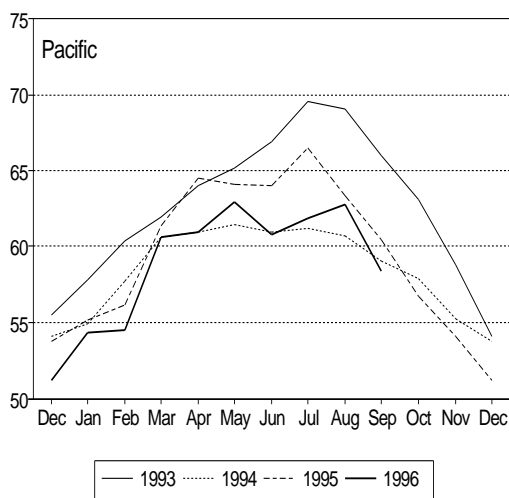
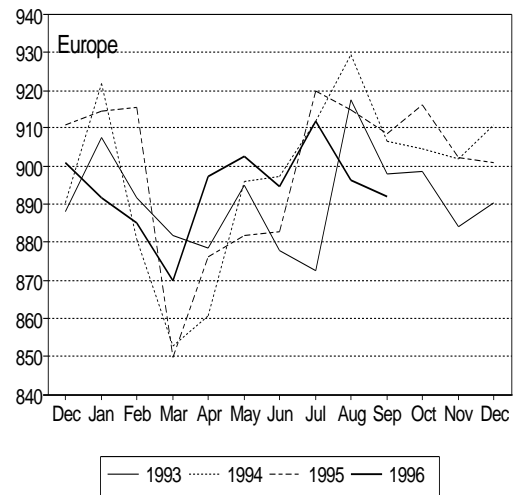
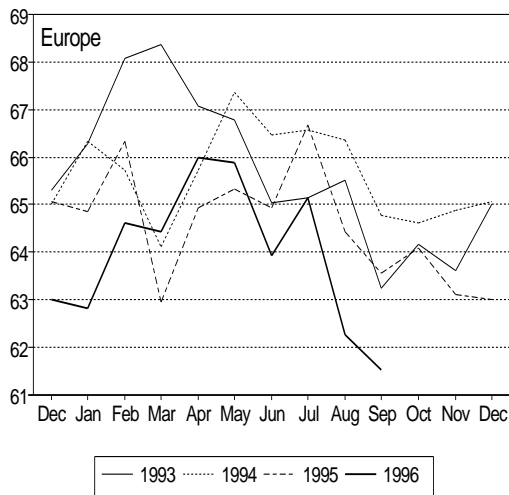
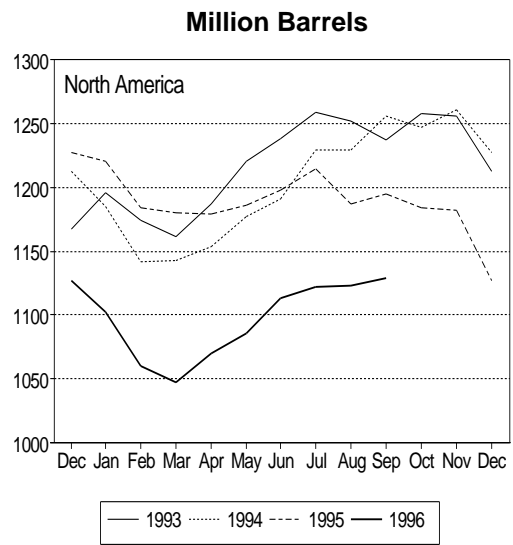
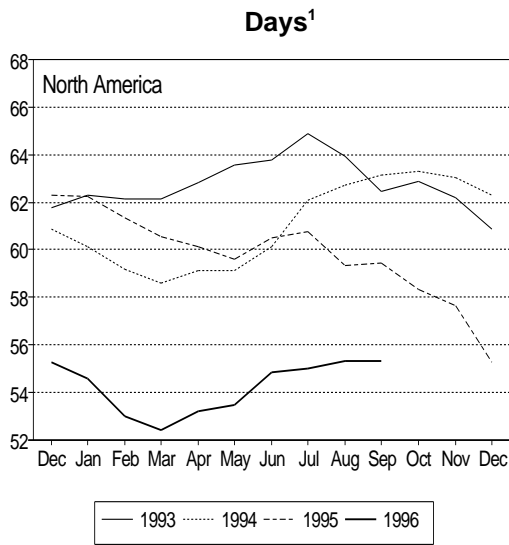
Crude Oil



Fuel Oil

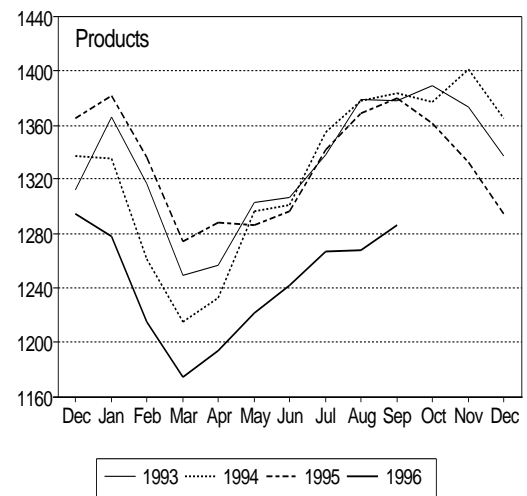
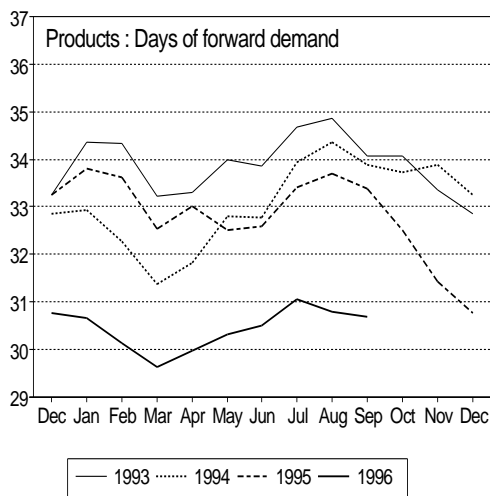
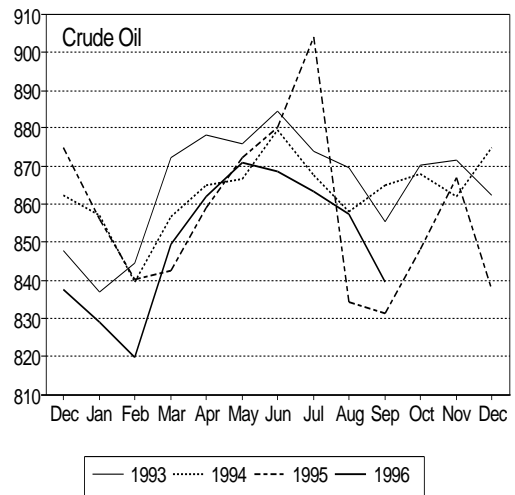
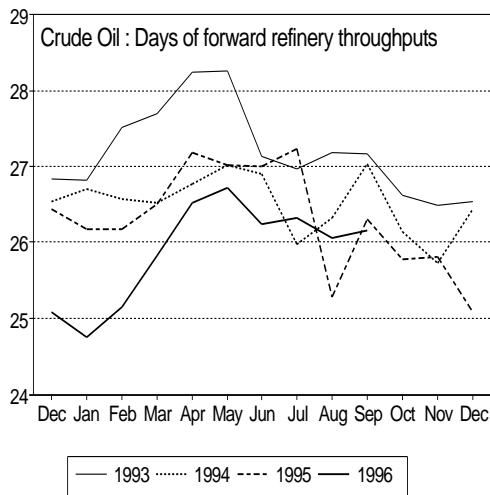
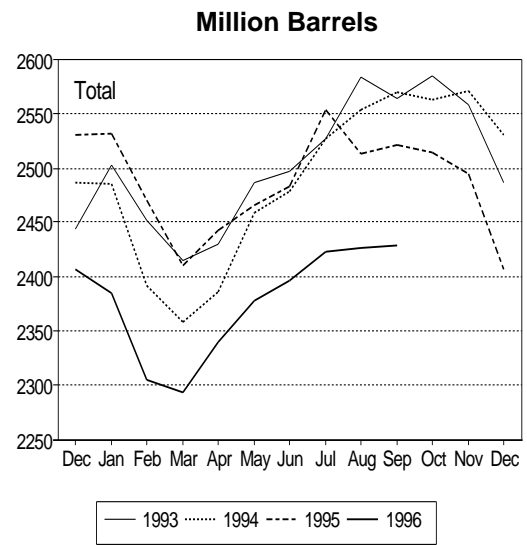
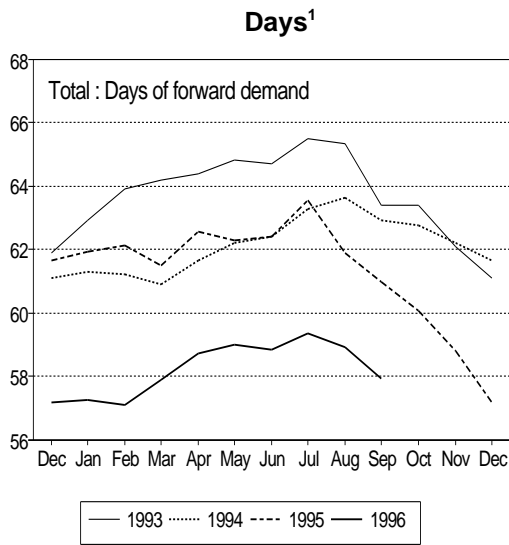


Regional OECD End-Month Industry Stocks (in days of forward demand and million barrels)



¹ Days of total stocks are based on demand for the next three months.

Total OECD End-Month Industry Stocks (in days and million barrels)



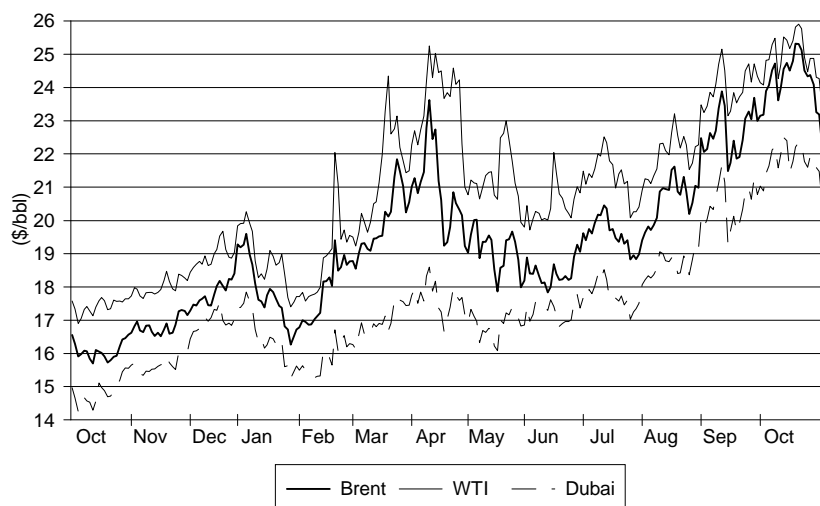
¹ Days of total and product stocks are based on demand for the next three months. Days of crude oil stocks are based on refinery throughputs for the next month

OIL PRICES AND REFINERY ACTIVITY

Summary

- Benchmark crude oil prices continued to rise sharply in the first three weeks of the month, mainly supported in the early part of October by the strength in Atlantic Basin gasoil prices and, when these started to decrease, by political developments in Russia and increased tensions between Kurdish factions in northern Iraq. After peaking at new post-Gulf War highs, prices decreased sharply in the last decade of the month, with prices for Brent and WTI declining by \$3.35/bbl and \$2.84/bbl respectively from the month's highs. Easing political tensions in northern Iraq and declining gasoil prices caused previously bullish market sentiment to erode and to trigger a sell-off in the futures market leading prices downward. Signs of oversupply in physical North Sea crude markets provided additional pressure on crude prices.
- Prices for sour crudes in the Mediterranean increased relative to those of Brent during most of the month as a result of tightening supplies, in particular of Iranian grades, but decreased relative to those of dated Brent in the last trading days of the month. The Brent/Dubai differential remained at more than \$2.00/bbl during most of the month, reflecting ample supplies of Middle East crudes. This, together with the closed transatlantic arbitrage possibility, led to increased exports of West African grades into European markets. Prices of light, sweet Asian grades strengthened significantly amid increasing demand for crude from Asian refiners.
- Heating oil's strength, the main driving force for the rally in oil markets in August and September began to ease on both sides of the Atlantic in the second week of October. Record gasoil production on the US Gulf Coast and higher sweet crude throughputs in Europe led to rising supplies in key markets and prices began to recede when signs of abundant supply of physical product caused a change in market sentiment. Gasoline prices on both sides of the Atlantic gained contraseasonal support for a brief period in late October, primarily as a result of unscheduled outages of large gasoline production facilities in the US and Venezuela, and strong demand from the UK ahead of an expected increase in gasoline excise tax in November. HSFO prices increased significantly in all major markets in line with supply tightness and strong demand, in particular, for bunker fuel.
- Refining margins in all major refining centres decreased in the first two decades of the month when crude prices increased steeply and increased in the last decade of the month when product prices, to some extent, lagged the appreciable decline in crude prices. Monthly average margins increased on the US Gulf Coast and, to a lesser extent, in Northwest Europe and Singapore (for cracking only) and remained almost unchanged in the Mediterranean.
- In November, refinery maintenance is expected to be concentrated in Asia and the Arabian Gulf, where some 700 kb/d and 450 kb/d of capacity is expected to be out of operation. In the US and Europe, shutdowns are expected to remain at significantly lower levels this autumn compared to last year.
- In September, the aggregate refinery throughputs in OECD countries remained unchanged from downwardly-revised August levels at 33.3 mb/d. Increases in Europe, North America and Australasia were offset by a decrease in Japan. Throughput levels in October are assessed to have declined appreciably in Japan and, to a lesser extent, in Europe and 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 August was \$20.12/bbl, \$0.64/bbl higher than in July. The corresponding estimates for September and October are \$22.20/bbl and \$23.80/bbl respectively. The latter is the highest monthly value since the Gulf War.

Spot Crude Oil Prices

Crude markets continued to rise appreciably well into the third week of October, mainly driven by the strength in European gasoil markets, by political developments in Russia and the flare-up of tensions between Kurdish factions in northern Iraq. In addition, unexpectedly low third-quarter growth in North Sea crude flows continued to contribute as a driving force to the upward pressure on the whole of the oil price complex.

However, after reaching new post-Gulf War highs prior to the expiry of the November contract of WTI on the NYMEX (dated Brent peaked at \$25.32/bbl on 18 October and WTI at \$25.90/bbl on 21 October), crude oil prices decreased sharply in the last ten days of October, with prices for Brent and WTI declining by \$3.35/bbl and \$2.84/bbl respectively from the month's highs. This steep decline, resembling in its magnitude the decline of crude oil prices in April (when fading expectations of a gasoline supply squeeze combined with progress at the UN/Iraqi talks) was mainly the result of a (limited) buildup of crude and heating oil stocks in key regions of the US, possibly decreasing spot market demand for gasoil on both sides of the Atlantic, indications of a surplus in North Sea crude markets (see Supply section above) and easing political tensions in northern Iraq. The combination of these factors, in particular the agreed cease-fire between the Kurdish factions, triggered the liquidation of the predominantly long positions in crude and gasoil futures that had been accumulated by some traders on the IPE and NYMEX over the previous few weeks.

Spot Crude Oil Prices and Differentials

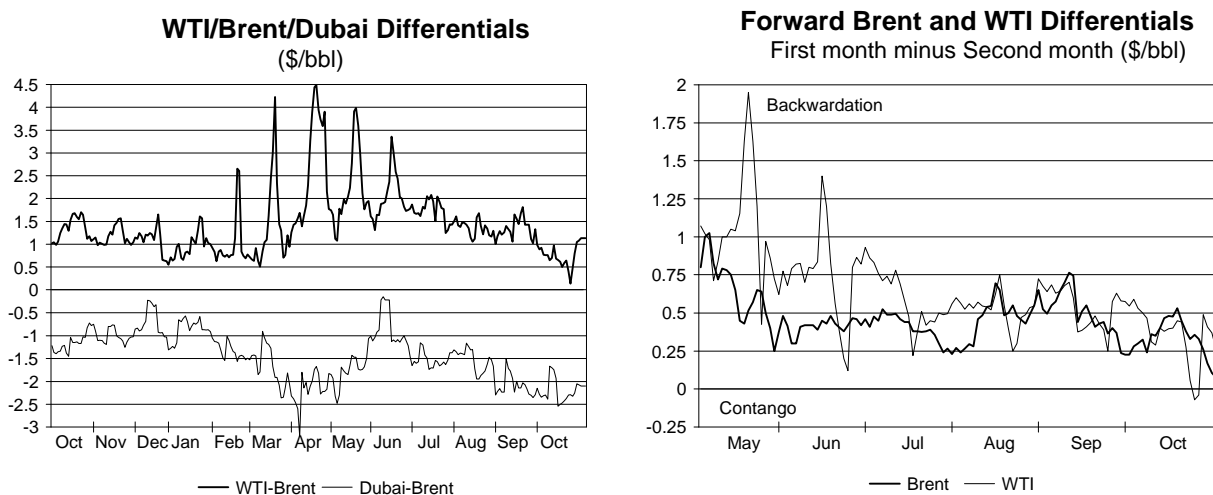
(monthly and weekly averages, \$/bbl)

	Aug	Sep	Oct	Change	Week Ending:					
					27 Sep	04 Oct	11 Oct	18 Oct	25 Oct	01 Nov
Brent Dated	20.60	22.69	24.15	1.46	23.10	23.46	24.21	24.78	24.73	22.93
Dubai	18.66	20.47	21.75	1.28	20.81	21.15	21.98	22.06	21.99	21.17
WTI	21.96	24.01	24.89	0.87	24.39	24.44	24.93	25.47	25.18	23.96
Brent over Dubai	1.93	2.22	2.40		2.29	2.30	2.23	2.72	2.74	1.76
WTI over Brent	1.36	1.32	0.74		1.29	0.98	0.72	0.69	0.45	1.03
Brent 1st month minus 2nd month	0.44	0.52	0.32		0.40	0.25	0.32	0.47	0.37	0.12
WTI 1st month minus 2nd month	0.52	0.55	0.36		0.46	0.56	0.39	0.41	0.13	0.36

Brent prices continued to strengthen further relative to those of WTI in October (see table above), supported by the high level of European gasoil and low-sulphur diesel prices. The WTI/Brent differential narrowed from about \$1.00 /bbl at the start of the month to a low of \$0.10/bbl in the fourth week of the month, as shown in the left-hand graph below. This narrow differential kept the transatlantic arbitrage possibility for Brent and Brent-related (mainly North Sea and West African) crudes firmly closed throughout the month. Strong European refiner demand for sweet, gasoil-rich crudes, in line with the firm gasoil and low-sulphur diesel demand, led to an appreciable increase in the premia for crudes such as Nigerian Forcados and Bonny Light, and North Sea Statfjord and Oseberg over Brent. These premia however softened towards the end of October, with premia for gasoil-rich North Sea crudes over Brent decreasing more steeply than those of West African grades.

In the first three weeks of the month, WTI prices were supported by concerns about the heating oil supply situation in the northeast of the US as a result of continuing low heating oil inventories heading into the winter heating season, strong technical buying activity on the NYMEX and, to a lesser extent, several minor, weather-related crude loading disruptions in Mexican ports. Despite the closed transatlantic arbitrage possibility for North Sea and West African grades, US spot markets remained well supplied from a combination of new US Gulf grades and Latin American imports. As in Europe, the demand for sweet, gasoil-rich grades led to a widening of the premia for crudes such as Light Louisiana Sweet over WTI and a widening of the sweet-sour crude differential (see graph to the right). In addition, regional US sour crudes came under pressure from the start of a new round of crude sales from the US Strategic Petroleum Reserve and good availabilities of Mexican and Venezuelan grades.

Brent and WTI remained in backwardation throughout the month. However, the level of backwardation in the near months decreased towards the end of October (see right-hand graph below). In the first half of the month the premium of dated Brent over front-month Brent increased to almost \$0.40/bbl, in line with the firm demand for physical North Sea crude, before decreasing steeply and turning into a discount of dated Brent to front month Brent of some \$0.40/bbl at the end of October. This steep decline in the relative value of dated Brent is believed to reflect growing near term length in North Sea grades. Forward price spreads in outer months for Brent and WTI futures have remained relatively stable (the slope of the curve remained unchanged whereas the absolute level of the curve changed), which indicates that the increase in crude prices in recent weeks was due more to a significant amount of trading activity than a prompt supply shortage.



In early October, sour crude prices in the Mediterranean continued to gain strength relative to those of Brent, and Urals traded at a discount of some \$0.55/bbl until towards the end of the month, despite the steep increase in sweet Atlantic Basin benchmark crude prices. This growing relative strength in sour crude prices in the last two months was mainly the result of a tightening availability of sour crude in the Mediterranean (as shown by the decreasing volume of Iranian crude moving through the Sumed pipeline), largely caused by a reported increase in the sale of marginal Iranian crude volumes to the Far East as opposed to the Mediterranean. The sharp decrease in the dated Brent/Urals differential to about \$1.10/bbl by the end of October is more related to the steep decrease in dated Brent prices relative to front-month Brent prices rather than to a greater weakness in sour crude prices than for sweet crude prices in the Mediterranean. The Brent/Iranian Heavy spread moved in line with that of Urals, narrowing to \$1.50/bbl for most of the month before widening to \$1.95/bbl by the end of October.

During most of October, the Brent/Dubai spread remained at a level of more than \$2.00/bbl, narrowing briefly to about \$1.66/bbl in the second week of the month and widening briefly in the third week to more than \$2.50/bbl (see the left-hand graph above). This volatility in the differential was mainly due to the volatility of Brent prices. The comparably wide differential reflected to some extent the higher availabilities of Middle East crudes in line with the high level of Asian refining capacity in turnaround this autumn, and, possibly, the gradual increase of Alaskan North Slope (ANS) crude flows into northeast Asia.

For most of the month, West African crude supplies continued to be confined to Europe and Africa due to the wide Brent/Dubai differential, which discouraged exports to Asia, the low WTI/Brent differential, which discouraged exports to North America, and the firm demand for gasoil-rich sweet crude in Europe.

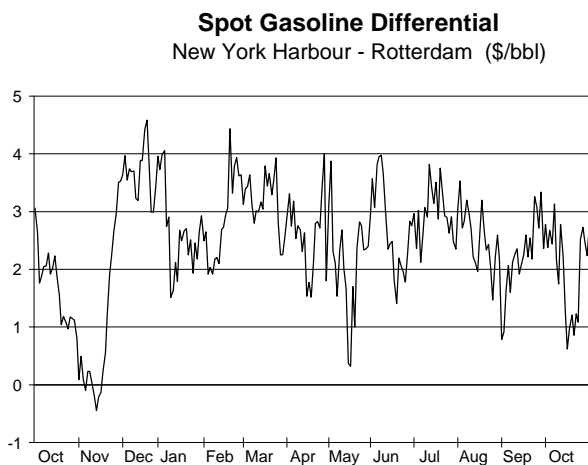
Prices for Asian crudes, which started to gain support in the second half of September from firming regional interest in light, sweet grades, continued to increase relative to those of Brent during October, in line with a tightening supply/demand balance. Increased refining activity in Singapore and Thailand, where distillation units returned from turnarounds, and the upcoming startup of two new refineries in Korea contributed to higher demand for regional, short haul crudes, while maintenance in the Australian Jaribu field and reduced availability from Australia's Wanea-Cossack, Indonesia's Belida and offshore Chinese crudes added to tightening supplies. The unfavourable economics for the import of Brent-related

West African crudes into Asia added to the upward pressure on prices for regional sweet grades and the average Tapis/Brent differential widened by \$1.22/bbl to \$1.60/bbl, while the discount for Minas to Brent narrowed by \$0.92 /bbl to \$0.73 /bbl.

Spot Product Prices in October

European spot **gasoline** prices, which decreased due to ample availability in the second half of September to below crude parity levels (for regular grades), rose sharply in the first three weeks of October and remained within a narrow band for most of the last two weeks of the month when crude prices started to weaken. In the first decade of October, this unexpected rebound in European gasoline prices was mainly the result of transatlantic arbitrage demand for high octane grades. In the last two decades of the month, the price increase was mainly due to a combination of tightening supplies, when gasoline stockpiling and importing into the UK by refiners and traders ahead of anticipated budgetary retail tax increases in November created incremental demand. In addition, firm buying interest from France and Germany, and significant gains in unleaded gasoline futures on the NYMEX contributed to support prices. Despite high refinery runs and a high proportion of light, sweet crudes in the refinery crude slate in Northwest European refineries, the gasoline supply tightness has been aggravated by the maximisation of the production of middle distillates in refineries, to some extent, at the expense of gasoline production, coupled with the reduction of gasoline production due to negative reforming margins from mid-September to mid-October.

The price for premium unleaded barges in Rotterdam reached the highest recorded level since the grade was introduced in 1992. The average gasoline/Brent differential increased in October to about \$1.35/bbl and \$2.75/bbl for unleaded regular and premium gasoline respectively, rising by some \$0.13/bbl from the lowest September levels in more than eight years. The arbitrage possibility for transatlantic gasoline exports closed in the second week of the month when local demand, mainly for the UK, increased and opened again in the fourth week of the month, when the unleaded gasoline contract on the NYMEX increased appreciably (see graph to the right).



Gasoline prices in the Mediterranean moved in line with those in Northwest Europe, to a large extent supported by demand from the eastern Mediterranean and more limited supplies. The average premium-gasoline/Urals differential increased to about \$3.50/bbl.

Spot gasoline prices on the US East Coast increased, essentially in line with those of crude in the first three weeks of October, but remained under pressure from soft demand and the ongoing arrival of large volumes of imported cargoes, which, for this three week period, averaged 410 kb/d. Over this three-week period, the average gasoline/WTI differential for regular gasoline in New York Harbour was \$1.92/bbl, the lowest spread for more than two years. However, in the last ten days of October, prices increased sharply and the gasoline/WTI differential for regular gasoline in New York Harbour widened to more than \$4.00/bbl. The unplanned outage of a 108 kb/d catalytic cracker at Venezuela's Amuay Bay refinery (cutting gasoline production by 90 kb/d) and operational problems in gasoline production facilities at some US refineries combined with falling gasoline import volumes and high gasoil production, to some extent, at the expense of gasoline production. As a consequence, inventory levels decreased, lending further support to gasoline prices.

The Asian gasoline market remained under downward pressure from ample gasoline supplies coupled with seasonally weak demand throughout the month. As a result, spot gasoline prices in Singapore increased only in line with those of light, sweet regional crudes but increased by more than those of sour Middle East crudes. The gasoline/Dubai differential increased by \$0.69/bbl to an average of \$3.04/bbl from the lowest monthly average value in more than eight years in September. However, the differential was almost \$2.45/bbl lower than during the same month last year. Thailand, where earlier this year some 270 kb/d of new refining capacity had been taken into operation has, since August, become a regular gasoline exporter into the region.

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
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
Sep	23.91	24.66	26.10	22.82	30.14	28.74	28.37	27.86	17.33	17.66	18.54	18.59
Oct	25.50	26.61	27.47	24.80	31.52	30.12	30.28	29.99	19.15	19.27	21.07	19.75
Oct-Sep	1.60	1.95	1.37	1.97	1.38	1.38	1.90	2.13	1.82	1.61	2.53	1.16
Week ending:												
27 Sep	22.80	23.86	25.71	23.00	31.11	29.66	29.42	27.91	17.55	18.18	19.13	19.17
04 Oct	23.45	24.37	25.98	23.27	32.92	31.02	30.64	29.11	18.46	18.95	19.77	19.97
11 Oct	24.48	25.99	26.93	24.44	32.77	31.20	30.96	29.76	19.14	19.51	20.99	19.83
18 Oct	26.35	27.41	27.60	25.20	31.51	30.40	30.59	30.30	19.57	19.68	21.53	20.07
25 Oct	26.58	27.58	28.27	25.52	30.68	29.50	30.11	30.07	19.29	19.30	21.74	19.62
01 Nov	26.03	27.10	28.19	25.23	29.48	28.21	28.70	30.39	19.08	18.67	20.65	19.02

Spot **naphtha** prices in Northwest Europe and in the Mediterranean remained supported by strong demand for paraffinic naphtha as one of the cheapest petrochemical feedstocks (condensate prices, for example, lacked competitiveness due to the high level of gasoil prices combined with condensate's significant gasoil yield) and tight supplies, partly as a result of the repeated, brief, weather-related closures of the Algerian port of Skikda. Comparatively high naphtha prices in the Mediterranean reportedly attracted export cargoes from as far away as India and from the Middle East.

During October, the increasing strength of European gasoline prices relative to naphtha caused the **reforming margin** in the region, which became negative in mid-September, to become positive again in the second half of the month. However, the gasoline/naphtha differential remained below the threshold of reforming profitability and some refiners are believed to have kept reforming throughputs at levels set by the refinery's hydrogen requirements.

Spot naphtha prices in Singapore in October moved mainly in line with those of crude but strengthened towards the end of the month, primarily supported by firm naphtha demand from northern Asia ahead of the start-up period of petrochemical plants in November and the diversion of Middle East export cargoes to the Mediterranean.

Up to the beginning of the second week of October, European spot **gasoil** prices continued to increase steeply, acting as the main driving force for the upward trend in Atlantic Basin oil markets and rising to new post-Gulf War highs. The exceptionally strong increase in prices reflected low stocks, firm demand, in particular in Germany, coupled with the introduction of low-sulphur diesel in the European Union on 1 October and political developments in the Middle East. The rise came to an abrupt end when crude prices briefly dipped sharply in the second week of the month, following a technical profit-taking sell off on futures markets before rebounding on support from political developments. Gasoil prices followed crude prices downwards, declining steeply, but then failed to rise again in line with those of crude. After trading within a comparatively narrow \$1.00/bbl band for about a week (when crude prices continued to rise), gasoil prices started to decrease again, triggered by the decrease in crude prices during the last two weeks of the month, albeit declining by less than those of crude. The gasoil/Brent differential peaked at a post-Gulf-War high of \$9.75/bbl in the first week of the month before narrowing to some \$5.50/bbl in the fourth week and rebounding to the \$6.50/bbl range in the last trading days of October, when crude prices decreased appreciably.

The steep decrease of more than \$4.00/bbl in gasoil prices from peak levels in the last three weeks of the month (see graph below) was mainly the result of an easing of the gasoil supply tightness in line with the arrival of sizeable export volumes of low-sulphur diesel from the US Gulf Coast, the maximisation of profitable middle distillate production coupled with low levels of refinery maintenance and a possible weakening of regional spot gasoil demand (Germany's consumer organisations were in mid-October reportedly advising individual buyers to wait for a further price decrease). The ample availability of Russian heating-oil-specification gasoil and, to some extent, the liquidation of long gasoil positions on futures exchanges reinforced the downward pressure on prices. However, gasoil prices gained some support during their decline from the seasonal switch from summer grade diesel and heating oil to winter grades (that are more costly to produce).

The gasoil contract on the IPE remained in backwardation in the front months throughout October, reflecting the continuing low level of gasoil stocks on both sides of the Atlantic and concerns about the supply adequacy of heating oil heading into the winter heating season, despite less refinery outages for maintenance than last autumn. The gradual decrease in the steepness of the backwardation during the month, however, suggest an easing of these concerns.

The premium for low-sulphur diesel over heating oil increased in Northwest Europe, peaking at an unexpectedly wide \$25/tonne (\$3.35/bbl) by mid-month, when firm local demand for low-sulphur diesel combined with gradually tightening supplies as local refiners encountered difficulties in producing sufficient volumes of winter-grade material. The tightness of low-sulphur diesel was less pronounced in the Mediterranean where refiners and traders reportedly had built adequate stocks of the new diesel grade. This stockbuild reflected concerns that a lack of sufficient desulphurisation capacity would create a low-sulphur diesel shortage.

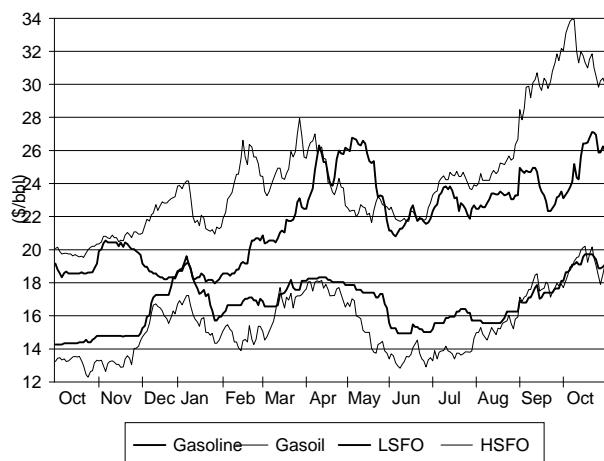
To a large extent, gasoil prices in the US followed the pattern in European gasoil prices. US gasoil prices were largely supported by concerns about very low heating oil inventory levels on the US East Coast, the main heating oil consuming region in the US, and heating oil stock holding policies as well as trade patterns and activities of futures exchanges attracted widespread political attention. In early October, prices were still rising in line with low and decreasing stocks, in particular on the US Atlantic Coast and concerns about transatlantic exports of low-sulphur diesel from the US Gulf Coast. Spot gasoil prices peaked at new post-Gulf War highs. However, with US refiners maximising distillate production and operating at unprecedentedly high utilisation rates for the time of the year, concerns over supply shortages began to subside by mid-October and prices fell sharply, to some extent triggered by profit-taking sell offs by non-commercial traders on the NYMEX. Refiners produced a near-record 3.63 mb/d in the first four weeks of the month (some 0.45 mb/d higher than last year) and this, plus the closure of the transatlantic arbitrage possibility, contributed to a limited rise in inventories. Concerns about East Coast stock levels also receded when 120 kb/d of spare capacity on the gasoline leg of the Colonial Pipeline system was made available to transport gasoil from the US Gulf to the Atlantic Coast and in addition, due to higher pumping rates on the Colonial Pipeline. As a result, large volumes of heating oil started to arrive in New York Harbour. The gasoil/WTI spread, which peaked at \$6.90/bbl in the second week of October, decreased and remained on average at \$4.90/bbl in the second half of the month, compared to an average of \$3.07/bbl for the same month last year.

The heating oil contract for the near-months on the NYMEX remained in shallow backwardation throughout October and thus continued to discourage a seasonal stockbuild of gasoil. In the first three weeks of the month the net long position of non-commercial traders and non-reporting traders decreased by 16.7% and 9.7% respectively.

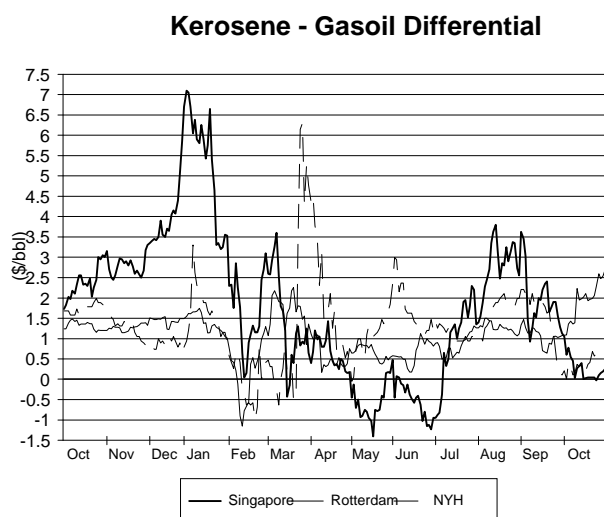
Unlike in Europe and the US, spot gasoil prices in Singapore remained within a narrow band of less than \$1.00/bbl for most of the month, almost unaffected by crude price developments and heating oil price changes in the Atlantic Basin. Regional demand for gasoil improved during October amid tightening supplies (some 1 mb/d of Asian refining capacity was in planned maintenance turnaround during October), aggravated by the diversion of Middle East gasoil cargoes to more profitable markets in the West. Spot gasoil prices increased towards the end of the month as a result of firm gasoil demand from China, India and Indonesia and in line with sizeable refinery turnarounds in three refineries in the Arabian Gulf in November.

Spot **kerosene** prices moved primarily in line with those of gasoil in the US and Singapore, where the kerosene/gasoil differential, which contracted appreciably during September, remained little changed at low levels. However, in Europe, kerosene prices increased by more than those of gasoil and the kerosene/gasoil differential increased appreciably during the month. The steep appreciation of kerosene

Rotterdam Spot Product Prices



prices relative to those of gasoil in Europe was due to firming 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 switch to winter specifications for gasoil and diesel, which require proportionally more kerosene in the blend in order to meet more stringent cold properties, aggravated the kerosene tightness and the kerosene/gasoil differential in Rotterdam increased from about \$1.00/bbl at the end of September to some \$2.90/bbl at the end of October. In a reversal of traditional trade patterns, firm European kerosene prices attracted kerosene export cargoes from the Middle East.



The sharp increase in middle distillate yields in the US, combined with high US refinery crude throughputs contributed to well-supplied US kerosene markets and rising US kerosene stocks and the kerosene/gasoil differential remained little changed within a narrow band around the monthly average of \$0.39/bbl. In October, kerosene prices on the US West Coast, which normally trade at a premium to prices in all other US regions, traded at a discount to prices in other regions, reflecting the local kerosene supply overhang. In Asia, ample supplies and mild weather, which curtailed demand, exerted downward pressure on kerosene prices and, in the last four weeks of October, the kerosene/gasoil differential in Singapore remained almost unchanged, averaging a low \$0.15/bbl.

Average European **LSFO** prices increased in line with those of crude, only supported amid adequate supplies and easing local demand by the open arbitrage possibility to the US during most of the month. Supplies of LSFO rose, in particular, in the Mediterranean as a result of the increased proportion of low sulphur crude processed by European refiners. The average Brent/LSFO differential increased slightly and continued to be appreciably wider than during the same month last year.

In the first half of the month, US Atlantic Coast spot LSFO prices increased in line with those of crude and remained almost unchanged for most of the second half of the month, despite the decline in crude prices. However, they started to decrease in the last trading days of the month when crude prices decreased more sharply. While prices remained under pressure earlier in the month from a combination of weak demand and the arrival of transatlantic arbitrage cargoes, prices were to some extent supported later in the month as utilities started to buy LSFO in order to build stocks ahead of peak East Coast demand. On average, New York Harbour LSFO prices increased relative to those of crude during the month. LSFO price developments in the US Gulf were more in line with the movement of crude prices than those in New York Harbour, rising up to mid-month and declining again towards the end of October.

Asian **LSWR** prices remained steady during most of the month and decreased, in line with those of crude, in the last decade of October. Prices remained under downward pressure during most of the month from a combination of good availability, limited local demand and limited possibilities for exports to the US as a crude substitute, mainly due to the volatility of crude prices. Unlike in the US and Europe, the differential between Asian sweet, light crudes and LSWR widened in Singapore appreciably during the month.

European **HSFO** prices moved in line with those of crude and continued to be supported by tighter supplies as refiners increased the proportion of low sulphur crude intake. In the Mediterranean, strong HSFO and bunker fuel demand and firming sour crude prices also contributed to firm HSFO prices. However, ample availabilities of Russian fuel oil exerted downward pressure on prices towards the end of the month. HSFO prices in Rotterdam continued to remain almost the same as those of LSFO but the LSFO/HSFO differential in the Mediterranean widened slightly to a continuing narrow \$1.25/bbl.

HSFO prices in the US increased appreciably during the first half of the month, peaking at the highest level since the Gulf War, before decreasing towards the end of the month, consistent with the sharp decline in crude prices (in particular in the US Gulf, where some refining capacity was in turnaround and where

refiners maximised intake to coking and other conversion units in order to maximise gasoil production). Tightening supplies of HSFO, due to decreasing fuel oil production, combined with strong cargo demand and firm bunker fuel demand to exert a strong upward pressure on HSFO prices. In late September and early October, spot HSFO prices in the US Gulf surpassed those of LSFO and HSFO prices increased on average by more than those of crude. Support for HSFO eased towards the end of the month when prompt supplies increased and demand slackened.

Despite amply supplied markets, spot HSFO prices in Singapore followed the pattern of regional marker crude prices, rising in early October and decreasing in the last two weeks of the month. While prices gained support in the first half of the month from local demand, in particular from Indonesia, and the diversion of Middle East fuel oil cargoes to Atlantic Basin destinations, prices came under increasing pressure in the second half of October due to a combination of waning demand and the prospects of additional supplies from two new refineries in South Korea, expected to start up during November.

End-User Product Prices

In October, mid-month end user prices for **gasoline** increased slightly in all of the European countries shown in Table 9, while prices remained unchanged in Canada and Japan and decreased in the US. The largest increase in gasoline prices occurred in Spain, followed by the UK, where prices continued to recover from the price-war related low levels in the first half of the year. While, except for the UK, pre-tax prices in Northwest European countries and the US were significantly higher than during the same month last year, prices increased by less in Mediterranean countries. Prices in Japan were lower than last year as a result of the deregulation of petroleum prices in April.

In line with the steep increase in spot gasoil prices in all major markets, **automotive diesel** prices and **heating oil** prices for domestic consumers increased appreciably in all countries, apart from Japan, where prices remained unchanged. However, diesel prices increased in general by less than those of heating oil, despite the change to the more-expensive-to-produce low-sulphur diesel grade, introduced in the European Union on 1 October. Compared on a pre-tax basis to the same month last year, diesel prices were more than 40% higher in Spain and France, 36% higher in Germany and more than 28% higher in the UK and Italy.

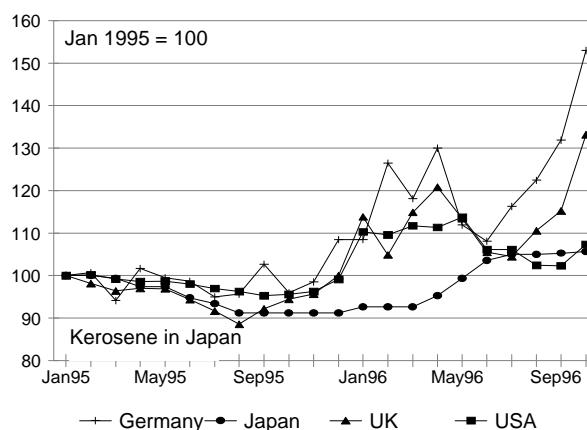
The sharpest month-on-month increase in heating oil prices occurred in the UK, Spain and Germany, as shown in the graph to the right, where prices increased by some 13%, 12% and 8% respectively. However, heating oil prices in the US increased by 4.9%, appreciably less than the rise in Europe. The price increase for heating oil on a pre-tax basis compared to the same month last year was, in some countries, even higher than for automotive diesel. The steepest increases compared to last October occurred in Germany (59%), followed by the Spain (54%) and the UK (41%).

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 October

Refining margins continued to be very volatile in October as a result of the sharp, relative changes in crude and product prices. In general, margins decreased in all major refining centres in the first half of the month, when crude prices continued to rise steeply and increased in the second half of the month, when product prices, to some extent, lagged the steep decline in crude prices. Monthly average refining margins for WTI increased appreciably on the US Gulf Coast, to a limited extent in Singapore (for cracking only) and Rotterdam, and remained almost unchanged in the Mediterranean, while the Dubai hydroskimming margin in Singapore decreased (see the table below).

End-User Heating Oil Prices
Local Currency Basis - Excluding Tax



However, while refining margins for incremental barrels remained at low levels in all major refining centres, indicators for refinery profitability like the diesel/crude differential, which widened appreciably in most markets, indicated improved base load refining margins in October.

Refining Margins in Major Refining Centres

(monthly and weekly averages, \$/bbl)

	Week Ending:									
	Aug	Sep	Oct	Change	27 Sep	04 Oct	11 Oct	18 Oct	25 Oct	01 Nov
NW Europe										
Brent (Hydroskimming)	-0.04	-0.20	-0.01	0.20	-0.16	0.28	0.15	-0.22	-0.69	0.85
Brent (Cracking)	1.23	0.90	1.15	0.25	0.78	1.17	1.21	1.01	0.59	2.15
Mediterranean										
Urals (Hydroskimming)	-0.02	0.95	0.93	-0.03	1.17	1.68	1.59	0.77	0.29	1.73
Urals (Cracking)	1.31	2.10	2.15	0.04	2.06	2.57	2.60	1.96	1.53	2.95
US Gulf Coast										
Brent (Cracking)	0.59	-0.08	-0.01	0.06	-0.16	0.10	0.21	-0.45	-0.50	0.86
WTI (Cracking)	0.50	-0.23	0.65	0.88	-0.32	0.27	0.75	0.25	0.63	1.38
Singapore										
Dubai (Hydroskimming)	-0.44	0.05	-0.06	-0.11	-0.08	-0.01	-0.31	-0.14	-0.22	0.56
Dubai (Cracking)	1.32	1.69	2.02	0.33	1.52	1.75	1.62	1.98	2.02	2.84

Sour crude refining margins in the Mediterranean were mainly supported by the unexpected firmness of gasoline prices and strong fuel oil prices, which offset the gradual decline in middle distillate prices relative to those of crude. Both the hydroskimming and the cracking margin in the Mediterranean continued to average well above the level of corresponding margins in Northwest Europe, to a large extent as a result of higher Mediterranean gasoline prices.

As in the Mediterranean, monthly average Rotterdam refining margins were mainly supported by the sharp rise in the gasoline/crude differential, which more than offset the decline in the gasoil/crude spread. The Brent-related Rotterdam margins were reduced by a brief but steep increase in North Sea tanker rates, which on average depressed margins by some \$0.18/bbl. In spite of the sharp increase in the relative value of light products in Rotterdam and the Mediterranean, the differential between the cracking and the hydroskimming margins remained unchanged. This was mainly due to the increasing strength of European fuel oil prices.

On the US Gulf Coast, the average WTI cracking margin increased appreciably, to a large extent due to the rise in gasoline and fuel oil prices relative to those of crude and an only slight contraction in the gasoil/crude differential (as opposed to the appreciable narrowing of the spread in Europe).

The average Singapore Dubai hydroskimming and cracking margins increased in line with the gradual strengthening of gasoline and gasoil prices, relative to those of crude. The spread between the cracking margin and the hydroskimming margin increased by some \$0.50/bbl, consistent with strengthening prices for light products relative to those of fuel oil.

Refinery Crude Throughputs in September

The aggregate refinery throughputs for September in OECD countries were 33.3 mb/d, almost unchanged from to August's downwardly-revised figures. Increases of 0.1 mb/d in each of Europe, North America and Australasia were offset by a 0.3 mb/d decrease in Japan. Total September throughputs were 0.5 mb/d or 1.6% higher than a year earlier.

Preliminary data suggest that total crude throughputs in distillation units in Europe increased by 0.1 mb/d to 12.7 mb/d, which were the highest September throughputs for more than eight years. Increases mainly in Austria (a return from a major turnaround), the UK, Germany, Sweden and Spain were partly offset by large decreases in the Netherlands and Portugal, where a combined 270 kb/d of distillation capacity was in turnaround. European throughputs were 1.8% or 0.23 mb/d higher than a year earlier.

Crude throughputs in the US increased by 0.1 mb/d to 14.5 mb/d, some 0.6% or almost 0.1 mb/d higher than a year earlier. Strong gasoil demand and low heating oil stocks continued to keep US throughputs

close to full capacity. Refinery utilisation, based on operating refinery capacity, is estimated to have increased by 0.8% from August levels to 97.7%, some 1.4% higher than the level a year earlier.

Japanese crude throughputs decreased by 0.3 mb/d to just below 4.1 mb/d, as distillation units in three refineries were shut down for maintenance. Total throughputs were almost unchanged from the level a year earlier. However, in line with a small capacity expansion last year, this month's utilisation rate shows a 0.7% decrease from the same month last year. In line with persistently weak refining margins, Singapore refiners reportedly maintained some of the cut in refinery throughputs introduced in June. However, throughputs increased slightly to an estimated 1.09 mb/d.

Refinery Crude Throughput in OECD Countries

	million barrels per day						% change from previous year	
	May	Jun	Jul	Aug	Sep*	Jan-Sep 1996*	Sep	Jan-Sep
OECD Europe	12.32	12.43	12.55	12.60	12.71	12.52	1.8	3.1
France	1.71	1.61	1.64	1.65	1.65	1.67	1.4	6.2
Germany	2.08	2.13	2.17	2.13	2.20	2.10	-1.7	-0.9
Italy	1.36	1.42	1.60	1.59	1.63	1.58	1.0	0.1
Netherlands	1.20	1.17	1.21	1.19	1.02	1.16	1.1	3.4
UK	1.78	1.78	1.77	1.75	1.83	1.75	1.4	5.9
US	14.32	14.50	14.35	14.40	14.48	14.15	0.6	0.9
Canada	1.31	1.42	1.39	1.44	1.45	1.37	15.7	6.5
Japan	3.58	3.28	3.98	4.38	4.06	4.17	-0.2	-0.1
Australia/New Zealand	0.56	0.60	0.55	0.45	0.59	0.54	5.2	-2.4
OECD Total	32.08	32.23	32.81	33.27	33.29	32.74	1.6	1.8

In October, refinery throughputs are thought to have decreased appreciably in Japan and only slightly in Europe, mainly reflecting further seasonal maintenance shutdowns. Weekly US statistics for the first four weeks of October suggest that throughput levels decreased by some 0.3 mb/d. In Singapore, it is reported that some refiners discontinued earlier throughput cuts and refinery throughputs are expected to have reached 1.12 mb/d in October and are projected to increase to 1.18 mb/d in November.

Refinery Maintenance Shutdowns

In the Arabian Gulf, some 450 kb/d of refining capacity is planned to be shut down for maintenance during November. The majority of this turnaround activity will be in export-oriented refineries. In the Asia/Pacific, maintenance shutdowns are projected to amount to 0.7 mb/d after 1.0 mb/d of refining capacity was shut down in October. However, 490 kb/d of new refining capacity in Korea is expected to start up and reach full capacity in a matter of weeks. As discussed in last month's Report, US refining maintenance shutdowns are expected to remain at the lowest level for more than five years. European refinery maintenance, which is expected to be only half of last year's level during this autumn, may in part be deferred as a result of strong gasoil demand and favourable average refining margins. Only minor maintenance is forecast for December and turnarounds are projected to be concentrated in January mainly in the US, where deferred maintenance is expected to add to the familiar level of mainly US Gulf refinery maintenance.

Refinery Maintenance Shutdowns

(mb/d of Nameplate Capacity)

	November	December	January
Europe	0.30	0.13	0.10
US	0.28	0.14	0.69
Persian Gulf	0.45	0.04	-
Japan	0.26	0.06	0.06
Other Asia / Pacific	0.44	0.24	0.06

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

The planned maintenance of a 100 kb/d catalytic cracker at Hess's St. Croix refinery has been postponed and is reported to now take place during November. 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. The unplanned outage of the 108 kb/d catalytic cracker at Venezuela's Amuay Bay refinery is expected to last up to mid-November. The 300 kb/d long residue catalytic cracker at Shell's Pulau Bukom refinery in Singapore went out of operation due to technical problems one week ahead of a planned maintenance shutdown, which was scheduled for the period 1 November to 7 December.

Product Quality Issues

The Netherlands and Germany have become the latest European countries to switch from leaded gasoline to gasoline that uses a potassium-based additive as a substitute for lead but can be used in vehicles which normally run only on leaded fuel. All major refiners in the Netherlands changed supplies over to so-called lead replacement gasoline by 2 September, following similar moves which have already taken place in Sweden, Norway, Austria and Finland. Germany also saw such a changeover due to an agreement between the domestic refiners and the environment ministry not to produce leaded gasoline past 1 October. Pump prices for the new gasoline are lower than for leaded gasoline because of the lower tax levied on the product but production costs are slightly higher.

Industry Developments

Kuwait Petroleum Corporation (KPC) announced on 30 September that it has acquired a 50% interest in Agip's 300 kb/d Milazzo refinery, near Messina on the north coast of Sicily, in addition to 330 retail gasoline stations throughout Italy. A joint-venture consisting of KPC and Agip will own and operate the refinery. Milazzo refinery is currently undergoing an extensive upgrading programme due for completion in 1997, including the addition of hydrocracking and desulphurisation capacity. These units are expected to enable the refinery to process heavy sour crudes, for example, Kuwait export grades.

Three of the largest US refining companies, Shell Oil, Texaco and Star Enterprise (a joint-venture between Texaco and Saudi Aramco) have reportedly confirmed ongoing discussions about merging their US refining and marketing operations. The resulting venture would serve some 15% of the US market.

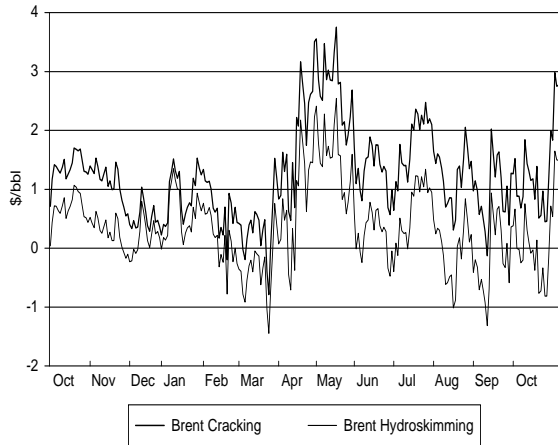
Korean Yukong's reportedly started up an additional 238 kb/d of primary distillation capacity at its 610 kb/d Ulsan refinery on 18 October. The new unit is expected to reach full capacity within a short time.

The 100 kb/d Dalian refinery, China's first Sino-foreign oil refining venture, started operations in early October. The refinery is reportedly still in the process of testing the equipment and starting up further downstream process units.

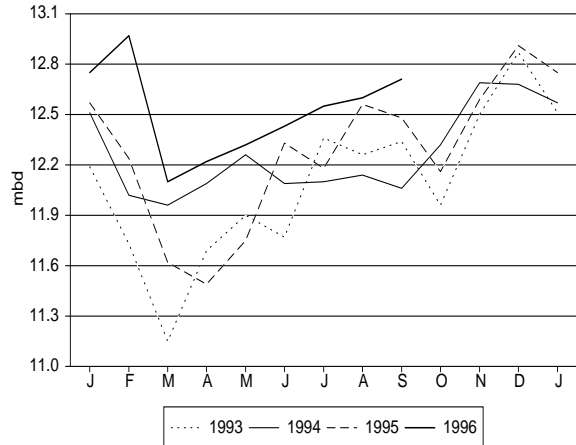
Indonesia's Pertamina reportedly raised the capacity at its Musi refinery in southern Sumatra by 10 kb/d to 145 kb/d since August. The increase was accomplished by upgrading two redistillation units to form one crude distillation unit.

According to a State report, the use of cleaner-burning gasoline in California reduced peak smog levels this summer. In the South Coast Air Basin (Los Angeles), average ozone levels on the smoggiest days in June, July and August were 18% lower than in 1994 and 1995 after adjusting for differences in weather, the report said. The use of the cleaner gasoline is reportedly the single biggest ozone-reducing measure in California since the introduction of the catalytic converter in 1975, with the South Coast Air Basin in 1996 enjoying the best year in its history of monitoring air quality.

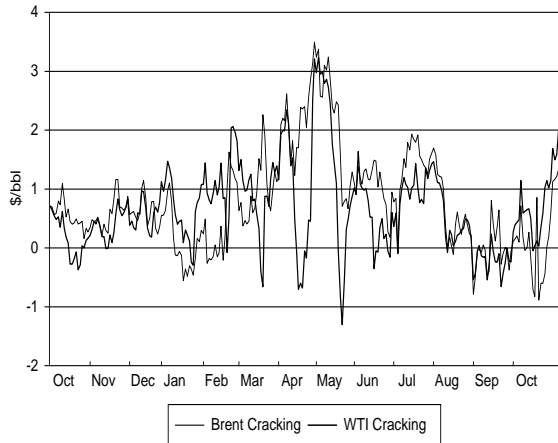
Rotterdam Refining Margins



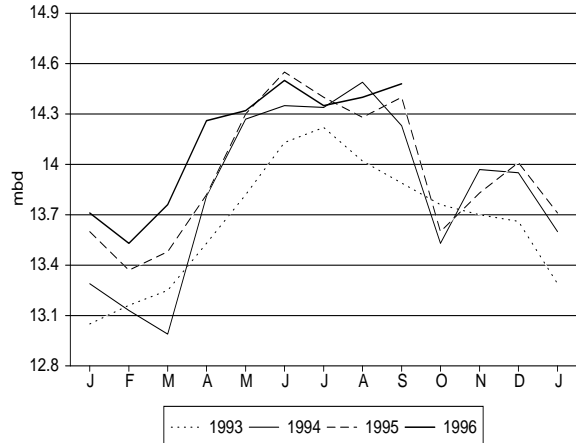
OECD Europe Crude Throughputs



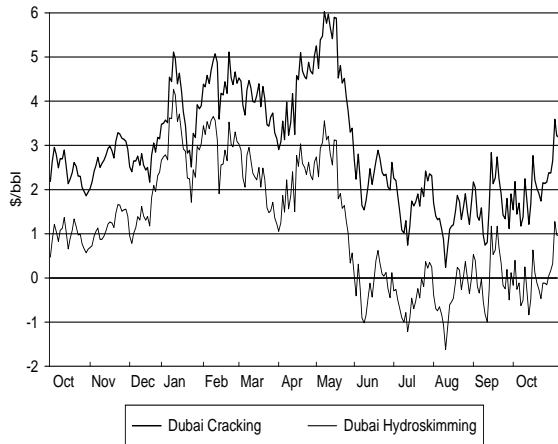
US Gulf Refining Margins



US Crude Throughputs



Singapore Refining Margins



Japan Crude Throughputs

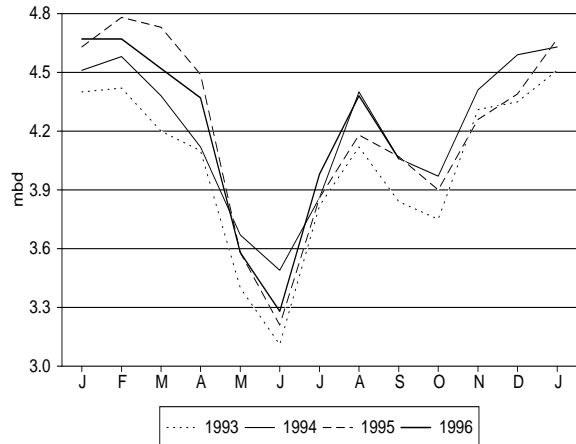


Table 1
WORLD OIL SUPPLY AND DEMAND
(million barrels per day)

	1993	1994	1Q95	2Q95	3Q95	4Q95	1995	1Q96	2Q96	3Q96	4Q96	1996	1Q97	2Q97	3Q97	4Q97	1997
DEMAND																	
OECD																	
North America	19.2	19.8	19.7	19.5	19.8	20.1	19.8	20.4	20.0	20.4	20.4	20.3	20.5	20.1	20.8	20.8	20.6
Europe	13.6	13.6	14.0	13.5	13.6	14.3	13.9	14.3	13.5	14.0	14.5	14.1	14.4	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	6.3	7.0	6.7	7.6	6.3	6.4	7.1	6.9
TOTAL OECD	39.0	40.0	41.1	39.2	39.8	41.3	40.3	42.1	39.6	40.8	42.0	41.1	42.5	40.3	41.4	42.7	41.7
NON-OECD																	
FSU ¹	5.7	4.9	5.1	4.5	4.5	4.9	4.7	4.6	4.1	4.2	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 ²	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	8.8	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
TOTAL NON-OECD	28.5	28.9	30.2	29.1	29.0	30.6	29.8	30.8	30.1	30.0	31.8	30.7	32.2	31.4	31.2	33.1	32.0
TOTAL DEMAND³	67.6	68.9	71.3	68.3	68.8	71.9	70.1	72.9	69.7	70.8	73.8	71.8	74.7	71.7	72.6	75.8	73.7
SUPPLY																	
OECD																	
North America	11.0	10.9	11.1	11.0	10.9	11.0	11.0	11.0	11.0	10.9	11.2	11.0	11.2	10.9	10.9	11.1	11.0
Europe	5.1	6.0	6.4	6.0	6.2	6.7	6.3	6.6	6.6	6.5	7.5	6.8	7.6	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	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8
TOTAL OECD	16.8	17.6	18.1	17.7	17.7	18.4	18.0	18.3	18.3	18.2	19.5	18.6	19.6	19.0	18.9	20.1	19.4
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	6.4	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	2.8	2.7	2.9	3.0	3.0	3.1	3.0
Processing Gains ⁴	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
TOTAL NON-OPEC	40.8	41.6	42.4	42.0	42.4	42.7	42.4	43.2	43.2	43.2	45.0	43.7	45.4	44.9	45.2	46.9	45.6
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	2.7	2.6	2.7	2.8	2.8	2.9	2.8
TOTAL OPEC	26.6	27.0	27.2	27.3	27.6	27.8	27.5	28.2	28.2	28.6							
TOTAL SUPPLY⁶	67.5	68.6	69.6	69.3	70.1	70.5	69.9	71.4	71.4	71.8							
STOCK CHANGES AND MISCELLANEOUS																	
REPORTED OECD																	
Industry	0.1	0.1	-1.3	0.7	0.4	-1.2	-0.3	-1.2	1.1	0.4							
Government	0.1	0.1	0.1	-0.1	0.1	0.1	0.0	0.0	-0.1	-0.1							
TOTAL OECD	0.2	0.2	-1.2	0.7	0.5	-1.2	-0.3	-1.2	1.1	0.3							
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 ⁶	-0.4	-0.3	-0.2	0.2	0.5	-0.5	0.0	0.0	0.5	0.8							
TOTAL STOCK CH. & MISC.	-0.1	-0.3	-1.7	0.9	1.2	-1.4	-0.2	-1.6	1.7	1.0							
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. ⁷	24.5	24.9	26.5	24.0	24.0	26.7	25.3	27.2	23.9	24.9	26.0	25.5	26.5	24.0	24.6	26.0	25.3
Total Demand ex. FSU	61.8	64.0	66.2	63.9	64.3	67.0	65.4	68.3	65.5	66.5	69.0	67.3	70.0	67.5	68.3	71.0	69.2
Total demand exc. FSU (% ch) ⁸	2.8	3.5	2.6	2.5	1.5	2.0	2.1	3.1	2.6	3.4	2.9	3.0	2.5	3.0	2.7	2.9	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
DEMAND																	
OECD																	
North America	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	0.1	-	0.1
Europe	-	-	-	-	-	-	0.1	-	-	0.1	-	-	-0.1	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-0.1	-	-0.1	-	-	-0.1	-	-
TOTAL OECD	-	-	0.1	-	0.1	-	-	-	-	0.1	0.1	-	-	-	0.1	-	-
NON-OECD																	
FSU	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL NON-OECD	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-
TOTAL DEMAND	-	-	-	-	-	-0.1	-	-	-	0.2	0.1	-	-	-	0.1	0.1	0.1
SUPPLY																	
OECD																	
North America	-	-	-	-	-	-	-	-	-	-0.1	-	-	0.1	-	-	-0.1	-
Europe	-	-	-	-	-	-	-	-	-	-0.1	0.1	-	0.1	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-0.1	-	-0.1	-	-	-0.1	-	-
TOTAL OECD	-	-	-	-	-	-	-	-	-	-0.2	-	-	0.1	0.1	-	-0.1	0.1
NON-OECD																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	0.1	-	0.1	-
Processing Gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL NON-OECD	-	-	-	-	-	-	-	-	-	-0.3	-	-	0.1	0.1	0.1	-	0.1
OPEC																	
Crude	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NGLs	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-
TOTAL OPEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL SUPPLY	-	-	-	-	-	-	-	-	-	-0.3	-	-	-	-	-	-	-
STOCK CHANGES AND MISCELLANEOUS																	
REPORTED OECD																	
Industry	-	-	-	-	-	-	-	-	-	-0.5	-	-	-	-	-	-	-
Government	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL OECD	-	-	-	-	-	-	-	-	-	0.1	-0.5	-	-	-	-	-	-
Floating Storage/Oil in Transit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous to balance	-	0.1	-0.1	-	-0.1	0.1	-	0.1	-0.1	0.2	-	-	-	-	-	-	-
TOTAL STOCK CH. & MISC.	-	-	-0.1	-0.1	-0.1	-	-	-	-	-0.4	-	-	-	-	-	-	-
Memo items:																	
FSU Net Exports	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Call on OPEC crude + Stock ch.	-	-	-	0.1	0.1	-	-	-	-	0.4	0.1	0.1	-0.2	-0.1	0.1	-	-
Total Demand ex. FSU	-	-	-	0.1	0.1	-0.1	0.1	-	-	0.1	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)

	April			May			June			Second Quarter			July		
	1995	1996	%	1995	1996	%	1995	1996	%	1995	1996	%	1995	1996	%
North America															
LPG	2.09	2.14	2.5	1.99	2.14	7.7	1.95	2.07	6.2	2.01	2.12	5.4	1.84	2.07	12.4
Naphtha	0.28	0.28	-0.5	0.28	0.28	-2.1	0.25	0.29	12.1	0.27	0.28	2.8	0.29	0.30	1.6
Motor Gasoline	8.26	8.52	3.1	8.59	8.69	1.2	8.93	8.79	-1.5	8.59	8.67	0.9	8.58	8.85	3.1
Jet/Kerosene	1.55	1.66	7.1	1.64	1.60	-2.6	1.54	1.72	11.8	1.58	1.66	5.2	1.61	1.72	7.0
Gasoil	3.53	3.83	8.7	3.37	3.61	6.9	3.70	3.64	-1.7	3.53	3.69	4.5	3.14	3.48	10.9
Residual Fuel Oil	0.99	0.91	-8.2	0.94	1.01	7.1	1.07	0.94	-12.3	1.00	0.95	-4.7	0.92	1.08	17.0
Other Products	2.31	2.46	6.5	2.55	2.63	2.9	2.74	2.74	0.2	2.53	2.61	3.0	2.79	2.78	-0.5
Total	19.02	19.81	4.2	19.37	19.95	3.0	20.18	20.18	0.0	19.52	19.98	2.4	19.18	20.28	5.7
Europe															
LPG	0.94	0.88	-5.9	0.82	0.81	-0.7	0.78	0.75	-3.7	0.85	0.82	-3.5	0.75	0.79	5.1
Naphtha	1.14	0.94	-18.0	1.13	1.11	-1.5	1.08	1.00	-7.3	1.12	1.02	-8.9	1.07	1.03	-4.1
Motor Gasoline	2.95	3.09	4.7	3.04	3.03	-0.1	3.12	2.96	-5.0	3.03	3.03	-0.2	3.07	3.15	2.7
Jet/Kerosene	0.80	0.85	5.3	0.83	0.89	7.3	0.85	0.89	4.3	0.83	0.88	5.6	0.92	0.96	4.6
Gasoil	4.60	4.72	2.5	4.48	4.51	0.8	4.61	4.51	-2.2	4.56	4.58	0.4	4.41	4.69	6.5
Residual Fuel Oil	2.14	2.05	-4.0	1.97	1.92	-2.4	1.98	1.96	-0.9	2.03	1.98	-2.5	2.04	2.07	1.5
Other Products	1.00	1.05	4.8	1.09	1.15	5.9	1.23	1.32	6.8	1.11	1.17	5.9	1.15	1.28	11.5
Total	13.57	13.57	0.0	13.35	13.44	0.7	13.66	13.40	-1.9	13.52	13.47	-0.4	13.41	13.98	4.3
Pacific															
LPG	0.76	0.76	-0.1	0.70	0.66	-6.1	0.66	0.65	-0.8	0.71	0.69	-2.3	0.61	0.63	3.2
Naphtha	0.75	0.77	3.6	0.74	0.72	-3.2	0.72	0.68	-5.8	0.74	0.72	-1.8	0.70	0.79	12.5
Motor Gasoline	1.16	1.25	7.3	1.21	1.24	1.8	1.21	1.20	-0.2	1.19	1.23	2.9	1.28	1.32	3.6
Jet/Kerosene	0.68	0.81	18.7	0.53	0.58	10.3	0.52	0.54	4.7	0.57	0.64	11.9	0.52	0.55	5.0
Gasoil	1.43	1.54	7.7	1.37	1.42	3.6	1.43	1.40	-2.1	1.41	1.45	3.0	1.41	1.49	6.1
Residual Fuel Oil	0.87	0.77	-11.2	0.77	0.70	-9.5	0.77	0.72	-6.3	0.80	0.73	-9.1	0.82	0.82	-0.8
Other Products	0.84	0.69	-17.3	0.69	0.69	-0.6	0.65	0.71	10.4	0.73	0.70	-3.7	0.68	0.73	7.7
Total	6.49	6.59	1.6	6.03	6.01	-0.3	5.96	5.92	-0.6	6.16	6.17	0.3	6.02	6.33	5.2
OECD															
LPG	3.79	3.79	-0.1	3.51	3.61	2.9	3.38	3.47	2.6	3.56	3.62	1.8	3.20	3.49	8.9
Naphtha	2.17	1.99	-8.3	2.15	2.11	-2.2	2.06	1.97	-4.4	2.13	2.02	-4.9	2.06	2.11	2.3
Motor Gasoline	12.38	12.86	3.9	12.84	12.96	1.0	13.25	12.96	-2.2	12.82	12.93	0.8	12.93	13.33	3.1
Jet/Kerosene	3.03	3.31	9.2	3.00	3.07	2.4	2.91	3.16	8.3	2.98	3.18	6.6	3.05	3.23	6.0
Gasoil	9.55	10.08	5.5	9.23	9.55	3.5	9.74	9.55	-2.0	9.50	9.72	2.3	8.95	9.66	8.0
Residual Fuel Oil	4.00	3.74	-6.6	3.69	3.63	-1.5	3.82	3.62	-5.2	3.83	3.66	-4.4	3.78	3.97	4.8
Other Products	4.15	4.20	1.3	4.33	4.47	3.1	4.62	4.77	3.4	4.36	4.48	2.6	4.62	4.80	3.7
Total	39.07	39.97	2.3	38.74	39.40	1.7	39.79	39.50	-0.7	39.20	39.62	1.1	38.61	40.59	5.1

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)

	May			June			Second Quarter			July			August		
	1995	1996	%	1995	1996	%	1995	1996	%	1995	1996	%	1995	1996	%
United States															
LPG	1.71	1.85	8.3	1.71	1.77	3.9	1.75	1.83	4.7	1.58	1.80	14.1	1.73	1.87	8.4
Naphtha	0.21	0.20	-3.7	0.18	0.21	19.8	0.20	0.21	6.6	0.22	0.21	-0.9	0.21	0.24	17.0
Motor Gasoline	7.89	8.00	1.3	8.22	8.09	-1.6	7.92	7.99	0.8	7.89	8.14	3.1	8.19	8.22	0.4
Jet/Kerosene	1.53	1.48	-2.9	1.42	1.58	11.4	1.47	1.54	4.9	1.49	1.59	6.5	1.54	1.60	4.2
Gasoil	2.90	3.12	7.6	3.27	3.19	-2.2	3.09	3.23	4.6	2.73	3.05	11.5	3.04	3.18	4.6
Residual Fuel Oil	0.76	0.83	8.3	0.90	0.74	-17.5	0.82	0.77	-6.3	0.76	0.90	18.8	0.82	0.86	5.0
Other Products	2.29	2.38	3.8	2.44	2.46	0.6	2.27	2.35	3.2	2.48	2.46	-1.0	2.52	2.53	0.6
Total	17.29	17.86	3.3	18.13	18.05	-0.4	17.52	17.91	2.2	17.15	18.14	5.8	18.04	18.51	2.6
Japan															
LPG	0.62	0.58	-6.3	0.57	0.58	1.4	0.62	0.61	-1.1	0.52	0.56	6.6	0.53	0.60	13.2
Naphtha	0.74	0.71	-3.3	0.72	0.68	-5.9	0.73	0.72	-1.8	0.69	0.78	12.6	0.77	0.78	1.7
Motor Gasoline	0.86	0.88	1.9	0.84	0.86	2.2	0.84	0.88	4.1	0.94	0.98	3.8	1.04	1.03	-0.9
Jet/Kerosene	0.43	0.48	11.7	0.42	0.44	4.7	0.48	0.54	13.2	0.42	0.44	4.8	0.43	0.43	0.9
Diesel*	0.70	0.75	7.5	0.74	0.73	-0.9	0.72	0.75	5.2	0.75	0.79	5.5	0.76	0.75	-1.2
Other Gasoil*	0.43	0.42	-3.7	0.46	0.42	-8.4	0.46	0.45	-3.0	0.44	0.46	5.1	0.44	0.43	-1.8
Residual Fuel Oil	0.70	0.65	-7.8	0.70	0.68	-3.7	0.74	0.68	-7.8	0.77	0.75	-2.6	0.87	0.75	-14.5
Direct use of Crude Oil	0.24	0.20	-18.8	0.23	0.26	10.1	0.25	0.22	-13.9	0.23	0.31	38.1	0.37	0.35	-3.7
Other Products	0.30	0.37	21.8	0.28	0.35	26.4	0.33	0.36	8.5	0.32	0.32	-1.1	0.35	0.34	-3.1
Total	5.02	5.03	0.1	4.97	4.99	0.6	5.18	5.21	0.7	5.08	5.39	6.0	5.56	5.47	-1.6
Germany															
LPG	0.12	0.11	-10.9	0.12	0.09	-25.6	0.12	0.10	-19.2	0.11	0.11	2.5	0.11	0.11	8.9
Naphtha	0.34	0.33	-3.5	0.33	0.28	-14.5	0.34	0.32	-5.8	0.30	0.31	5.4	0.31	0.32	2.9
Motor Gasoline	0.73	0.72	-1.7	0.73	0.69	-5.7	0.72	0.71	-1.4	0.71	0.73	1.9	0.72	0.71	-1.4
Jet/Kerosene	0.13	0.13	4.0	0.14	0.14	-0.4	0.13	0.13	0.2	0.14	0.15	0.7	0.14	0.14	3.5
Diesel	0.46	0.44	-5.9	0.45	0.43	-4.9	0.45	0.44	-2.2	0.44	0.45	3.1	0.46	0.44	-3.8
Other Gasoil	0.79	0.80	1.6	0.76	0.84	10.3	0.79	0.78	-1.6	0.77	0.85	10.7	0.80	0.98	21.6
Residual Fuel Oil	0.19	0.17	-10.7	0.17	0.17	-3.6	0.18	0.17	-6.1	0.20	0.18	-11.6	0.19	0.17	-9.7
Other Products	0.18	0.17	-5.8	0.18	0.20	10.1	0.17	0.17	-0.2	0.17	0.19	12.9	0.20	0.16	-19.2
Total	2.95	2.87	-2.6	2.88	2.83	-1.8	2.90	2.82	-3.0	2.84	2.97	4.5	2.93	3.04	3.8
Italy															
LPG	0.08	0.08	-6.7	0.08	0.08	-7.7	0.09	0.09	-3.8	0.08	0.09	20.1	0.09	0.09	0.9
Naphtha	0.12	0.13	2.3	0.14	0.13	-7.1	0.13	0.13	-3.7	0.12	0.13	14.1	0.13	0.13	-0.2
Motor Gasoline	0.42	0.43	2.9	0.44	0.41	-6.4	0.42	0.43	1.1	0.43	0.46	7.5	0.44	0.44	-0.5
Jet/Kerosene	0.08	0.08	5.9	0.06	0.06	-1.3	0.07	0.07	4.4	0.07	0.08	14.9	0.07	0.07	9.6
Diesel	0.32	0.32	-0.8	0.34	0.32	-5.0	0.32	0.32	0.7	0.32	0.33	3.6	0.27	0.24	-7.9
Other Gasoil	0.11	0.10	-6.5	0.12	0.09	-26.7	0.12	0.10	-15.3	0.13	0.14	8.4	0.12	0.13	2.7
Residual Fuel Oil	0.55	0.50	-9.5	0.54	0.53	-2.5	0.55	0.52	-5.4	0.55	0.63	15.3	0.49	0.45	-7.3
Other Products	0.12	0.10	-11.2	0.12	0.14	12.5	0.11	0.11	-2.0	0.13	0.14	1.7	0.09	0.09	0.6
Total	1.80	1.73	-3.4	1.85	1.76	-5.0	1.82	1.77	-2.7	1.83	2.01	10.1	1.69	1.64	-2.8
France															
LPG	0.10	0.09	-9.2	0.09	0.08	-17.5	0.10	0.09	-8.9	0.08	0.09	1.3	0.08	0.08	-5.4
Naphtha	0.23	0.22	-3.8	0.16	0.16	-3.1	0.21	0.17	-20.3	0.24	0.17	-31.5	0.24	0.19	-18.8
Motor Gasoline	0.37	0.36	-3.9	0.39	0.35	-9.4	0.37	0.36	-4.2	0.40	0.39	-2.0	0.39	0.38	-2.0
Jet/Kerosene	0.10	0.11	5.8	0.10	0.11	8.1	0.10	0.11	8.3	0.12	0.12	6.0	0.12	0.12	3.5
Diesel	0.46	0.47	2.2	0.49	0.48	-2.4	0.47	0.48	2.5	0.46	0.51	10.3	0.43	0.45	5.0
Other Gasoil	0.27	0.27	-0.3	0.35	0.28	-22.0	0.31	0.30	-4.6	0.38	0.37	-0.1	0.26	0.33	29.2
Residual Fuel Oil	0.12	0.14	13.8	0.11	0.13	19.9	0.12	0.15	18.7	0.13	0.11	-11.8	0.13	0.11	-16.2
Other Products	0.14	0.16	19.6	0.18	0.25	38.7	0.15	0.20	36.0	0.15	0.22	45.3	0.17	0.18	6.8
Total	1.79	1.82	1.4	1.88	1.83	-2.6	1.85	1.86	0.8	1.96	1.99	1.3	1.82	1.85	1.9
United Kingdom															
LPG	0.17	0.17	3.4	0.14	0.17	25.8	0.16	0.18	8.8	0.17	0.17	-3.0	0.15	0.18	19.0
Naphtha	0.06	0.07	14.7	0.08	0.05	-35.1	0.07	0.07	-5.5	0.05	0.06	12.1	0.07	0.06	-13.1
Motor Gasoline	0.51	0.53	3.7	0.51	0.51	0.4	0.51	0.52	2.9	0.49	0.53	7.8	0.52	0.51	-0.6
Jet/Kerosene	0.22	0.24	10.9	0.22	0.23	2.2	0.22	0.23	8.1	0.22	0.24	9.0	0.23	0.24	5.4
Diesel	0.27	0.30	9.0	0.28	0.29	2.8	0.27	0.29	7.6	0.26	0.30	15.9	0.27	0.29	6.5
Other Gasoil	0.18	0.18	0.5	0.17	0.17	-2.5	0.18	0.18	0.3	0.16	0.18	11.1	0.17	0.18	2.4
Residual Fuel Oil	0.16	0.17	4.6	0.17	0.16	-6.2	0.17	0.16	-3.6	0.16	0.12	-24.3	0.18	0.14	-21.7
Other Products	0.19	0.19	-1.9	0.21	0.16	-21.3	0.20	0.18	-6.3	0.19	0.20	3.7	0.18	0.17	-8.3
Total	1.76	1.84	4.9	1.78	1.75	-2.1	1.77	1.81	2.6	1.71	1.80	5.1	1.77	1.77	-0.2
Canada															
LPG	0.27	0.28	3.8	0.23	0.28	22.7	0.25	0.27	10.5	0.25	0.26	2.0	0.25	0.25	0.0
Naphtha	0.07	0.08	2.6	0.08	0.07	-5.0	0.08	0.07	-6.7	0.08	0.08	8.7	0.07	0.08	13.8
Motor Gasoline	0.62	0.62	0.1	0.64	0.63	-2.6	0.60	0.61	1.5	0.63	0.65	3.4	0.67	0.67	-0.1
Jet/Kerosene	0.08	0.08	3.3	0.09	0.10	14.4	0.08	0.09	10.4	0.09	0.11	17.7	0.10	0.11	14.6
Diesel	0.16	0.16	0.0	0.16	0.16	0.0	0.15	0.15	0.0	0.15	0.15	0.0	0.16	0.15	-7.9
Other Gasoil	0.27	0.28	4.8	0.24	0.24	1.1	0.26	0.27	5.6	0.22	0.25	12.7	0.24	0.27	11.7
Residual Fuel Oil	0.10	0.10	4.3	0.10	0.11	13.4	0.10	0.10	0.3	0.10	0.11	16.4	0.13	0.13	-0.3
Other Products	0.23	0.21	-5.6	0.26	0.25	-6.1	0.23	0.23	0.9	0.28	0.29	4.2	0.29	0.27	-5.8
Total	1.80	1.82	1.1	1.80	1.85	2.5	1.74	1.80	3.1	1.79	1.90	5.9	1.91	1.94	1.4

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)

	1995	1996 ^f	1997 ^f	4Q95	1Q96	2Q96	3Q96 ^p	4Q96 ^f	Aug96	Sep96 ^p	Oct96 ^p
OPEC¹											
Crude Oil											
Saudi Arabia	7.94			7.92	7.95	7.84	7.93		7.90	7.95	7.90
Iran	3.65			3.68	3.69	3.62	3.71		3.75	3.67	3.70
Iraq	0.55			0.55	0.55	0.55	0.55		0.55	0.55	0.55
UAE	2.19			2.16	2.19	2.19	2.19		2.18	2.19	2.19
Kuwait	1.84			1.84	1.84	1.79	1.80		1.83	1.80	1.80
Neutral Zone	0.43			0.43	0.46	0.47	0.48		0.45	0.51	0.51
Qatar	0.45			0.46	0.47	0.48	0.49		0.49	0.51	0.52
Nigeria	1.93			2.01	2.09	2.13	2.15		2.19	2.15	2.20
Libya	1.41			1.40	1.38	1.39	1.40		1.40	1.41	1.39
Algeria	0.76			0.79	0.78	0.81	0.83		0.83	0.84	0.85
Venezuela	2.58			2.71	2.89	2.94	3.02		3.02	3.03	3.03
Indonesia	1.34			1.34	1.38	1.41	1.38		1.37	1.35	1.42
Total Crude Oil	25.06			25.30	25.67	25.61	25.91		25.94	25.94	26.03
NGLs ²	2.42	2.62	2.81	2.48	2.51	2.55	2.69	2.73	2.69	2.70	2.68
TOTAL OPEC	27.48			27.78	28.17	28.16	28.60		28.63	28.64	28.71
NON-OPEC^{1,3}											
OECD											
North America	11.00	11.03	11.03	10.99	10.99	10.96	10.91	11.24	10.89	11.03	11.13
United States	8.61	8.57	8.54	8.57	8.54	8.59	8.46	8.70	8.41	8.56	8.59
Canada	2.39	2.45	2.50	2.43	2.45	2.37	2.45	2.55	2.48	2.47	2.54
Europe	6.31	6.81	7.53	6.73	6.65	6.56	6.55	7.47	6.39	6.60	6.98
UK	2.79	2.89	3.38	2.93	2.83	2.73	2.68	3.32	2.56	2.75	3.12
Norway	2.91	3.28	3.46	3.19	3.21	3.22	3.23	3.46	3.17	3.20	3.19
Others	0.61	0.64	0.69	0.61	0.61	0.61	0.64	0.69	0.66	0.65	0.67
Pacific	0.67	0.73	0.82	0.64	0.68	0.73	0.75	0.78	0.73	0.75	0.74
Australia	0.58	0.63	0.71	0.54	0.58	0.62	0.64	0.66	0.61	0.63	0.63
Others	0.10	0.11	0.11	0.10	0.10	0.11	0.11	0.11	0.12	0.12	0.11
Total OECD	17.98	18.57	19.38	18.36	18.32	18.25	18.20	19.48	18.00	18.38	18.85
Non-OECD											
Former USSR	7.12	7.03	7.21	7.09	7.02	6.99	7.06	7.08	7.09	7.04	7.04
Russia	6.15	6.00	6.05	6.07	6.01	5.99	6.04	5.98	6.07	5.99	5.97
Others	0.97	1.03	1.16	1.02	1.01	0.99	1.02	1.10	1.03	1.05	1.07
Asia	5.06	5.12	5.22	5.14	5.10	5.10	5.08	5.19	5.07	5.04	5.19
China	2.99	3.13	3.18	3.03	3.10	3.14	3.10	3.18	3.09	3.05	3.18
Malaysia	0.76	0.72	0.71	0.81	0.72	0.71	0.72	0.72	0.73	0.72	0.72
India	0.70	0.66	0.70	0.69	0.68	0.64	0.64	0.67	0.63	0.65	0.66
Others	0.61	0.61	0.64	0.62	0.60	0.61	0.62	0.62	0.62	0.62	0.62
Europe	0.27	0.27	0.28	0.27	0.28	0.27	0.27	0.28	0.27	0.27	0.27
Latin America	6.06	6.53	6.95	5.90	6.47	6.52	6.44	6.69	6.35	6.45	6.59
Mexico	3.07	3.31	3.40	2.84	3.31	3.35	3.23	3.37	3.17	3.21	3.30
Brazil	0.91	1.01	1.22	0.96	1.00	0.99	0.99	1.08	0.97	1.02	1.06
Argentina	0.76	0.82	0.80	0.78	0.80	0.82	0.84	0.83	0.85	0.84	0.83
Colombia	0.59	0.64	0.76	0.61	0.63	0.63	0.65	0.67	0.64	0.65	0.66
Ecuador	0.38	0.39	0.41	0.38	0.39	0.39	0.38	0.38	0.38	0.38	0.38
Others	0.35	0.35	0.36	0.35	0.34	0.34	0.35	0.36	0.35	0.36	0.36
Middle East ⁴	1.87	1.89	1.98	1.88	1.87	1.88	1.91	1.92	1.90	1.92	1.92
Oman	0.86	0.89	0.91	0.87	0.87	0.88	0.90	0.91	0.90	0.91	0.91
Syria	0.59	0.60	0.63	0.59	0.60	0.60	0.60	0.61	0.60	0.60	0.60
Yemen	0.37	0.35	0.39	0.37	0.35	0.35	0.36	0.36	0.36	0.36	0.36
Africa	2.59	2.73	3.00	2.62	2.63	2.69	2.74	2.84	2.73	2.76	2.79
Egypt	0.95	0.93	1.00	0.95	0.94	0.93	0.91	0.92	0.92	0.89	0.90
Angola	0.65	0.72	0.80	0.67	0.67	0.72	0.72	0.75	0.73	0.73	0.75
Gabon	0.35	0.35	0.36	0.35	0.36	0.36	0.35	0.35	0.35	0.35	0.35
Others	0.65	0.73	0.84	0.66	0.66	0.68	0.76	0.82	0.74	0.78	0.80
Total Non-OECD	22.97	23.58	24.63	22.90	23.36	23.44	23.50	23.98	23.42	23.48	23.80
Processing Gains ⁵	1.46	1.52	1.57	1.49	1.52	1.50	1.50	1.55	1.50	1.50	1.55
TOTAL NON-OPEC	42.40	43.66	45.59	42.75	43.19	43.20	43.21	45.01	42.92	43.36	44.19
TOTAL SUPPLY	69.88			70.53	71.36	71.35	71.81		71.55	72.00	72.90

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

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

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

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

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

p preliminary

f forecast

Table 4A
OIL SUPPLY IN OECD COUNTRIES¹
(thousand barrels per day)

	August		September		3rd Quarter 96		October		4th Quarter 96f		1997f	
	Level	Change ²	Level	Change	Level	Change	Level	Change	Level	Change	Level	Change
United States												
Alaska	1326	6	1404	78	1349	-28	1414	10	1481	131	1392	-26
California (inc. offshore)	956	-5	949	-7	955	6	952	3	951	-4	919	-35
Texas	1425	-10	1420	-5	1427	-54	1410	-10	1408	-18	1323	-130
Offshore Gulf of Mexico	1187	18	1219	32	1191	90	1263	44	1292	100	1436	280
Other US Lower 48	1495	-3	1512	17	1501	-59	1429	-83	1408	-94	1331	-174
NGLs ³	1750	-6	1765	15	1757	-70	1805	40	1850	93	1824	37
Other Hydrocarbons	275	4	295	20	280	-13	315	20	305	25	313	14
Total	8414	4	8563	150	8461	-128	8587	24	8695	233	8537	-34
Canada												
Alberta Light & Medium	669	-3	675	6	672	2	690	15	682	9	653	-26
Alberta Heavy	273	5	275	2	272	16	272	-3	262	-10	277	17
Alberta Bitumen	160	-3	155	-5	160	13	160	5	157	-3	156	2
Saskatchewan	361	14	365	4	357	29	372	7	376	19	369	18
Other Conventional	105	5	110	5	105	1	103	-7	102	-3	103	1
NGLs	618	49	595	-22	594	-10	618	23	643	49	633	15
Syncrudes	290	11	290	-1	287	24	325	35	324	38	305	16
Total	2476	78	2464	-12	2446	75	2540	75	2545	99	2495	43
United Kingdom⁴												
Brent Fields	480	18	447	-33	463	0	496	49	540	77	471	-22
Forties Fields	868	9	882	14	870	-13	981	99	1032	163	1035	110
Ninian Fields	239	-79	311	72	289	-24	339	28	343	54	315	-2
Flotta Fields	192	-45	224	32	217	3	246	22	250	33	243	11
Other Offshore Fields	452	-54	547	95	501	-3	650	103	722	221	888	340
NGLs	220	-3	241	21	228	-16	297	56	322	94	311	45
Total	2451	-154	2652	201	2568	-53	3009	357	3210	641	3264	483
Norway⁴												
Ekofisk/Ula Area	524	24	512	-12	512	9	537	25	570	59	532	16
Oseberg Area	902	-36	923	21	921	24	941	18	970	49	938	15
Statfjord-Gullfaks-Snorre	1092	-161	1249	157	1197	-35	1053	-195	1235	38	1150	-73
Haltenbanken	392	20	262	-129	343	-3	380	117	393	50	460	105
Sleipner/Frigg	116	-6	123	8	120	13	140	17	151	31	235	111
Plant Condensate (as NGLs)	8	-1	6	-2	8	-0	10	4	10	2	7	-1
Lighter NGLs	132	-1	123	-9	130	4	132	9	133	4	135	2
Total	3165	-160	3199	34	3230	10	3194	-5	3463	233	3457	175
Other OECD Europe												
Other North Sea	262	10	272	10	265	33	279	7	288	23	293	43
Onshore U.K.	112	-2	102	-10	109	1	109	7	112	2	115	6
Italy	110	12	110	0	106	7	115	5	117	11	130	26
Turkey	67	0	66	-1	67	-3	67	1	67	-0	64	-3
Other	174	27	150	-24	157	8	153	3	154	-3	144	-7
NGLs	16	-11	22	6	18	-17	24	1	27	9	32	-5
Non-Conventional Oils	27	3	29	2	27	6	30	1	31	4	29	4
Total	768	39	751	-18	749	35	776	25	795	46	808	64
Australia												
Gippsland Basin	198	-8	200	2	201	-0	201	1	208	7	193	-10
Cooper/Eromanga	33	-2	33	-1	34	-1	34	2	34	-0	34	-0
Carnarvon Basin	279	-37	302	23	299	16	308	6	335	36	395	102
Bonaparte Basin	25	-3	19	-6	24	-2	12	-7	15	-9	22	1
Other Fields	6	-0	6	-0	6	0	6	0	6	0	6	-0
NGLs	70	-1	72	2	71	2	70	-2	65	-6	61	-6
Total	611	-51	631	20	635	15	631	0	662	27	711	86
Other OECD Pacific												
New Zealand	40	8	36	-4	36	1	34	-2	34	-2	36	2
Japan	11	2	11	0	10	-0	11	0	11	1	11	0
NGLs	13	0	10	-3	12	0	13	3	13	1	14	1
Synthetic Fuels	52	-1	58	6	54	0	54	-4	55	0	51	-1
Total	116	9	116	-1	113	1	112	-3	113	0	111	2
OECD												
Crude Oil	14522	-287	14860	337	14729	36	15145	285	15691	962	15654	697
NGLs	2835	34	2845	10	2827	-98	2980	135	3077	250	3031	89
Non-Conventional Oils	644	17	672	27	648	16	724	52	715	67	698	34
Total	18002	-235	18377	375	18203	-45	18849	473	19483	1280	19383	820

¹ Subcategories refer to crude oil only unless otherwise noted.

² All changes are period to period not year-on-year.

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

⁴ 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 STOCKS¹ AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS ²					PRIOR YEARS' STOCKS ²			STOCK CHANGES			
	in Million Barrels					in Million Barrels			in mb/d			
	May96	Jun96	Jul96*	Aug96*	Sep96*	Sep93	Sep94	Sep95	Q495	Q196	Q296	Q396
North America												
Crude	373	378	374	380	372	385	405	373	-0.05	-0.02	0.13	-0.06
Gasoline	224	224	221	210	215	225	223	220	0.03	0.05	-0.04	-0.10
Middle Distillate	157	167	174	178	185	202	222	205	-0.04	-0.57	0.19	0.20
Residual Fuel Oil	43	44	44	44	45	52	53	49	-0.04	-0.05	0.04	0.01
Total Products ³	565	584	592	587	604	668	670	652	-0.38	-0.80	0.43	0.21
Total ⁴	1086	1113	1122	1122	1128	1237	1256	1195	-0.74	-0.87	0.72	0.17
Europe												
Crude	329	321	337	322	318	299	309	288	0.22	0.06	0.09	-0.04
Gasoline	125	129	126	120	124	122	118	124	0.06	0.08	-0.07	-0.05
Middle Distillate	214	212	217	216	213	227	239	247	-0.33	-0.23	0.19	0.01
Residual Fuel Oil	92	92	94	98	96	106	98	105	-0.05	-0.16	0.06	0.04
Total Products ³	516	517	519	516	515	542	541	565	-0.33	-0.37	0.17	-0.02
Total ⁴	903	895	912	896	892	898	907	909	-0.08	-0.33	0.27	-0.03
Pacific												
Crude	169	170	152	156	150	171	151	170	-0.09	0.10	-0.01	-0.21
Gasoline	22	20	23	21	22	21	22	20	-0.01	0.01	-0.02	0.01
Middle Distillate	49	50	58	68	73	73	77	68	-0.17	-0.12	0.09	0.25
Residual Fuel Oil	16	15	16	16	15	20	16	15	-0.01	0.00	0.01	0.00
Total Products ³	141	141	155	165	168	168	173	163	-0.21	-0.16	0.14	0.29
Total ⁴	390	389	389	408	409	429	407	417	-0.42	-0.03	0.14	0.22
Total												
Crude	871	869	863	857	839	855	865	831	0.07	0.13	0.21	-0.32
Gasoline	371	373	370	351	360	368	361	366	0.07	0.15	-0.13	-0.14
Middle Distillate	419	429	450	463	471	502	538	520	-0.53	-0.92	0.48	0.46
Residual Fuel Oil	151	151	154	158	156	177	167	169	-0.10	-0.22	0.11	0.05
Total Products ³	1222	1242	1267	1268	1287	1378	1384	1380	-0.92	-1.33	0.74	0.49
Total ⁴	2378	2397	2423	2427	2429	2564	2570	2521	-1.24	-1.23	1.14	0.35

OECD GOVERNMENT-CONTROLLED STOCKS⁵ AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS ²					PRIOR YEARS' STOCKS ²			STOCK CHANGES ³			
	in Million Barrels					in Million Barrels			in mb/d			
	May96	Jun96	Jul96*	Aug96*	Sep96*	Sep93	Sep94	Sep95	Q495	Q196	Q296	Q396
North America												
Crude	586	584	583	578	573	586	592	592	0.00	-0.03	-0.05	-0.13
Europe												
Crude	134	133	134	134	134	135	134	134	0.00	0.00	-0.01	0.01
Products	185	185	186	187	187	186	187	184	-0.01	0.04	-0.02	0.02
Pacific												
Crude	299	299	299	299	299	247	267	293	0.07	0.01	0.00	0.00
Total												
Crude	1019	1017	1016	1011	1006	968	993	1018	0.07	-0.02	-0.06	-0.12
Products	185	185	186	187	187	186	187	184	-0.01	0.04	-0.02	0.02
Total ⁴	1204	1203	1202	1198	1193	1153	1180	1202	0.06	0.02	-0.08	-0.10

* 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 STOCKS¹ ON LAND IN SELECTED COUNTRIES

(million barrels)

	April			May			June			July			August		
	1995	1996	%	1995	1996	%	1995	1996	%	1995	1996	%	1995	1996	%
United States															
Crude	336.4	303.0	-9.9	332.4	304.8	-8.3	327.9	314.3	-4.2	315.6	309.6	-1.9	307.8	315.2	2.4
Motor Gasoline	207.8	203.0	-2.3	208.0	205.1	-1.4	204.6	204.6	0.0	207.1	201.5	-2.7	192.2	191.5	-0.4
Middle Distillate	158.4	128.4	-18.9	160.5	135.3	-15.7	158.6	143.2	-9.7	170.4	148.4	-12.9	175.5	152.9	-12.9
Residual Fuel Oil	37.1	33.7	-9.2	38.6	34.3	-11.1	36.0	34.9	-2.9	36.8	34.8	-5.5	37.9	35.8	-5.6
Other Products	134.7	116.1	-13.8	140.6	121.9	-13.3	147.9	130.9	-11.5	159.0	136.4	-14.2	162.5	137.9	-15.1
Total Products	538.0	481.1	-10.6	547.7	496.7	-9.3	547.1	513.6	-6.1	573.3	521.1	-9.1	568.1	518.1	-8.8
Other ²	135.3	130.6	-3.4	140.0	132.1	-5.6	142.2	133.2	-6.4	143.8	136.2	-5.3	146.8	136.4	-7.1
Total	1009.7	914.7	-9.4	1020.0	933.6	-8.5	1017.3	961.1	-5.5	1032.8	966.9	-6.4	1022.6	969.8	-5.2
Japan															
Crude	135.4	140.0	3.4	143.2	151.2	5.5	159.4	152.7	-4.2	163.0	136.4	-16.3	149.9	140.1	-6.5
Motor Gasoline	15.5	13.7	-11.5	14.9	13.9	-7.3	13.4	11.6	-13.7	12.3	11.6	-5.6	12.3	11.8	-4.2
Middle Distillate	45.4	37.0	-18.4	48.5	40.5	-16.5	46.9	42.3	-9.7	51.5	47.9	-7.0	57.0	58.6	2.9
Residual Fuel Oil	14.7	13.0	-11.9	14.2	12.7	-10.5	14.3	12.6	-12.0	14.8	12.9	-12.7	13.0	13.1	0.6
Other Products	48.6	46.3	-4.8	48.1	49.7	3.4	44.9	49.7	10.8	46.4	52.8	13.8	53.5	54.2	1.2
Total Products	124.2	110.0	-11.5	125.7	116.8	-7.1	119.5	116.3	-2.7	125.1	125.2	0.2	135.8	137.7	1.4
Other ²	82.3	72.2	-12.2	82.4	73.3	-11.0	77.4	71.9	-7.1	79.1	75.6	-4.4	78.4	80.8	3.0
Total	341.9	322.1	-5.8	351.3	341.2	-2.9	356.3	340.8	-4.3	367.2	337.3	-8.1	364.1	358.6	-1.5
Germany															
Crude	22.9	21.2	-7.6	22.8	20.9	-8.3	20.7	20.9	1.0	23.1	19.1	-17.5	22.1	21.1	-4.6
Motor Gasoline	11.1	9.6	-13.4	10.0	9.7	-3.4	10.8	11.4	5.6	11.0	11.2	1.9	11.5	8.6	-24.6
Middle Distillate	16.7	17.8	6.4	17.5	15.6	-11.0	17.0	15.3	-10.4	17.4	18.5	6.0	17.8	15.6	-12.4
Residual Fuel Oil	8.9	8.4	-5.3	9.5	8.9	-6.2	10.1	8.3	-17.8	10.5	8.3	-21.2	10.1	9.1	-10.8
Other Products	12.8	11.6	-9.0	12.6	11.2	-10.7	11.8	11.9	1.2	12.0	11.6	-3.7	11.9	11.5	-3.6
Total Products	49.5	47.5	-4.1	49.6	45.4	-8.5	49.7	46.9	-5.7	50.9	49.5	-2.8	51.3	44.8	-12.8
Other ²	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
Total	72.4	68.7	-5.2	72.3	66.2	-8.4	70.4	67.8	-3.7	74.0	68.6	-7.4	73.4	65.9	-10.3
Italy															
Crude	41.9	35.2	-15.9	42.6	39.5	-7.3	42.7	39.6	-7.2	45.8	37.5	-18.0	45.8	36.5	-20.4
Motor Gasoline	22.4	21.1	-5.8	23.1	21.2	-8.0	22.2	21.0	-5.5	21.5	21.6	0.6	19.6	21.0	6.9
Middle Distillate	33.3	35.3	6.0	34.7	35.1	1.0	36.0	34.9	-3.0	35.2	33.4	-4.9	36.4	37.4	2.8
Residual Fuel Oil	22.7	20.0	-11.6	22.3	23.0	3.0	24.3	24.9	2.1	24.4	25.2	3.2	26.6	26.9	1.1
Other Products	8.5	8.9	4.0	7.7	9.9	28.5	7.4	9.4	28.0	8.7	8.5	-2.3	9.5	8.4	-12.2
Total Products	86.9	85.3	-1.8	87.8	89.1	1.5	89.9	90.2	0.3	89.8	88.8	-1.1	92.1	93.7	1.6
Other ²	5.1	5.8	13.0	5.2	4.7	-9.2	5.6	4.5	-19.1	5.4	5.2	-3.9	5.2	5.4	4.6
Total	134.0	126.3	-5.7	135.6	133.3	-1.7	138.1	134.3	-2.8	141.0	131.5	-6.7	143.2	135.6	-5.3
France															
Crude	42.2	45.5	7.8	37.2	40.3	8.3	41.0	37.6	-8.4	47.2	43.4	-8.0	38.0	43.8	15.3
Motor Gasoline	18.8	20.6	9.8	18.7	20.9	11.9	21.7	21.3	-1.9	16.3	20.2	24.0	16.1	17.1	5.8
Middle Distillate	34.0	36.5	7.4	36.3	39.3	8.1	40.3	38.7	-4.2	34.6	36.3	4.8	41.4	33.1	-20.0
Residual Fuel Oil	7.1	8.4	19.0	8.1	8.9	11.0	7.8	8.2	4.9	8.4	8.2	-2.4	9.4	8.4	-10.5
Other Products	9.7	9.2	-5.4	8.1	8.5	5.0	8.9	8.5	-5.2	8.5	8.4	-0.4	9.3	8.2	-11.3
Total Products	69.5	74.7	7.5	71.2	77.7	9.1	78.7	76.6	-2.8	67.8	73.2	7.9	76.2	66.8	-12.3
Other 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	13.1	12.6	-4.2
Total	123.7	132.2	6.9	120.6	130.6	8.2	133.2	127.6	-4.2	128.3	129.6	1.0	127.3	123.2	-3.2
United Kingdom															
Crude	33.3	35.4	6.4	33.5	32.8	-2.2	26.5	32.6	22.9	33.7	36.1	7.2	30.9	31.2	1.2
Motor Gasoline	16.3	15.1	-7.4	15.9	14.7	-7.4	15.1	15.2	0.1	15.1	14.2	-6.1	15.9	14.5	-8.3
Middle Distillate	17.8	18.1	1.7	18.8	18.4	-2.3	18.1	18.8	3.8	18.6	18.2	-2.2	19.2	18.0	-6.5
Residual Fuel Oil	7.6	7.0	-6.8	8.8	7.3	-16.7	8.5	6.5	-23.6	9.2	7.0	-23.8	9.1	7.0	-23.3
Other Products	12.6	11.9	-6.0	12.8	11.7	-9.2	12.1	12.4	2.6	12.8	11.7	-8.0	12.2	11.7	-3.6
Total Products	54.3	52.1	-4.0	56.3	52.0	-7.6	53.8	52.8	-1.8	55.7	51.1	-8.2	56.4	51.3	-9.1
Other ²	15.1	17.0	12.7	17.4	16.6	-4.6	17.1	15.2	-11.5	15.8	13.9	-12.3	16.1	14.4	-10.2
Total	102.7	104.6	1.8	107.2	101.4	-5.4	97.5	100.6	3.2	105.2	101.2	-3.9	103.3	96.9	-6.2
Canada															
Crude	60.2	60.3	0.3	62.4	59.5	-4.6	75.4	54.7	-27.4	74.6	56.1	-24.8	56.4	56.0	-0.8
Motor Gasoline	24.3	20.9	-14.2	21.1	17.2	-18.4	19.7	17.7	-10.2	20.4	17.6	-13.5	19.3	17.0	-12.2
Middle Distillate	23.2	18.6	-19.8	20.4	18.0	-11.9	21.9	20.3	-7.1	22.9	22.3	-2.5	23.6	21.9	-7.3
Residual Fuel Oil	4.5	5.1	13.7	4.0	4.6	15.6	4.7	5.0	6.5	5.2	4.9	-6.9	5.2	4.2	-18.3
Other Products	19.4	15.9	-18.1	19.5	17.6	-9.8	18.6	16.9	-9.0	18.3	16.0	-12.4	17.7	15.5	-12.4
Total Products	71.4	60.5	-15.3	65.1	57.5	-11.7	65.0	60.0	-7.6	66.8	60.9	-8.9	65.8	58.6	-11.0
Other ²	13.9	10.5	-24.2	14.4	11.4	-20.6	16.2	13.7	-15.4	16.6	14.3	-13.9	18.1	14.3	-21.2
Total	145.5	131.3	-9.7	141.8	128.4	-9.5	156.5	128.4	-17.9	158.0	131.2	-17.0	140.4	128.9	-8.2

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

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

	End September 1995		End December 1995		End March 1996		End June 1996 ⁴		End September 1996 ⁵	
	Stock ¹ Level	Days Fwd ² Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
Canada	142.9	75	131.6	70	131.0	73	128.4	-	-	-
United States	1619.7	90	1562.9	85	1481.9	83	1545.5	-	-	-
NORTH AMERICA	1786.3	89	1718.2	84	1636.7	82	1697.7	83	1701.1	84
Australia	42.7	52	39.1	49	40.1	48	39.0	-	-	-
Japan	657.7	110	630.5	98	626.5	120	640.2	-	-	-
New Zealand	9.4	57	7.8	51	8.6	67	9.0	-	-	-
PACIFIC	709.8	102	677.3	92	675.3	109	688.2	108	708.5	102
Austria	16.9	71	16.9	71	15.7	70	15.7	-	-	-
Belgium	29.7	56	28.5	46	24.9	49	26.9	-	-	-
Denmark	27.4	116	26.2	108	19.4	84	19.2	-	-	-
Finland	21.7	109	28.5	167	28.5	175	28.5	-	-	-
France	157.6	79	155.3	75	153.0	82	156.2	-	-	-
Germany	303.5	108	302.3	103	299.2	106	298.6	-	-	-
Greece	22.6	56	21.7	57	20.3	59	20.9	-	-	-
Ireland	7.8	64	7.3	58	6.2	51	7.2	-	-	-
Italy	139.4	67	141.5	69	135.7	77	140.1	-	-	-
Luxembourg	0.8	22	0.7	18	0.7	19	0.8	-	-	-
Netherlands	116.5	146	107.0	138	97.1	124	105.2	-	-	-
Norway	45.1	236	48.6	234	56.4	277	58.6	-	-	-
Portugal	18.7	64	18.8	74	19.3	72	18.2	-	-	-
Spain	92.3	75	94.2	84	89.7	79	92.7	-	-	-
Sweden	32.8	85	31.9	73	32.2	90	31.3	-	-	-
Switzerland	47.4	183	45.0	188	44.4	187	45.1	-	-	-
Turkey	42.0	68	42.9	73	46.7	80	47.8	-	-	-
United Kingdom	104.4	57	101.1	55	101.9	56	100.6	-	-	-
EUROPE⁵	1226.4	86	1218.4	85	1191.1	89	1213.5	86	1212.8	85
Total	3722.6	90	3613.9	86	3503.1	88	3599.4	88	3622.4	87
DAYS OF IEA NET IMPORTS⁶	-	132	-	128	-	122	-	126	-	-

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 June and end September 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 ¹	Industry	Total	Government	Industry
		controlled Millions of Barrels			controlled Days of Fwd. Demand ²	
Q393	3717	1153	2564	92	29	63
Q493	3649	1162	2486	90	29	61
Q194	3534	1175	2359	91	30	61
Q294	3655	1177	2478	92	30	62
Q394	3750	1180	2570	92	29	63
Q494	3720	1190	2530	91	29	62
Q195	3608	1198	2410	92	31	62
Q295	3676	1192	2484	92	30	62
Q395	3723	1202	2521	90	29	61
Q495	3614	1208	2406	86	29	57
Q196	3503	1210	2293	88	31	58
Q296	3599	1203	2397	88	30	59
Q396	3622	1193	2429	87	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 and September 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	May96	Jun96	Jul96	Aug96	Sep96	Oct96
Crude Oil Prices														
IEA CIF Average Import	16.37	15.65	17.19	16.42	16.10	18.59	19.78	20.60*	19.76	18.82	19.48	20.12	22.20*	23.80*
FOB Spot														
Brent (Dated)	17.00	15.80	17.02	16.18	16.92	18.54	19.51	20.96	19.13	18.43	19.58	20.60	22.69	24.15
WTI (1st month)	18.44	17.19	18.41	17.83	18.12	19.64	21.80	22.43	21.35	20.45	21.31	21.96	24.01	24.89
Urals (Del. Med.)	15.39	15.23	16.62	15.50	16.50	18.52	18.66	20.10	18.41	17.25	18.55	19.86	21.90	23.44
Dubai (1st month)	14.93	14.75	16.10	15.31	15.83	16.43	17.26	18.96	16.87	17.25	17.74	18.66	20.47	21.75
OPEC Basket	16.32	15.53	16.88	15.98	16.70	18.44	19.18	20.30	18.92	18.37	19.29	19.94	21.68	23.24*
Product Prices¹														
Rotterdam, Barges FOB														
Premium 0.15 g/l	22.45	20.18	21.25	20.81	20.50	21.18	25.52	24.83	27.04	23.16	24.45	24.49	25.56	27.26
Regular Unleaded	20.70	18.65	19.75	19.38	19.14	19.76	23.86	23.31	25.14	21.61	22.94	23.09	23.91	25.50
Naphtha	18.47	17.30	18.15	17.43	17.14	19.02	20.85	21.90	21.12	19.38	20.99	21.43	23.27	25.18
Jet/Kerosene	23.37	20.95	21.60	21.57	22.38	25.07	23.78	27.48	23.13	22.69	25.01	26.21	31.21	33.53
Gasoil	22.28	19.80	20.47	20.49	21.04	23.97	23.16	26.41	22.48	22.05	24.16	24.93	30.14	31.52
Fuel Oil 1.0%S	13.50	14.00	15.76	13.69	15.39	17.20	16.90	16.35	17.41	15.13	15.91	15.82	17.33	19.15
Fuel Oil 3.5%S	10.22	13.01	14.82	12.97	14.16	15.66	15.41	15.57	15.13	13.48	13.80	15.27	17.65	19.10
Gross Product Worth ²	19.80	18.45	19.55	18.75	18.99	20.49	22.67	23.35	23.10	20.91	22.44	22.93	24.68	26.53
Brent Cracking Margin	1.70	1.60	1.42	1.43	0.98	0.65	1.97	1.30	2.74	1.33	1.77	1.23	0.90	1.15
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	26.99	23.66	24.66	24.70	25.02	26.97
Naphtha	17.17	15.71	16.35	15.61	15.20	17.07	18.91	20.13	19.21	17.46	19.15	19.82	21.42	23.30
Jet/Kerosene	21.74	19.26	19.94	19.74	21.17	23.48	22.38	26.00	21.93	21.45	23.45	24.76	29.79	30.86
Gasoil	21.51	18.71	19.39	19.15	20.53	22.27	22.42	25.06	21.94	20.82	22.56	23.88	28.74	30.12
Fuel Oil 1.0%S	13.72	13.93	15.48	13.42	15.65	17.32	17.33	16.44	17.39	15.49	16.24	15.42	17.66	19.27
Fuel Oil 3.5%S	9.43	11.98	13.95	11.80	14.03	15.14	13.70	14.51	14.63	10.51	13.22	13.76	16.55	18.02
Gross Product Worth ³	18.87	17.46	18.39	17.63	18.70	20.04	21.24	22.23	21.50	19.32	20.87	21.49	24.31	25.89
Urals Cracking Margin	3.14	1.89	1.44	1.80	1.87	1.19	2.26	1.81	2.76	1.73	2.00	1.31	2.10	2.15
NY Harbour, Barges														
Premium Unleaded 93	23.69	23.65	24.81	24.73	23.78	24.35	28.17	28.00	29.40	26.52	28.48	27.41	28.12	29.87
Regular Unleaded 87	21.58	20.54	22.57	22.38	21.29	22.65	26.34	25.88	27.24	24.33	25.89	25.64	26.10	27.47
Jet/Kerosene	23.33	22.20	21.76	21.78	23.37	26.27	26.01	27.13	24.93	23.32	24.45	27.03	29.90	30.67
No.2 (Heating Oil)	22.04	20.68	20.72	20.41	22.08	25.21	24.45	25.69	23.87	21.60	23.35	25.35	28.37	30.28
Fuel Oil 1.0%S (Cargo)	14.63	15.05	16.06	14.71	16.24	19.36	18.23	17.93	17.77	16.96	17.90	17.35	18.54	21.07
Fuel Oil 3.0%S (Cargo)	11.21	12.25	14.47	12.82	13.85	14.94	15.17	15.49	15.14	14.55	14.99	15.21	16.28	19.44
Gross Product Worth ⁴	20.17	19.54	20.33	19.80	19.60	21.96	22.39	22.03	23.11	21.11	21.07	21.51	23.50	25.11
WTI Cracking Margin	0.63	1.24	0.82	0.87	0.38	0.89	0.99	0.41	1.42	0.53	0.95	0.50	-0.23	0.65
Singapore, Cargoes														
Gasoline ⁵	24.01	21.10	22.11	22.30	21.47	21.61	25.01	22.32	26.30	23.60	22.55	21.59	22.83	24.80
Naphtha	17.22	16.34	17.54	16.69	16.26	17.51	19.53	20.22	19.46	18.75	19.61	20.01	21.04	22.44
Jet/Kerosene	24.42	21.74	22.72	21.13	25.10	28.68	25.32	27.75	25.93	23.83	25.34	28.10	29.82	30.23
Gasoil	24.02	20.87	21.60	20.63	22.08	25.87	25.47	25.86	26.52	24.32	24.40	25.32	27.86	29.99
LSWR (0.3%) ⁷	14.90	13.58	14.74	13.80	15.64	16.21	17.86	17.57	18.74	17.53	16.68	17.43	18.59	19.75
HSFO (3.5%S 180cst)	11.83	13.17	14.98	13.14	15.18	17.15	15.63	15.89	15.44	14.08	14.46	15.39	17.82	18.47
HSFO (3.5%S 380cst)	10.81	12.37	14.30	12.49	14.50	15.93	14.64	15.21	14.47	13.14	13.73	14.67	17.21	17.75
Gross Product Worth ⁶	20.22	18.76	19.74	18.87	19.79	21.96	22.39	22.03	23.11	21.11	21.07	21.51	23.50	25.11
Dubai Cracking Margin	4.13	2.97	2.35	2.15	2.62	4.09	3.79	1.58	4.97	2.29	1.74	1.32	1.69	2.02

* = 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 PRODUCTS¹
October 1996

	National Currency						US Dollars					
	Price	Tax	% ch Prev. Month	Excl. Tax	Price	Excl. Tax	Price	Excl. Tax	% ch Prev. Month	Excl. Tax	Price	Excl. Tax
GASOLINE² Price per Litre												
France	6.290	5.064	0.3	0.8	7.0	20.8	1.215	0.236	-0.6	-0.1	2.0	15.2
Germany	1.579	1.186	0.2	0.8	6.4	26.8	1.031	0.257	-1.4	-0.9	-1.7	17.1
Italy	1891	1413	0.1	0.2	1.9	6.8	1.239	0.313	-0.3	-0.2	7.3	12.4
Spain	120.2	81.4	2.0	5.6	7.1	13.8	0.932	0.301	0.5	4.0	1.8	8.1
UK	0.634	0.486	1.9	8.0	8.6	9.6	1.002	0.235	3.1	9.2	8.6	9.6
Japan	104	57	0.0	0.0	-2.8	-6.0	0.929	0.420	-2.1	-2.1	-12.6	-15.5
Canada	0.571	0.286	0.0	-0.3	7.1	12.2	0.422	0.211	1.3	1.0	6.7	11.7
USA ³	0.339	0.101	-0.9	-1.2	13.8	20.8	0.339	0.238	-0.9	-1.2	13.8	20.8
AUTOMOTIVE DIESEL⁴ Price per Litre												
France	3.782	2.292	4.4	12.0	17.9	41.9	0.730	0.288	3.4	10.9	12.5	35.4
Germany	1.102	0.620	3.7	8.8	13.3	36.5	0.720	0.315	2.0	7.0	4.6	26.1
Italy	1259.66	747.47	3.4	8.7	9.8	28.2	0.825	0.336	3.0	8.3	15.6	34.9
Spain	84.65	43.20	5.1	11.1	20.2	44.2	0.657	0.322	3.6	9.4	14.2	37.1
UK	0.518	0.343	5.1	16.7	15.4	28.7	0.818	0.276	6.2	18.0	15.4	28.7
Japan	78	34	0.0	0.0	10.3	19.8	0.699	0.395	-2.1	-2.1	-0.8	7.7
Canada	0.547	0.215	3.0	4.4	7.5	11.8	0.405	0.246	4.4	5.8	7.0	11.3
USA	..	..	..	..	..	..	..	..	..	..	..	..
DOMESTIC HEATING OIL Price per 1000 Litres												
France	2405.0	915.0	6.4	8.8	19.5	27.0	464.5	287.8	5.4	7.7	14.0	21.1
Germany	573.5	154.8	8.1	9.8	45.6	59.4	374.6	273.5	6.3	8.0	34.4	47.3
Italy	1448000	978660	2.5	6.7	11.0	34.7	948.9	307.6	2.1	6.3	16.9	41.8
Spain	53355	19959	12.0	17.3	35.8	54.2	413.9	259.1	10.3	15.6	29.1	46.5
UK	184.70	36.98	13.2	15.6	35.5	41.0	291.8	233.4	14.4	16.9	35.5	41.0
Japan ⁵	45938	1338	0.0	0.0	15.8	15.8	410.2	398.2	-2.1	-2.1	4.2	4.2
Canada	..	..	..	..	..	..	..	..	..	..	..	..
USA ⁶	258.9	..	4.9	..	12.7	..	258.9	..	4.9	..	12.7	..
HFO FOR INDUSTRY^{4,7} Price per Metric Ton												
France	858.0	156.9	5.8	7.2	26.4	33.6	165.7	135.4	4.8	6.2	20.5	27.4
Germany	244.0	30.0	7.5	8.6	27.3	32.1	159.4	139.8	5.7	6.9	17.6	22.0
Italy	297000	45000	3.4	4.0	13.8	16.7	194.6	165.1	3.0	3.6	19.8	22.8
Spain	24637	2150	9.1	10.1	30.9	34.3	191.1	174.5	7.5	8.4	24.4	27.6
UK	99.75	18.20	6.1	7.6	20.5	23.4	157.6	128.8	7.3	8.7	20.5	23.4
Japan	19516	568	0.0	0.0	20.0	20.0	174.3	169.2	-2.1	-2.1	7.9	7.9
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

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Oil Market Report Contacts

Demand

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

Supply

David Knapp
(+33 1) 40 57 65 91
david.knapp@iea.org

Stocks (and Editor)

Philip Starling
(+33 1) 40 57 65 90
philip.starling@iea.org

Oil Prices and Refinery Activity

Roberto Sieber
(+33 1) 40 57 65 93
roberto.sieber@iea.org

Oil Trade

Koji Nakui
(+33 1) 40 57 65 94
koji.nakui@iea.org

Fax: (+33 1) 40 57 65 99/40 57 66 09

Editorial Enquiries

Oil Industry and Markets Division
International Energy Agency (IEA)
9 rue de la Fédération
75730 PARIS Cedex 15, 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

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