INTERNATIONAL ENERGY AGENCY/AGENCE INTERNATIONALE DE L'ENERGIE

# OIL MARKET REPORT

A MONTHLY OIL MARKET AND STOCKS ASSESSMENT

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INTERNATIONAL ENERGY AGENCY

AGENCE INTERNATIONALE DE L'ENERGIE

11 October 2005

## HIGHLIGHTS

- Front-month NYMEX WTI fell below $62/bbl in the wake of Hurricanes Katrina and Rita causing a simultaneous drop in crude and product demand. Spot gasoline prices were pressured on record US imports and maximised gasoline refinery yields. Heating oil prices moved above gasoline and close to parity with natural gas in early October.

- World oil supply declined by 845 kb/d in September to 83.8 mb/d. Hurricanes have shuttered 1.2 mb/d of US Gulf crude production, prompting 300-400 kb/d downward revisions to non-OPEC supply for 2005 and 2006. Non-OPEC growth of 170 kb/d in 2005 and 1.3 mb/d in 2006 is in addition to OPEC NGL growth of 0.4 mb/d each year.

- OPEC crude supply rose by 100 kb/d in September to 29.8 mb/d following increases from Iraq and Kuwait. OPEC spare capacity remains below 2.0 mb/d. OPEC attempts to make this available may be frustrated by a lack of demand for heavy, sour crude. OPEC capacity should increase by 0.5 mb/d by end-year and further in 2006.

- Due to regional economic and logistical disruptions, as well as retail price spikes, Hurricanes Katrina and Rita had a substantial impact on September demand. October should be less affected as logistical disruptions subside. Global demand growth is revised down by 90 kb/d to 1.26 mb/d for 2005, but should rebound to 1.75 mb/d in 2006.

- OECD total industry oil stocks fell by 3.5 mb in August. Crude inventories were little changed with offsetting moves in Europe and North America. Product inventories saw draws in gasoline largely balanced by increases in distillates. Forward demand cover by industry stocks held steady at 54 days, two days above last year.

- Atlantic Basin refining margins reached record levels on surging product prices. Strong hydro-skimming margins in September should encourage the use of spare crude distillation capacity. Along with reduced product demand this should partially offset a potential US Gulf Coast product output loss of up to 163 mb by year end.

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# FLEXIBILITY IN THE SYSTEM

"What would happen to oil prices if two hurricanes knocked-out a large proportion of crude oil, natural gas and refining capacity?" Posing this hypothetical question in August would have sparked a debate about the number of digits in the oil price, but with little disagreement on price direction. One month into reality, front month crude and gasoline futures prices have dipped below pre-hurricane levels and heating oil is not far above end-August levels. However we are not yet out of the woods.

This Report sees a possible loss of around 140 mb of crude and NGL output through to the end of December and a likely loss of 163 mb of products over the same period. These estimates remain subject to change as the information flow improves. It is also important that crude and refining losses are not double-counted.

Lost US crude production has so far been offset by reduced refinery throughput, while product output losses have been partially balanced by reduced domestic demand, higher imports and stock draws. Of these the sharp 2.3% decline in September US product demand triggered by the hurricanes has captured the market attention.

The US demand reduction in September comprises a combination of price effects, logistical constraints and policy measures. However, product distribution is gradually improving and will probably cause a recovery in primary demand as delivery restrictions ease and the replenishment of depleted secondary stockpiles begins. Further more, demand substitution from natural gas to oil could be more pronounced given heavy discounts of fuel oil to natural gas on a BTU basis, and the near parity of heating oil and Henry Hub gas prices.

Although oil markets have been characterised as tight for the past few years (both by a lack of upstream and refinery upgrading capacity), there is still some flexibility in the system. In the refining sector, there would appear, in theory, to be sufficient spare crude distillation capacity to offset much of the projected product loss through to the end of the year. That is ***if:***

- there are no unplanned outages
- maintenance can be postponed
- throughputs can be sustained at levels that have previously only been seen in short bursts and never in all countries simultaneously
- hydroskimming margins remain positive

There are clearly a lot of "***if***s", but with financially attractive hydro-skimming margins, there is certainly a commercial incentive to increase crude runs.

Further flexibility comes from stocks. The coordinated stock release from IEA member countries and US SPR loans will continue to provide liquidity through to the end of October. There may also be flexibility within commercial stocks, but that depends upon whether commercial players feel more confident about the future.

For most of this year higher prices have been seen despite rising stocks as commercial players sought an inventory buffer against future uncertainty. With high prices tempering global oil demand relative to GDP growth and with the supply side rebounding, it is possible that commercials could feel more comfortable with a lower level of stocks than was apparent for much of this year. This Report has long argued that there was unlikely to be a demand surge in the fourth quarter of 2005. But, it was only in August that this view gained general acceptance.

The supply-side also has to be considered. 2005 non-OPEC supply growth is projected to fall to a six-year low of 170 kb/d. Production growth however is expected to rebound to 1.3 mb/d in 2006, accompanied by higher OPEC capacity – some of which is light sweet crude. Whether these supply and demand factors constitute a more certain future is open to debate.

In all, the oil market appears to have adjusted rapidly to the hurricanes. So far, strong market forces, the IEA stock release and policy action have combined to mitigate a significant supply disruption. Now we are at a juncture where damage assessments are improving and there will be clearer indications of when oil production, refining and transportation facilities may return. A large number of conditions need to be met for the market to fully offset crude and product losses. If holes appear in the market, then policy makers may need to offer a further helping hand.

# DEMAND

## Summary

- **Hurricanes Katrina and Rita** had a substantial impact on September US oil product demand. Disruptions to regional economic activity and supply logistics, as well as product price spikes, reduced US demand by an estimated 2.3% in September versus year ago levels. Gasoline demand declined by an estimated 2.4% year-on-year, but fuel oil demand jumped by some 11.4% due to interfuel substitution away from high-priced natural gas. Although logistical disruptions are expected to persist into October, there may be a rebound in product deliveries as secondary and tertiary inventories are rebuilt following the hurricane-related supply disruptions.

- **Compared to a projected 'no hurricane' scenario**, global oil product demand was reduced by about 980 kb/d in September. US demand was the most affected, with a reduction of approximately 790 kb/d. Globally, gasoline demand was down by an estimated 440 kb/d versus the September 'no hurricane' scenario. However, this was offset to some extent by a 160 kb/d increase in fuel oil demand. In October, the negative impact of the hurricanes on global oil demand is expected to subside to approximately 290 kb/d versus the 'no hurricane' scenario.

- **Projected 2005 global demand growth** is revised down by 90 kb/d, to 1.26 mb/d. Demand is estimated to have grown by 0.9% in the third quarter of 2005 in spite of OECD demand declining by 0.2%. In 2006, global demand growth is anticipated to increase to 1.75 mb/d, in part due to a rebound from the largely temporary impact of Katrina and Rita and a recovery in Chinese demand.

- **Baseline global demand** is revised down by 80 kb/d in 2005 and 100 kb/d in 2006. Global demand is projected to average 83.40 mb/d in 2005 and 85.15 mb/d in 2006.

**Global Oil Demand from 2004 to 2006**

| | 1Q04 | 2Q04 | 3Q04 | 4Q04 | 2004 | 1Q05 | 2Q05 | 3Q05 | 4Q05 | 2005 | 1Q06 | 2Q06 | 3Q06 | 4Q06 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Demand (mb/d) | 82.1 | 80.9 | 81.7 | 83.8 | 82.1 | 83.8 | 81.9 | 82.4 | 85.5 | 83.4 | 85.4 | 83.4 | 84.7 | 87.2 | 85.2 |
| Annual Change (%) | 2.8 | 5.3 | 3.7 | 3.0 | 3.7 | 2.1 | 1.2 | 0.9 | 2.0 | 1.5 | 1.8 | 1.8 | 2.8 | 2.0 | 2.1 |
| Annual Change (mb/d) | 2.3 | 4.1 | 2.9 | 2.5 | 2.9 | 1.7 | 1.0 | 0.7 | 1.7 | 1.3 | 1.5 | 1.5 | 2.3 | 1.7 | 1.7 |
| Changes from last month's report (mb/d) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.2 | -0.1 | -0.1 | 0.0 | 0.0 | -0.2 | -0.2 | -0.1 |

- **Indonesia** substantially increased administered retail prices as the fiscal burden of price subsidies became prohibitive. Kerosene prices are now almost triple previous levels, and both gasoline and diesel prices roughly doubled. As with the elimination of subsidies in Thailand, this move is expected to dampen demand growth.

**Global Oil Demand by Region**
(million barrels per day)

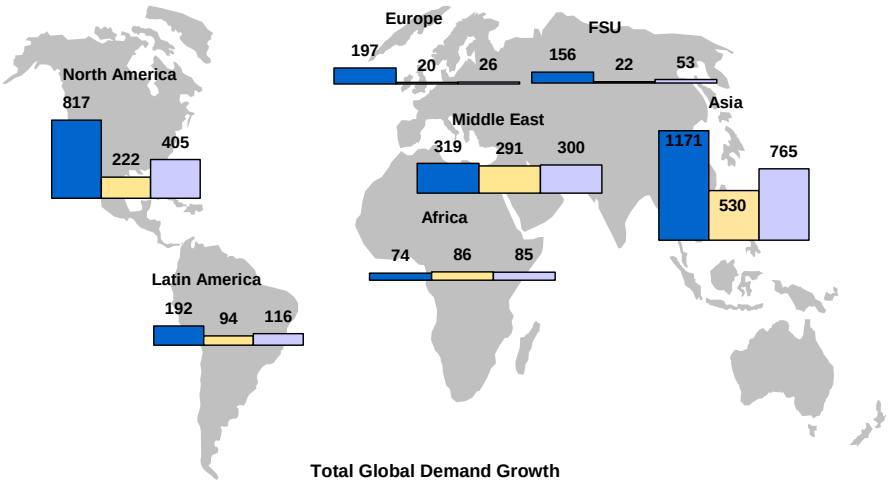
| | Demand | Annual Change | | | Annual Change (%) | | |
|---|---|---|---|---|---|---|---|
| | 2005 | 2004 | 2005 | 2006 | 2004 | 2005 | 2006 |
| North America | 25.57 | 0.82 | 0.22 | 0.41 | 3.3 | 0.9 | 1.6 |
| Europe | 16.33 | 0.20 | 0.02 | 0.03 | 1.2 | 0.1 | 0.2 |
| OECD Pacific | 8.64 | -0.16 | 0.11 | 0.09 | -1.9 | 1.3 | 1.0 |
| China | 6.64 | 0.86 | 0.20 | 0.47 | 15.4 | 3.2 | 7.0 |
| Other Asia | 8.74 | 0.48 | 0.22 | 0.21 | 5.9 | 2.5 | 2.4 |
| Subtotal Asia | 24.02 | 1.17 | 0.53 | 0.76 | 5.2 | 2.3 | 3.2 |
| FSU | 3.76 | 0.16 | 0.02 | 0.05 | 4.4 | 0.6 | 1.4 |
| Middle East | 5.88 | 0.32 | 0.29 | 0.30 | 6.0 | 5.2 | 5.1 |
| Africa | 2.89 | 0.07 | 0.09 | 0.08 | 2.7 | 3.1 | 2.9 |
| Latin America | 4.95 | 0.19 | 0.09 | 0.12 | 4.1 | 1.9 | 2.3 |
| World | 83.40 | 2.93 | 1.26 | 1.75 | 3.7 | 1.5 | 2.1 |

- **Chinese** apparent demand for 2005 is broadly unchanged, but revised lower by 40 kb/d for 2006. The demand picture appears to be stabilising with government pressure to limit product exports, thereby increasing supplies to the domestic market. Gasoline exports are expected to be over 70%

below August levels in September and October. Chinese apparent demand is projected to grow by only 3.2% in 2005, but rebound to 7.0% in 2006.

**Global Demand Growth 2004/2005/2006**

**thousand barrels per day**




**Total Global Demand Growth**
(mb/d)

| | | |
|---|---|---|
| **2004** | **2.93** | **3.7%** |
| **2005** | **1.26** | **1.5%** |
| **2006** | **1.75** | **2.1%** |

## OECD

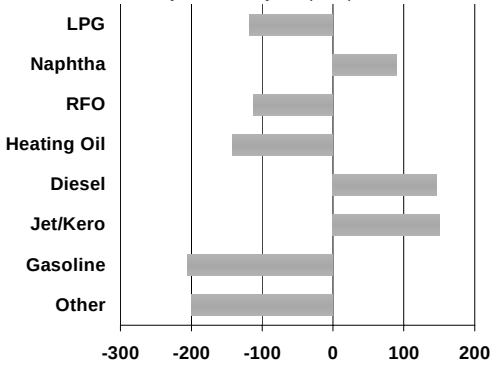
*Overview of OECD Demand Trends*

**Preliminary Inland Deliveries - August 2005[1]**

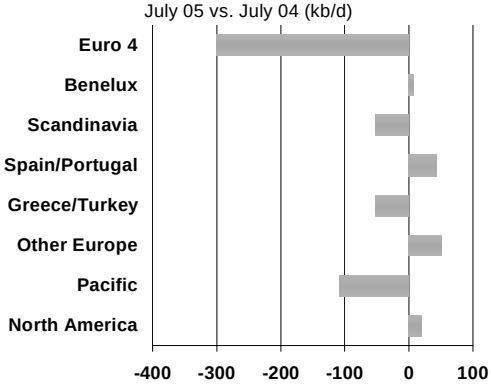
| | Gasoline | | Jet/Kerosene | | Diesel | | Other Gasoil | | RFO | | Other[2] | | Total Products | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | mb/d | % pa | mb/d | % pa | mb/d | % pa | mb/d | % pa | mb/d | % pa | mb/d | % pa | mb/d | % pa |
| USA[3] | 9.36 | 0.3 | 1.66 | -4.3 | 3.04 | 1.0 | 0.97 | 10.4 | 0.96 | 23.9 | 5.4 | 1.5 | 21.37 | 1.6 |
| Canada | 0.76 | 3.3 | 0.13 | -4.4 | 0.47 | 6.6 | 0.04 | 0.0 | 0.13 | -8.7 | 0.3 | -9.4 | 1.81 | 0.3 |
| Mexico | 0.68 | 9.7 | 0.06 | -3.1 | 0.33 | 9.3 | 0.00 | na | 0.35 | 11.4 | 0.4 | 0.8 | 1.79 | 7.5 |
| Japan | 1.19 | 0.2 | 0.30 | -15.1 | 0.64 | -4.1 | 0.42 | -5.4 | 0.50 | -1.6 | 1.4 | -8.1 | 4.49 | -5.1 |
| Korea | 0.19 | 8.1 | 0.07 | 0.0 | 0.37 | -1.1 | 0.05 | 4.2 | 0.19 | -13.8 | 1.1 | 2.3 | 1.96 | 0.3 |
| France | 0.28 | -1.7 | 0.15 | 1.2 | 0.62 | 5.6 | 0.35 | 37.1 | 0.05 | 1.0 | 0.4 | 3.0 | 1.86 | 7.9 |
| Germany | 0.55 | -6.3 | 0.19 | 5.0 | 0.60 | 0.6 | 0.63 | 34.1 | 0.11 | -4.0 | 0.5 | 5.1 | 2.59 | 6.4 |
| Italy | 0.32 | -4.4 | 0.10 | 3.8 | 0.45 | 7.0 | 0.08 | 3.2 | 0.11 | -31.0 | 0.4 | 3.7 | 1.43 | -1.1 |
| **Total** | **12.56** | **0.4** | **2.52** | **-4.4** | **6.04** | **1.6** | **2.49** | **15.0** | **2.27** | **6.1** | **9.6** | **0.3** | **35.48** | **1.5** |

Sources: US EIA, Statistics Canada, Mexico PEMEX, Japan METI, Korea KNOC, France CPDP, Germany MWV, Italy Ministry of Industry
Percentage change is calculated versus last year
1 excludes refinery fuel and bunkers (except US)
2 includes direct use of crude oil
3 fifty states only. Diesel's share of total distillate is estimated. Note that monthly US demand data are subject to revision, as discussed in the Reports dated 13 July 2005 and 11 August 2005

**OECD Oil Products Demand Growth**
July 05 vs. July 04 (kb/d)




**OECD Oil Demand Growth**
July 05 vs. July 04 (kb/d)



**Total OECD Demand by Product**
(million barrels per day)

| | 2004 | 2005 | 3Q04 | 4Q04 | 1Q05 | 2Q05 | May 05 | Jun 05 | Jul 05 | Latest month vs. Jun 05 | Latest month vs. Jul 04 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LPG & Ethane | 4.86 | 4.77 | 4.42 | 5.03 | 5.39 | 4.32 | 4.14 | 4.38 | 4.35 | -0.03 | -0.12 |
| Naphtha | 3.22 | 3.29 | 3.20 | 3.33 | 3.40 | 3.15 | 3.12 | 3.00 | 3.24 | 0.24 | 0.09 |
| Motor Gasoline | 14.88 | 14.90 | 15.24 | 14.89 | 14.46 | 15.08 | 14.94 | 15.35 | 15.27 | -0.08 | -0.20 |
| Jet & Kerosene | 4.10 | 4.22 | 3.93 | 4.24 | 4.62 | 3.90 | 3.80 | 4.00 | 3.97 | -0.03 | 0.15 |
| Gas/Diesel Oil | 12.85 | 13.05 | 12.45 | 13.40 | 13.38 | 12.64 | 12.38 | 12.75 | 12.19 | -0.56 | 0.01 |
| Residual Fuel Oil | 4.59 | 4.61 | 4.46 | 4.68 | 4.89 | 4.37 | 4.15 | 4.49 | 4.41 | -0.08 | -0.11 |
| Other Products | 4.98 | 4.97 | 5.45 | 4.89 | 4.42 | 5.23 | 4.95 | 5.85 | 5.33 | -0.53 | -0.20 |
| **Total Products** | **49.48** | **49.81** | **49.15** | **50.46** | **50.57** | **48.70** | **47.47** | **49.82** | **48.76** | **-1.07** | **-0.39** |

### *Pacific*

Japanese demand was exceptionally weak in August, declining by a preliminary 5.2% year-on-year. Part of the decline may be attributed to Typhoon Mawar, which hit eastern Japan on 26 August, disrupting product supplies and impacting demand. Although high oil prices have dampened business sentiment, Japan's business confidence index continues to improve as the economy shows signs of strength. Overall, OECD Pacific demand is projected to grow by 1.0% in 2006.

Among other developments, Tokyo Electric Power Company (TEPCO) recently reported that it has no plans to increase oil purchases due to the unplanned shutdown of a nuclear power unit at its Kashiwazaki-Kariwa plant. However, a hurricane-related increase in US natural gas prices could contribute to an increase in demand for fuel oil in power generation in both Japan and Korea this winter as liquefied natural gas (LNG) cargoes are drawn away from the Pacific market to the US Gulf Coast. Korea is likely to be most affected, as it secures a more substantial portion of its LNG in the spot market rather than through long-term contracts.

**OECD Pacific Demand by Product**
(million barrels per day)

| | 2004 | 2005 | 3Q04 | 4Q04 | 1Q05 | 2Q05 | May 05 | Jun 05 | Jul 05 | Latest month vs. Jun 05 | Latest month vs. Jul 04 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LPG & Ethane | 0.88 | 0.89 | 0.79 | 0.88 | 1.00 | 0.87 | 0.82 | 0.86 | 0.84 | -0.01 | 0.04 |
| Naphtha | 1.57 | 1.62 | 1.56 | 1.63 | 1.69 | 1.54 | 1.53 | 1.49 | 1.57 | 0.09 | 0.05 |
| Motor Gasoline | 1.60 | 1.63 | 1.70 | 1.63 | 1.59 | 1.59 | 1.53 | 1.64 | 1.62 | -0.02 | -0.10 |
| Jet & Kerosene | 1.02 | 1.06 | 0.74 | 1.12 | 1.54 | 0.77 | 0.68 | 0.76 | 0.70 | -0.06 | 0.01 |
| Gas/Diesel Oil | 1.89 | 1.90 | 1.81 | 1.95 | 1.99 | 1.85 | 1.70 | 1.97 | 1.71 | -0.26 | -0.08 |
| Residual Fuel Oil | 1.05 | 1.05 | 1.03 | 1.05 | 1.17 | 0.98 | 0.91 | 1.00 | 0.97 | -0.03 | -0.06 |
| Other Products | 0.52 | 0.51 | 0.54 | 0.52 | 0.52 | 0.50 | 0.45 | 0.55 | 0.55 | 0.00 | 0.03 |
| **Total Products** | **8.53** | **8.64** | **8.16** | **8.77** | **9.49** | **8.10** | **7.62** | **8.26** | **7.97** | **-0.29** | **-0.11** |

### *Europe*

High fuel prices sparked protests in the UK and calls by the French government for oil companies to cut prices. In Austria oil firms marginally lowered prices after the government threatened them with a special tax. The French government also responded by offering increased tax relief to certain categories of consumers, such as truckers and farmers, in an effort to soften the impact of increased prices. Although the volumes are small, it is interesting to note that some French motorists are reportedly turning to vegetable oil as a substitute for diesel. While technically this is illegal if the fuel tax is not paid, the financial incentive is clear as vegetable oil is priced about 35% lower than diesel.

**OECD Europe Demand by Product**
(million barrels per day)

| | 2004 | 2005 | 3Q04 | 4Q04 | 1Q05 | 2Q05 | May 05 | Jun 05 | Jul 05 | Latest month vs. Jun 05 | Latest month vs. Jul 04 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LPG & Ethane | 1.03 | 0.98 | 0.91 | 1.03 | 1.12 | 0.89 | 0.88 | 0.86 | 0.87 | 0.01 | -0.13 |
| Naphtha | 1.14 | 1.15 | 1.10 | 1.15 | 1.21 | 1.14 | 1.14 | 1.05 | 1.08 | 0.03 | -0.04 |
| Motor Gasoline | 2.78 | 2.67 | 2.89 | 2.72 | 2.52 | 2.75 | 2.73 | 2.78 | 2.75 | -0.03 | -0.20 |
| Jet & Kerosene | 1.17 | 1.22 | 1.26 | 1.17 | 1.14 | 1.24 | 1.24 | 1.29 | 1.30 | 0.01 | 0.08 |
| Gas/Diesel Oil | 5.98 | 6.09 | 5.83 | 6.37 | 6.17 | 5.80 | 5.69 | 5.80 | 5.74 | -0.06 | 0.03 |
| Residual Fuel Oil | 2.02 | 2.01 | 1.98 | 2.08 | 2.13 | 1.91 | 1.82 | 1.97 | 1.92 | -0.05 | -0.05 |
| Other Products | 1.48 | 1.49 | 1.61 | 1.48 | 1.26 | 1.56 | 1.50 | 1.67 | 1.66 | -0.01 | 0.00 |
| **Total Products** | **15.60** | **15.61** | **15.58** | **16.00** | **15.55** | **15.29** | **15.00** | **15.42** | **15.32** | **-0.10** | **-0.30** |

Overall, European demand is adjusted upwards by 80 kb/d in the third quarter in spite of the price increases associated with Hurricane Rita. This is largely because German and French heating oil deliveries increased by a preliminary 34.1% and 37.1% respectively in August versus year ago levels. In spite of the increase, German tank levels are still low when compared to historical levels as German consumers remain reluctant to fill their tanks at high prices. European oil demand growth is projected to decline marginally (0.1%) in the fourth quarter.

### *North America*

Preliminary indications are that Hurricanes Katrina and Rita had a substantial impact on US oil product demand as supplies were disrupted and product prices spiked to all-time highs (see 'The Impact of Hurricanes Katrina and Rita on Oil Product Demand'). US demand is estimated to have declined by 2.3% in September versus year ago levels, with a 2.4% decline in gasoline demand. In contrast, fuel oil demand is projected to have jumped by some 11.4% due to interfuel substitution away from high-priced natural gas. This rise follows an estimated 25.9% year-on-year increase in fuel oil demand in August. While at this point there is limited supporting data, there is also evidence that the use of distillate in power generation may have increased with disruptions to natural gas supplies. Normally about 40 kb/d of distillate is used in power generation, but this can increase to some 200 kb/d. On the whole, however, US gasoil demand is estimated to have declined by some 3.2% in September.

It is important to caution that the pre- and post-hurricane delivery data are subject to revision and that oil product deliveries are an imperfect proxy for actual demand. This is especially the case when supply logistics are disrupted, because product deliveries may not equal actual demand due to changes in secondary inventories. For example, it is estimated that gasoline demand roughly doubled in the Houston area in the days leading up to Hurricane Rita as residents evacuated the area. This left many retail stations empty. However, the spike in demand will show up with a lag as an increase in deliveries from primary storage when these stations rebuild their inventories. As such, oil product delivery data must be viewed cautiously and may be subject to relatively large fluctuations in coming weeks.

**OECD North America Demand by Product**
(million barrels per day)

| | 2004 | 2005 | 3Q04 | 4Q04 | 1Q05 | 2Q05 | May 05 | Jun 05 | Jul 05 | Latest month vs. Jun 05 | Latest month vs. Jul 04 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LPG & Ethane | 2.95 | 2.91 | 2.72 | 3.12 | 3.27 | 2.55 | 2.44 | 2.67 | 2.64 | -0.03 | -0.03 |
| Naphtha | 0.50 | 0.52 | 0.54 | 0.56 | 0.50 | 0.47 | 0.46 | 0.46 | 0.59 | 0.12 | 0.08 |
| Motor Gasoline | 10.50 | 10.60 | 10.65 | 10.55 | 10.35 | 10.74 | 10.68 | 10.93 | 10.89 | -0.03 | 0.09 |
| Jet & Kerosene | 1.91 | 1.94 | 1.93 | 1.96 | 1.94 | 1.89 | 1.88 | 1.95 | 1.97 | 0.02 | 0.06 |
| Gas/Diesel Oil | 4.98 | 5.07 | 4.81 | 5.08 | 5.22 | 5.00 | 4.99 | 4.98 | 4.74 | -0.24 | 0.05 |
| Residual Fuel Oil | 1.51 | 1.55 | 1.46 | 1.54 | 1.60 | 1.48 | 1.42 | 1.52 | 1.52 | 0.00 | 0.00 |
| Other Products | 2.98 | 2.97 | 3.30 | 2.89 | 2.65 | 3.18 | 2.99 | 3.64 | 3.12 | -0.52 | -0.23 |
| **Total Products** | **25.34** | **25.57** | **25.41** | **25.69** | **25.53** | **25.31** | **24.85** | **26.15** | **25.47** | **-0.68** | **0.02** |

There are indications that the US economy took a hit in September as job losses mounted in hurricane-struck areas and overall US consumer confidence dropped. As a consequence, third quarter GDP growth may be revised down by as much as one percent versus pre-hurricane projections. Looking forward, however, an economic rebound is expected as rebuilding begins and the latest data suggest that US manufacturing activity continues to grow.

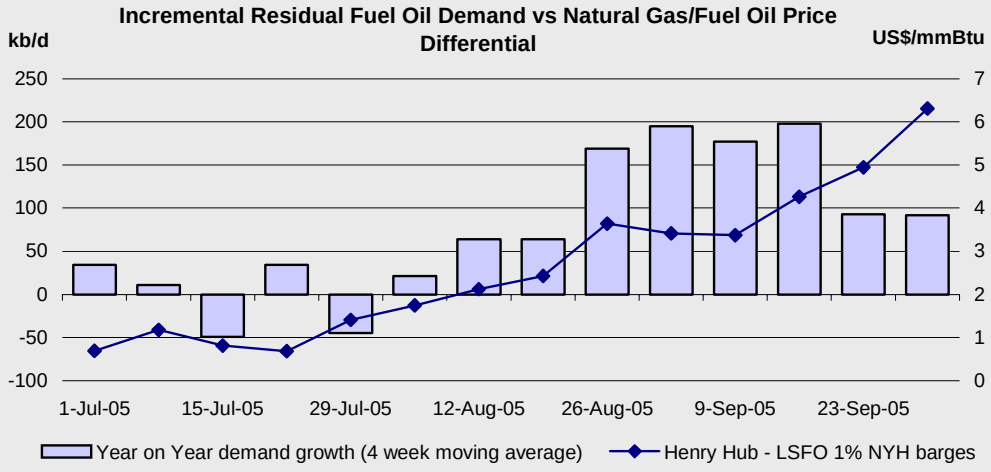
In the fourth quarter of 2005, US oil product demand is expected to recover from the September downturn to grow by 1.1%, albeit well down from 3.4% in the same period last year. Gasoline demand is projected to grow by 0.9%, in part due to rebuilding of secondary and tertiary inventories in October. Demand for fuel oil is expected to be 5.3% above the fourth quarter last year. This is based on the assumption that natural gas prices remain high, encouraging interfuel substitution at the margin.

## The Impact of Hurricanes Katrina and Rita on Oil Product Demand

It is not possible to isolate the impact of Rita versus Katrina on US oil product demand. Both have affected economic activity, supply logistics and product prices, which has in turn impacted oil demand. Preliminary weekly US data indicate that deliveries of transport fuels fell sharply. This decline is attributed partly to logistical disruptions (e.g., some retail stations reportedly ran out of fuel) and partly to a demand response to higher product prices.

Although the demand response to oil price increases has been muted in recent years, prices have reached a threshold where a demand response may become more pronounced (gasoline prices have been at a level that would typically be associated with a $75-80/bbl WTI crude price). In addition, there have been calls for demand restraint which, if heard, could have an impact on demand at the margin. However, the negative impact of high oil prices on consumption is partially counteracted by extraordinarily high natural gas prices. As a consequence, total demand for oil products that typically are more responsive to high oil prices (e.g., fuel oil and heating oil) will not post substantial declines. In fact, fuel oil demand is expected to increase as a result of the hurricanes.

Deliveries of fuel oil have risen sharply as disruptions to natural gas supplies and a sharp increase in natural gas prices has led to interfuel substitution. The natural gas/fuel oil price differential rose from about $1.50-2.00/mmBtu prior to Katrina to roughly $4.50-6.00/mmBtu in subsequent weeks. This differential should continue to decline as natural gas production returns, but fuel oil demand is expected to remain strong in coming months.




### *Comparison With a 'No Hurricane' Scenario*

To fully evaluate the impact of the hurricanes on oil product demand it is necessary to compare the outcome to a 'no hurricane' scenario. At this point it appears that US gasoline demand will be reduced by some 370 kb/d in September versus a 'no hurricane' demand scenario. At the same time, fuel oil demand growth is expected to be about 90 kb/d higher than the 'no hurricane' scenario. Overall, US demand is reduced by some 790 kb/d.

Outside of the US, the impact of the increase in product prices associated with Katrina and Rita is difficult to assess in the absence of preliminary September demand data. In the OECD, comparatively high taxes on retail sales should help dampen the impact of the increase in wholesale prices. Taken together, the hurricanes are estimated to lower OECD (non-US) gasoline demand by some 50 kb/d in September versus a 'no hurricane' scenario. Overall, September OECD (non-US) oil product demand is estimated to be about 90 kb/d lower versus the 'no hurricane' scenario. In October, the negative impact of the hurricanes is expected to reduce demand by about 80 kb/d (of which 40 kb/d is gasoline).

## Impact of Hurricanes Katrina and Rita on Oil Product Demand (continued)

The non-OECD demand picture is complicated by the fact that retail product prices are often regulated. Changes in international market prices are typically not immediately passed on to the consumer. These policies are proving difficult to sustain, and over time governments are moving to increase retail prices in line with the international market (especially in Asia). However, because prices are still widely regulated, the immediate impact of the increase in international market prices associated with the hurricanes may be subdued.

Globally, it appears that gasoline demand may be some 440 kb/d lower in September versus a 'no hurricane' scenario. On the whole, September oil product demand was likely off by some 980 kb/d when compared to the 'no hurricane' scenario. The global impact is expected to decline to approximately 290 kb/d in October.

*A preliminary projection of the impact of Katrina and Rita versus a 'no hurricane' baseline is depicted in the tables below:*

**Hurricane Impact on US Oil Product Demand**
(thousand barrels per day)

| | Sep 05 | Oct 05 | Nov 05 | Dec 05 |
|---|---|---|---|---|
| LPG & Ethane | -160 | -22 | -15 | -16 |
| Naphtha | -19 | -3 | -2 | -2 |
| Motor Gasoline | -367 | -103 | -57 | -45 |
| Jet & Kerosene | -34 | -13 | -9 | -9 |
| Gas/Diesel Oil | -221 | -18 | -10 | -9 |
| Residual Fuel Oil | 94 | 69 | 51 | 46 |
| Other Products | -77 | -17 | -10 | -10 |
| **Total Products** | **-785** | **-107** | **-52** | **-45** |

**Hurricane Impact on Global Oil Product Demand**
(thousand barrels per day)

| | Sep 05 | Oct 05 | Nov 05 | Dec 05 |
|---|---|---|---|---|
| LPG & Ethane | -197 | -57 | -42 | -41 |
| Naphtha | -43 | -26 | -19 | -17 |
| Motor Gasoline | -443 | -167 | -102 | -82 |
| Jet & Kerosene | -55 | -33 | -24 | -23 |
| Gas/Diesel Oil | -289 | -82 | -59 | -50 |
| Residual Fuel Oil | 158 | 122 | 92 | 81 |
| Other Products | -110 | -46 | -33 | -30 |
| **Total Products** | **-978** | **-290** | **-187** | **-162** |

## Non-OECD

### *China*

While Chinese apparent demand is again revised down (by 10 kb/d for 2005 and 40 kb/d for 2006), the demand pattern appears to have stabilised somewhat, albeit at a much lower growth rate than witnessed in 2004. Net oil product imports were off by some 100 kb/d year-on-year in August. But it seems that the major state-owned oil companies bowed to government pressure and maintained crude runs in spite of continued dismal refining margins under retail price caps. August refinery production is reported to have increased by 5.6% versus year ago levels.

**China Crude & Product Trade**
(thousand barrels per day)

| | 2003 | 2004 | 3Q2004 | 4Q2004 | 1Q2005 | 2Q2005 | Jun 05 | Jul 05 | Aug 05 | Latest month vs. Jul 05 | Latest month vs. Aug 04 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Net Imports/(Exports) of:** | | | | | | | | | | | |
| **Crude Oil** | **1664** | **2346** | **2232** | **2491** | **2305** | **2541** | **2520** | **2421** | **1950** | **-471** | **-155** |
| **Products & Feedstocks** | **442** | **661** | **545** | **653** | **501** | **375** | **579** | **406** | **333** | **-73** | **-96** |
| Gasoil/Diesel | -28 | 43 | 21 | 79 | -6 | -27 | -10 | -24 | -71 | -47 | -73 |
| Gasoline | -175 | -125 | -146 | -117 | -151 | -161 | -129 | -155 | -233 | -78 | -56 |
| Heavy Fuel Oil | 407 | 506 | 412 | 515 | 480 | 395 | 508 | 401 | 374 | -26 | -49 |
| LPG | 202 | 201 | 222 | 184 | 200 | 179 | 215 | 175 | 231 | 56 | 67 |
| Naphtha | -22 | -33 | -48 | -51 | -49 | -67 | -79 | -25 | -47 | -23 | 9 |
| Jet & Kerosene | 1 | 16 | 19 | 8 | 6 | 5 | 11 | -14 | 28 | 42 | 23 |
| Other | 58 | 52 | 64 | 34 | 22 | 51 | 63 | 49 | 52 | 3 | -17 |
| **Total** | **2106** | **3008** | **2777** | **3144** | **2807** | **2916** | **3100** | **2828** | **2284** | **-544** | **-251** |

Sources: China Oil, Gas and Petrochemicals plus IEA estimates.

Chinese apparent demand is projected to grow by 5.7% in the fourth quarter of 2005. This is well below the 12.0% increase seen in the same period of 2004, but it is an increase on the first three

quarters of 2005 when apparent demand is estimated to have grown by only 3.6%. Gasoline exports will reportedly decline from about 230 kb/d in August to 60 kb/d in September and October, partly in response to a temporary removal of tax rebates for exports of gasoline and naphtha. In addition, Petrochina plans to resume limited diesel imports in October, amounting to just over 20 kb/d, for the first time in 2005. Sinopec refuses to import diesel because it maintains that it would incur a substantial loss once the import duty (6%) and value-added tax (17%) are included in the cost.

**China Demand by Product**
(thousand barrelas per day)

| | Demand | | | Annual Change | | Annual Change (%) | |
|---|---|---|---|---|---|---|---|
| | **2004** | **2005** | **2006** | **2005** | **2006** | **2005** | **2006** |
| LPG & Ethane | 633 | 649 | 675 | 16 | 25 | 2.5 | 3.9 |
| Naphtha | 684 | 716 | 790 | 32 | 74 | 4.7 | 10.3 |
| Motor Gasoline | 1069 | 1092 | 1183 | 23 | 90 | 2.2 | 8.3 |
| Jet & Kerosene | 239 | 257 | 280 | 18 | 23 | 7.4 | 9.0 |
| Gas/Diesel Oil | 2150 | 2274 | 2456 | 124 | 182 | 5.8 | 8.0 |
| Residual Fuel Oil | 829 | 785 | 804 | -45 | 19 | -5.4 | 2.4 |
| Other Products | 828 | 865 | 917 | 36 | 52 | 4.4 | 6.0 |
| **Total Products** | **6433** | **6638** | **7104** | **205** | **466** | **3.2** | **7.0** |

Interestingly, wholesale prices for unleaded gasoline have typically remained below China's official retail prices for the past few months. Although this situation may appear odd at first glance, it is a rational response by state-owned refiners to a government policy of suppressing retail product prices in spite of rising international prices. In an effort to stem their downstream losses, state-owned Sinopec and CNPC/Petrochina ensure that their own retail outlets are supplied and then quote higher wholesale prices to independent retailers and businesses that are not subject to regulated retail prices. Negative retail margins on key products obviously hurt independent retailers and there are reports that many have shutdown or limited sales (independent retail stations are reported to account for nearly half of the total 88,000 retail outlets in China). Similarly, low product prices place pressure on independent refiners which pay international market prices for their crude or residual fuel oil feedstock. On the whole, while Sinopec and CNPC/Petrochina are certainly bearing a substantial burden in terms of foregone profits due to low product prices, government pricing policy is helping to solidify their position as the dominant downstream players in China's oil market.

### *Other Non-OECD*

In Southeast Asia, moves to raise or eliminate retail price subsidies are certainly affecting oil product demand. After posting growth of approximately 10% in 2004, **Thailand's** oil product demand growth stagnated, and actually declined in July, following the removal of price subsidies.

**India Crude & Product Trade**
(thousand barrels per day)

| | 2003 | 2004 | 3Q2004 | 4Q2004 | 1Q2005 | 2Q2005 | May 05 | Jun 05 | Jul 05* | Latest month vs. Jun 05 | Latest month vs. Jul 04 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Net Imports/(Exports) of:** | | | | | | | | | | | |
| **Crude Oil** | **1863** | **1945** | **2013** | **1742** | **1969** | **1894** | **1905** | **1864** | **1820** | **-44** | **-191** |
| **(by Public Oil Cos)** | **1243** | **1158** | **1214** | **1000** | **1133** | **1116** | **1121** | **1103** | **978** | **-125** | **-293** |
| **Products & Feedstocks** | **-152** | **-176** | **-178** | **-222** | **-82** | **-92** | **13** | **-184** | **-31** | **152** | **140** |
| Gasoil/Diesel | -119 | -139 | -122 | -162 | -89 | -108 | -76 | -127 | -74 | 53 | -5 |
| Gasoline | -72 | -75 | -75 | -80 | -53 | -39 | -53 | -40 | -39 | 1 | 46 |
| Heavy Fuel Oil | 5 | -6 | -5 | -20 | -4 | 10 | 29 | 6 | 1 | -5 | 11 |
| LPG | 55 | 86 | 86 | 128 | 95 | 74 | 86 | 64 | 73 | 9 | 13 |
| Naphtha | -1 | -7 | -29 | -25 | -15 | -39 | -9 | -77 | -13 | 65 | 27 |
| Jet & Kerosene | -22 | -47 | -43 | -74 | -34 | -5 | 25 | -29 | 10 | 39 | 38 |
| Other | 1 | 12 | 9 | 12 | 17 | 15 | 11 | 19 | 10 | -10 | 10 |
| **Total** | **1712** | **1769** | **1834** | **1520** | **1887** | **1801** | **1918** | **1681** | **1789** | **108** | **-51** |

* Preliminary

Sources: Indian Ministry of Commerce, Indian Port Authorities and IEA estimates.

**Indonesia** recently mustered the political will to substantially raise product prices as the fiscal burden of subsidies became prohibitive. Previous attempts to raise prices have sparked widespread protests which caused the government to back down and rescind the price increases. In the face of such political pressure, the magnitude of the recent price increases surprised many observers. However, the government appears to be committed to holding firm and it has tried to soften the blow of the price increase by distributing cash (approximately $30) to 15.5 million poor families. In the future, the government plans to ensure that retail price movements are more closely aligned with the regional market. Indonesia's oil product demand spiked prior to the 1 October price increase, but it is expected to stagnate in coming months as consumers adjust to the reality of prices that are more in line with the international market.

**Indonesian Retail Price Increase**
(price per litre)

| | New Price | | Old Price | | % increase | Sept Singapore |
|---|---|---|---|---|---|---|
| | (rupiah) | ($US) | (rupiah) | ($US) | | Spot Price ($US) |
| Gasoline | 4,500 | 0.45 | 2,400 | 0.24 | 87.50 | 0.49 |
| Diesel | 4,300 | 0.43 | 2,100 | 0.21 | 104.76 | 0.47 |
| Kerosene | 2,000 | 0.20 | 700 | 0.07 | 185.71 | 0.50 |

1 US dollar = approx. 10,065 Indonesian Rupiah

While **Indian** oil product demand was expected to post a strong rebound from a flood driven downturn in July, preliminary estimates of 11.5% growth in August 2005 versus August 2004 exceeded expectations. It should be cautioned that the large August 2005 demand increase is a one-off spike that is not indicative of a more robust future demand trend. In addition to a rebound from July flooding, August 2004 baseline demand was negatively impacted by a truckers strike. There is also evidence that August 2005 sales rose temporarily as retailers built inventories in anticipation of a 7% increase in administered gasoline and diesel prices that took place on 6 September.

# SUPPLY

## Summary

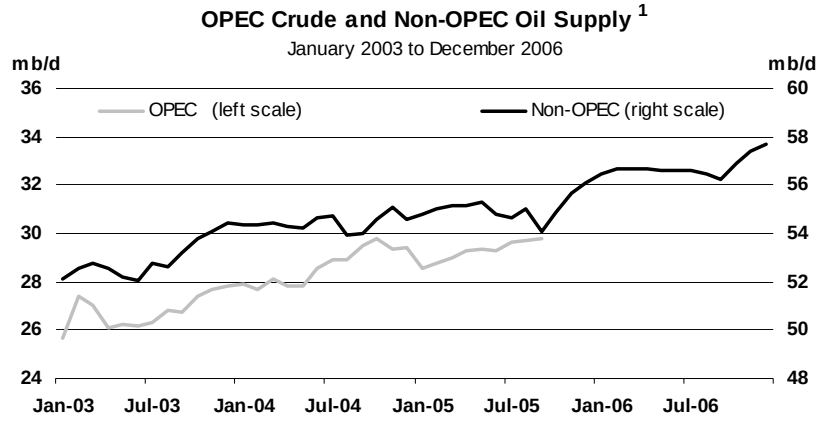
- **World oil supply** declined by 845 kb/d from August to September, averaging 83.8 mb/d under the impact of Hurricanes Katrina and Rita in the US Gulf of Mexico (GOM). Lower North American production eclipsed increases of a combined 440 kb/d from the North Sea, Russia, Kazakhstan and Brazil, plus a 100 kb/d rise in OPEC crude. On a yearly comparison, global supply stood a modest 315 kb/d above September 2004 levels. Total OPEC oil supply was up by over 700 kb/d, non-OECD supply rose by a robust 855 kb/d but OECD production was down by 1.28 mb/d.

- **Hurricane Rita** swiftly followed **Hurricane Katrina,** making landfall on the Texas-Louisiana border on 24 September and compounding Katrina's impact on regional energy supply. At writing, nearly 1.2 mb/d (80%) of GOM crude production remains shut-in, plus 6.4 bcf/d (64%) of natural gas supply. Severe damage affects elements of upstream infrastructure, but production recovery is being further hampered by inoperable pipelines, processing plants, terminals and refineries. Regional NGL supply and onshore crude production are also off by up to 400 kb/d for September. Shut-in production through early 2006, lower NGL supply, the impact of deferred drilling activity on new field start-ups or expansions and modest permanent production losses are assumed to cut forecast US oil production by 285 kb/d for 2005 and 260 kb/d for 2006 versus last month's Report. These are incremental to downward revisions of 155 kb/d and 50 kb/d made one month ago.

- The intensity and possible long-duration impact of GOM storms again underpin revisions to forecast **non–OPEC supply** for 2005 and 2006. This year's supply is revised down by 335 kb/d to average 50.3 mb/d while 2006 production is now forecast at 51.6 mb/d, 400 kb/d less than envisaged last month. Non-OPEC growth in 2005 therefore averages 170 kb/d (the lowest since 1999), but rebounds to 1.3 mb/d in 2006. OPEC other liquids supply generates an additional 400 kb/d of growth in both years. This year's non-OPEC estimate is also curbed due to lower expectations for the UK, India and Sudan. Reductions in forecast supply for 2006 outside of the US are centred on Canada, the UK, non-OECD Asia and Sudan.

- **OPEC crude supply** gained 100 kb/d in September to reach 29.8 mb/d. Individual changes were modest, Iraq and Kuwait increasing by 45 kb/d each. Higher liftings of Kirkuk crude from Ceyhan underpinned Iraq's rise, although limited Kirkuk to Ceyhan pipeline shipments kept storage low and ultimately held liftings below initial expectations. OPEC spare capacity at below 2 mb/d remains thin. Despite an offer following OPEC's Vienna meeting to make this capacity available to the market, marginal demand is focussed on lighter, sweeter grades. However, OPEC investments could lift sustainable capacity by nearly 500 kb/d by end year.

- **The 'call on OPEC crude and stock change'** is revised up by 300 kb/d for 2005 and 2006, averaging 28.4 mb/d in both years. Developments in the US Gulf result in a 0.8 mb/d upward revision to the call for the current quarter, and this now averages 29.9 mb/d.



1 Non-OPEC Oil Supply includes OPEC NGLs, condensate and non-conventional oil

*All world oil supply figures for September discussed in this Report are IEA estimates. Estimates for OPEC countries, Alaska, Egypt and Russia are supported by preliminary September supply data.*

**Note: Random events present downside risk to the non-OPEC production forecast contained in this Report. These events can include accidents, unplanned or unannounced maintenance, technical problems, labour strikes, political unrest, guerrilla activity, wars and weather-related supply losses. Allowance has been made in the forecast for scheduled maintenance in all regions and for typical seasonal supply outages (including hurricane-related stoppages) in North America. These aside, no contingency allowance for random events is subtracted from the supply forecast. While upside variations can occur, experience in recent years indicates that the random events listed above may cause supply losses of between 300 kb/d and 400 kb/d for non-OPEC supply each year.**

## OPEC

OPEC crude supply in September gained 100 kb/d to reach 29.8 mb/d. Changes in production by individual members were modest, with only Iraq and Kuwait seeing appreciable increases, adding around 45 kb/d each. Elsewhere within the Organisation, production trended within a 10-20 kb/d range of August levels. Most members are now operating close to physical or market-related capacity constraints, although some additional supply-side flexibility should enter the market during the fourth quarter and through 2006 as net capacity additions are offered to the market (see below).

The Organisation concluded its 19-20 September meeting in Vienna with an agreement to make available its spare capacity for three months from 1 October at what it termed 'reasonable prices' and subject to market demand. OPEC will review market developments at a further extraordinary meeting in Kuwait on 12 December, but suggests that presently crude markets are amply supplied. It sees shortages of appropriate refining capacity as the key to recent price increases and volatility and cites this as being primarily a responsibility for main consuming countries.

In the current market, OPEC's decision to relax quota adherence may indeed be somewhat irrelevant as spare upstream capacity, as noted before, is largely in the form of heavy, sour crude for which there is only a limited market appetite, particularly in light of US Gulf Coast refinery outages. This region, with the greatest concentration of sophisticated refinery upgrading equipment, is the primary market for heavy and sour crude from OPEC members.

**OPEC Crude Production**
(million barrels per day)

| | 1 July 2005 Target | September 2005 Production | Sustainable Production Capacity[1] | Spare Capacity vs September 2005 Production | Production vs. Target |
|---|---|---|---|---|---|
| Algeria | 0.89 | 1.37 | 1.37 | 0.00 | 0.48 |
| Indonesia | 1.45 | 0.93 | 0.98 | 0.05 | -0.52 |
| Iran | 4.11 | 3.97 | 4.10 | 0.14 | -0.15 |
| Kuwait[2] | 2.25 | 2.46 | 2.50 | 0.05 | 0.21 |
| Libya | 1.50 | 1.65 | 1.65 | 0.00 | 0.15 |
| Nigeria | 2.31 | 2.46 | 2.50 | 0.05 | 0.15 |
| Qatar | 0.73 | 0.81 | 0.83 | 0.02 | 0.08 |
| Saudi Arabia[2] | 9.10 | 9.56 | 10.50 | 0.94 | 0.46 |
| UAE | 2.44 | 2.52 | 2.55 | 0.04 | 0.07 |
| Venezuela[3] | 3.22 | 2.11 | 2.20 | 0.09 | -1.11 |
| **Subtotal** | **28.00** | **27.82** | **29.18** | **1.36** | **-0.18** |
| Iraq | | 1.97 | 2.50 | 0.54 | |
| **Total** | | **29.79** | **31.68** | **1.89** | |
| *(excluding Iraq, Nigeria, Venezuela., Indonesia* | | | | *1.17)* | |

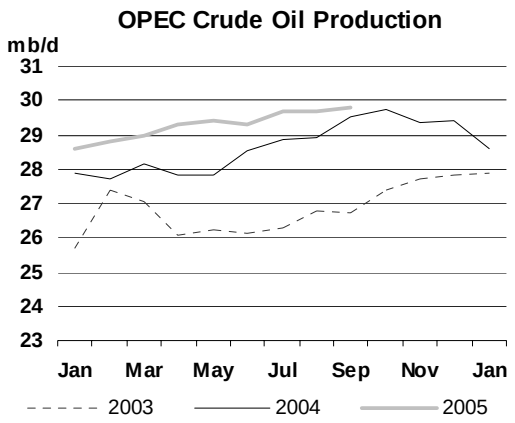
1 Capacity levels can be reached within 30 days and sustained for 90 days
2 Includes half of Neutral Zone Production
3 Excludes upgraded Orinoco extra-heavy oil which averaged 588 kb/d in September

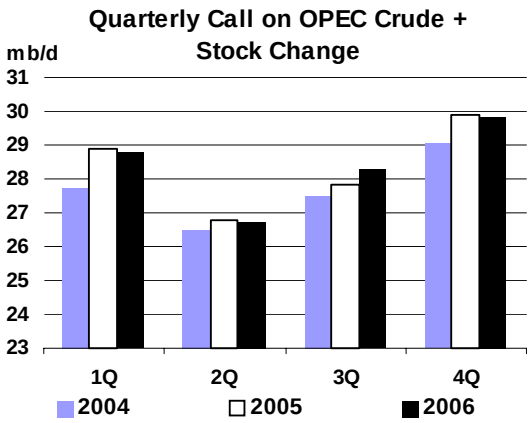
OPEC members tend to stress that their ability and willingness to expand upstream capacity depends upon the emergence of a consensus view on likely demand growth. The Organisation has raised the concept of security of demand. This refers both to finished product demand trends and to widely acknowledged global shortages of refinery upgrading capacity. Notwithstanding, the Organisation will have noted its loss of influence in price setting. The marginal barrel of supply is, for now, not relatively cheap Middle Eastern barrels but instead high cost deepwater or non-conventional production from non-OPEC producers (not least being slowly-recovering Gulf of Mexico production). Numerous analysts have pointed out that this in part explains the uncertainty over future price paths and the likely floor for prices in the short to medium term.

Further, OPEC members such as Saudi Arabia with ample reserves are concerned that sustained high prices could undermine longer term demand for crude. Comments from the Saudi Foreign Minister that he would be happy for prices to revert towards $35-$40/bbl can be seen in this context, although he added that such a weakening did not appear to be imminent. Such sentiments are not necessarily universal within OPEC as more resource-constrained members may be happier to see higher prices persist a while longer, not least to help fund burgeoning social and infrastructural investment programmes.

Nonetheless, setting aside valid claims that refining constraints are part of the problem, markets would clearly be less nervous with a greater degree of spare upstream capacity. Events in the US Gulf have reinforced the importance of supply-side flexibility, even if the main problem this time has been downstream. And while consumer country emergency stock releases added welcome liquidity to stretched markets, as has been noted before, one-off stock releases are no substitute for the more effective buffer of spare capacity both up and downstream.

The relationship between prices and spare capacity can at times be blurred. Nonetheless, historically a margin of less than 3-4 mb/d, or alternatively OPEC producing in excess of 90% of capacity, has tended to result in an upsurge in prices. Nor is it a coincidence that areas of production deemed most at risk at various times over the past two to three years (Venezuela, Nigeria, Iraq, US Gulf) have tended to be of 2-3 mb/d magnitude each. Clearly, the market seeks signs of sustained investment in new production capacity and a margin of supply flexibility more in tune with current perceived risks before allowing OPEC to again exert some influence over prices. A number of OPEC members, not least Saudi Arabia, are already doing just that. Buoyed by an expected 40% increase in revenues in 2005, net capacity is seen increasing by 0.5 mb/d by the end of 2005 (largely from UAE, Nigeria and Kuwait) and by almost 800 kb/d in 2006 (Saudi Arabia, Nigeria and others). The Report avoids forecasting either OPEC production levels or prices, but such an investment schedule suggests it could be mid- to late-2006 before more comfortable levels of spare capacity are reached.




Production from **Iraq** (net of re-injection and pipeline flows to Ceyhan) averaged 1.97 mb/d in September compared to 1.92 mb/d in August. Domestic crude use at refineries and for power generation is assessed flat in September at August's upwardly revised level of 445 kb/d. Total exports increased by 45 kb/d to 1.52 mb/d. Southern tanker liftings came in at 1.4 mb/d while tanker and pipeline deliveries from storage at Ceyhan in Turkey are assessed at 110 kb/d. This is less than had been anticipated for Ceyhan in September, with some earlier analyses having suggested up to 165 kb/d were scheduled for the month. Exports were hampered by minimal volumes in storage at Ceyhan following ongoing pipeline disruptions from Iraq's northern fields around Kirkuk. This likely impeded onward pipeline shipments to Turkish refiner Tupras. The State Oil Marketing Organisation has scheduled 1.5 mb/d of Basrah Light exports for October from Basrah, while Tupras has an entitlement to lift up to 2 mb from Ceyhan for use in its refineries.

**Kuwaiti** supply is assessed 45 kb/d higher at 2.46 mb/d as maintenance at western production facilities came to an end. Refinery maintenance in September may also have resulted in higher export liftings for the month. Production capacity and output could rise through to the year end as Kuwait fully reactivates northern and western gathering centres. However, longer term plans to boost capacity at northern fields to 900 kb/d with foreign company involvement still face political opposition.

**Nigerian** supply remained largely unchanged at 2.46 mb/d, despite repeated facility closures due to civil unrest. Chevron lost 28 kb/d of production from two flow stations in the third week of September when armed militants took over facilities, but these operations were subsequently reopened. Deeper offshore production increases are thought to have made up for these losses overall. Output in Nigeria remains prone to disruption against a backdrop of both ethnic tensions and threats of strike action over recent domestic fuel price rises. Nonetheless, since mid-2003, crude production has proved resilient in the face of threats and production is expected to rise in late-2005 and 2006 with the deepwater Bonga and Erha developments potentially adding 375 kb/d of capacity.

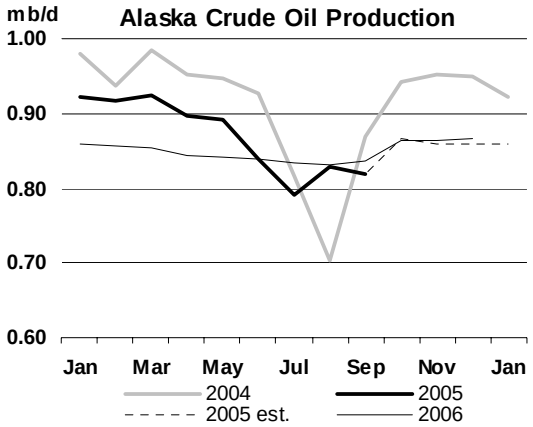
Supply from **Saudi Arabia** remained stable in September at just under 9.6 mb/d. The Kingdom continued to stress its willingness to increase supply further but suggested there were few buyers for extra oil production at present, notably of heavy, sour grades. Indeed, there have been suggestions of impending curbs in Saudi production if complex refining capacity on the US Gulf Coast remains off line for a prolonged period. The Oil Minister announced during the World Petroleum Congress that Saudi Arabia would soon be able to boost proved reserves of 264 billion bbls by a further 200 billion bbls. Separately, the Minister suggested that the Haradh project is now due onstream by April 2006. The Haradh gas-oil separator at the Ghawar field is the first of five expansion projects which total a gross addition of some 2.35 mb/d in Saudi crude capacity.

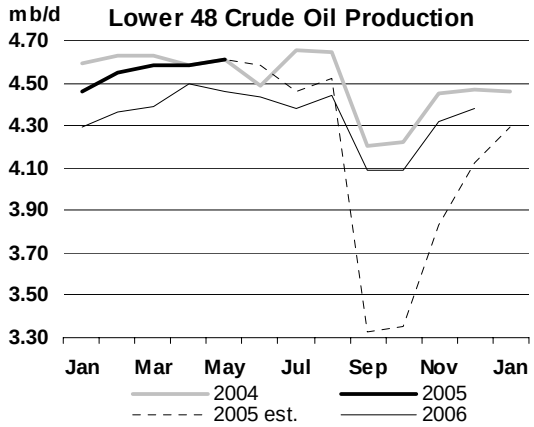
News on capacity developments elsewhere amongst OPEC members was mixed. The **UAE** reiterated that it expects to add 200 kb/d of Murban crude availability, split between fourth quarter 2005 and first quarter 2006. However, completion of pipeline facilities enabling expanded production from the Elephant and other fields in **Libya** has been put back to March 2006 from end-2005. **Iran** too is experiencing delays in realising sustained full production from the recently inaugurated Soroush and Nowruz fields. Earlier technical difficulties reportedly are now being augmented by delays as Iran attempts to ascertain the best way to market these heavy crude streams.

## OECD

*North America*

**US – September Alaska actual, others estimated:** The combined impact of Hurricanes Katrina and Rita on US GOM oil supply is discussed in detail below. In all, US oil production is revised down this month by 285 kb/d for 2005 and by 260 kb/d for 2006. Production now averages 7.3 mb/d in 2005 and 7.4 mb/d in 2006. Aside from GOM/Louisiana production, the outlook for Alaskan production is also revised down by 20 kb/d in fourth quarter 2005/first quarter 2006, and by 10 kb/d in second quarter 2006. This follows reports that BP will temporarily shut in up to 70 wells accounting for production of 20 kb/d of North Slope output, with gradual reinstatement expected through mid-2006. Alaskan production recovered over the course of September after a weak start to the month from the Northstar and Milne Point fields. Nonetheless, crude production averaged 820 kb/d versus 830 kb/d in August.



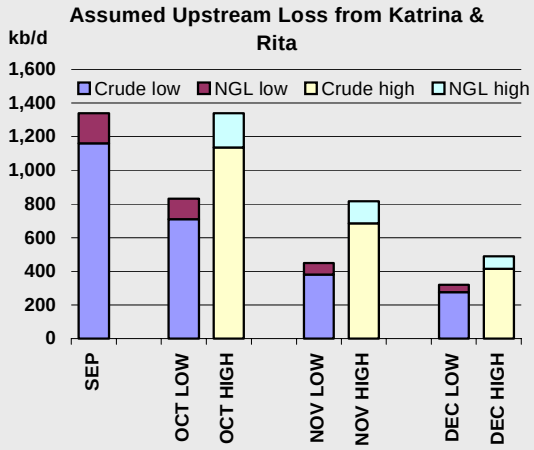
### *Hurricane Rita Compounds the Katrina Effect*

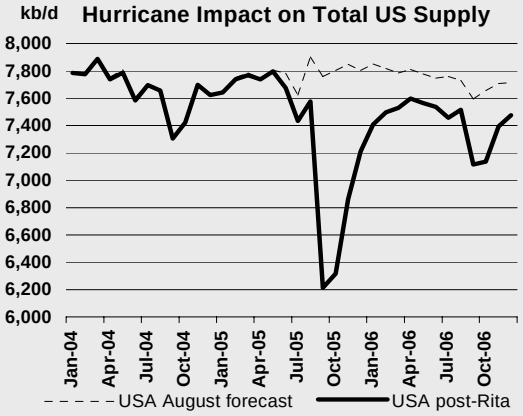
Hurricane Rita followed hard on the heels of Hurricane Katrina**,** hitting landfall close to the Texas-Louisiana border on 24 September and compounding Katrina's impact on regional energy supply. On Friday 7 October, shut-in crude production in the US GOM stood at 1.16 mb/d, nearly 80% of normal GOM output and over 20% of US crude oil production. The cumulative loss of crude supply since 26 August is 50 mb. Louisiana authorities have also reported 165 kb/d of oil production currently shut-in within the state's onshore and shallow offshore boundaries.

Not surprisingly, given devastation and workforce displacement, it will take time to make complete damage assessments of production, transportation and processing infrastructure. Recovery after last year's Hurricane Ivan was much quicker, despite extensive offshore pipeline damage. One month on from Ivan, shut in production had fallen below 0.5 mb/d. This year, damage to offshore production infrastructure, while considerable, is less of an impediment to supply recovery than is damage to pipelines and onshore processing facilities. The US Minerals Management Service (MMS) reported at the end of September that Katrina did more damage to sub-sea pipelines than originally thought. Permits to barge crude ashore have been granted to producers temporarily lacking pipeline access.

Some 6.4 bcf/d of natural gas production in the Gulf is also shut in, representing 64% of normal GOM output and around 12% of US marketed gas production. Outages on gas pipelines and gas processing facilities on the Gulf Coast are also affecting onshore natural gas production in Louisiana and Texas. The US EIA on 3 October reported that 21 gas processing plants remained closed with a combined capacity of 13.1 bcf/d (although many operate well below capacity). Some 42% of the shuttered capacity lacks electricity or gas feedstock, with the remainder out due to equipment damage.

A lack of gas processing capacity has the potential three fold effect of cutting volumes of non-associated gas, associated gas plus accompanying crude, and natural gas liquids. Short of flaring or re-injecting associated gas at oilfields, pipeline and processing constraints will keep crude oil production shut-in for longer than would otherwise be the case. US authorities are now considering granting limited permits to allow flaring. This Report estimates that in addition to crude oil losses of 1.16 mb/d in September, a further loss of 180 kb/d of NGL may have been incurred.




The level of lost output has grown considerably since the last Oil Market Report. That Report envisaged a potential loss of 48 mb of crude and 7 mb of NGL from the GOM in the September-December period. The graph (left, above) shows updated scenarios for GOM production loss through end-year 2005. The 'Low Disruption' profile assumes shut-in production drops to below 900 kb/d in the first half of October, the 'background' level of outages after Katrina but before Rita. Recovery is assumed to continue gradually thereafter through early December. A residual 275 kb/d of crude and 75 kb/d of NGL remains shut during December, the low end of the range of estimated damage to major production infrastructure (six major facilities, including Shell's Mars platform and Chevron's Typhoon, have sustained damage requiring several months to rectify). The cumulative September-December loss in this scenario is 77 mb of crude & 13 mb of NGL.

*Hurricane Rita Compounds the Katrina Effect* (continued)

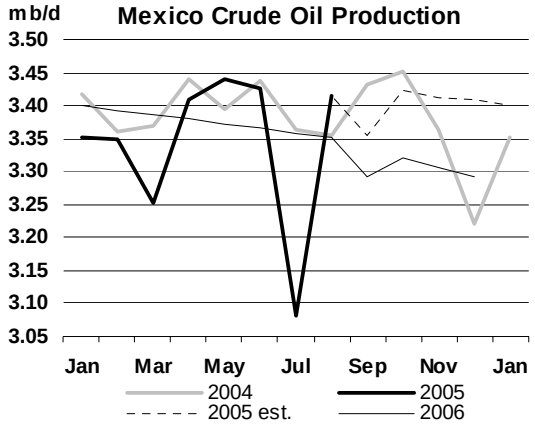
The 'High Loss' scenario assumes a slower recovery, deriving from more pessimistic assessments of the state of pipeline and processing infrastructure. Little aggregate recovery is seen in October, although crude outages fall to some 400 kb/d in December (the higher end of the range assessment for likely production loss from seriously damaged upstream facilities). This scenario results in a cumulative September-December GOM supply loss of 104 mb of crude and 18 mb of NGL. For now, the High Loss scenario looks the more likely and is incorporated in the supply/demand balances.

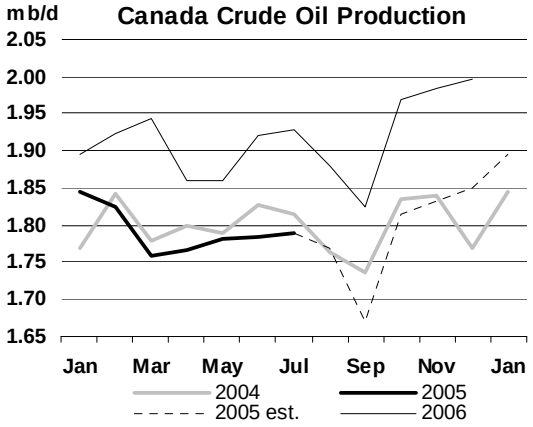
Assuming a similar recovery profile for onshore crude production, a further 15 mb of supply could be lost in the four month period, in addition to the losses indicated above for the Gulf of Mexico itself. The highly provisional nature of these scenarios must be emphasised. Damage assessments continue, but evaluating the integrity of some offshore pipelines could take months rather than weeks.

The 'tail' of supply disruption from Katrina and Rita could run well into 2006 and the ultimate tally of lost crude and NGL supply could be markedly higher than the end-2005 estimates suggested here. This Report assumes a gradually diminishing impact, with 120 kb/d of US GOM supply remaining offline until April. In reality, outages could be either more intense in the short term but with less of a tail, or show faster than expected recovery from shallow water and onshore facilities in the November-December period but with a longer tail affecting deepwater facilities. Projections remain subject to revision in the months ahead.

The longer-term impact on Gulf of Mexico production is difficult to predict. MMS suggests that destruction of older facilities nearing the end of their production life will see a permanent loss of only some 25 kb/d of crude capacity. But losses of drilling rigs and higher insurance charges will increase already-high development costs, deferring new field start-ups and satellite reservoir developments. Applying a blanket, three-month delay to all new starts or expansions scheduled for late 2005 and 2006 results in a further loss in supply by end-2006 of 40 mb. Indeed, there are indications that major projects such as BP's Thunder Horse may be subject to further delay. And given the potential for sustained disruption in gas suppy, US NGL supply is revised down by some 50 kb/d for 2006. The working scenario for the combined impact of shut-in crude production, facility losses, deferred developments and lower gas liquids supply is shown above, right. Fourth quarter 2006 US oil supply is now seen at 7.3 mb/d versus 7.7 mb/d before, with the 2005 hurricane season yet to run its course.

**Canada – Newfoundland August actual, others July actual:** Total Canadian oil supply fell by 15 kb/d in July and by an estimated 30 kb/d in both August and September. Synthetic crude output is thought to have regained peak levels around 600 kb/d in September after nearly a year of lower supply following maintenance and unscheduled outages. However, this was countered by lower supplies from offshore Newfoundland. Nonetheless, recent reports have confirmed the expected start-up of supplies from the White Rose field from November. In all, Canadian oil supply is seen averaging 3.03 mb/d in 2005 and 3.26 mb/d in 2006. The 2006 figure is 35 kb/d less than last month's forecast, with the incorporation of a higher assumption for maintenance at the syncrude units next year. Canada is one of several OECD producers which has seen production lag our earlier estimates but more because of unscheduled or prolonged facility outages than due to prevailing field decline.

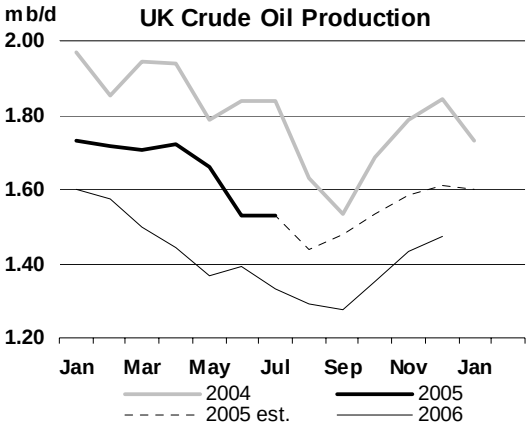


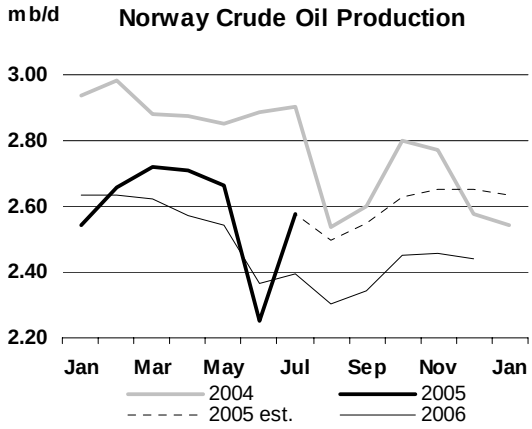



**Mexico – August actual:** Production in August rebounded after a storm-affected July, averaging 3.4 mb/d versus 3.1 mb/d the month before. Exports were up more modestly, with heavy-sour Maya and lighter Isthmus accounting for the bulk of August's 50 kb/d increase. Mexican production is not believed to have been directly affected by September's Hurricanes Katrina and Rita, or by October's Tropical Storm Stan. However, at writing, there have been reports that state producer Pemex may have temporarily shut-in 10% of production due to a lack of buyers following refinery outages on the US Gulf Coast. This Report's September and October production estimates are therefore subject to revision when final production data is released. The company was also reportedly chartering tankers to store surplus crude. The government's latest budget envisages 3.48 mb/d crude production for 2006. This Report has retained a more conservative 3.35 mb/d outlook until it becomes apparent whether new field developments can be activated rapidly enough to offset decline at the mature Cantarell field.

*North Sea*

**UK – July actual:** Recent data point to UK production falling sharply during the June to August period under the influence of both scheduled maintenance and unscheduled stoppages. Field-by-field data show June total oil production at 1.78 mb/d compared to 1.93 mb/d in May, with the Forties and Flotta systems bearing the brunt of the decline. Aggregate production data and loading schedules for subsequent months suggest a potential further fall to 1.66 mb/d in August but possible recovery to 1.85 mb/d by end-year. September saw further unscheduled outages affecting the Brent and Scott fields, while October loading schedules suggest slower rebound than expected after summer maintenance. Consequently, UK production is revised down by 50 kb/d for fourth quarter 2005 and by 40 kb/d for 2006. The latter adjustment reflects heavier assumed maintenance in third quarter 2006. Total UK oil production is now forecast at 1.86 mb/d in 2005 and 1.66 mb/d in 2006.




**Norway – July actual, August provisional**: Provisional August production data show a much shallower maintenance-inspired dip in production than anticipated previously in this Report. As for the UK, Norwegian output is seen recovering through end-year, reaching 3.13 mb/d by December from June lows of 2.64 mb/d. Despite markedly higher than expected August production, revisions to forecast Norwegian oil supply are marginal in total. Higher production from the Heidrun field is countered by a deferral into December of start-up at Oseberg West. Total Norwegian output is expected to average 3.0 mb/d in 2005 and 2006, with crude oil accounting for 2.6 mb/d and 2.5 mb/d in the two years respectively. Partners in Norway's new coalition government are seeking internal agreement on whether to allow exploration activity in environmentally sensitive areas offshore northern Norway. Upstream players see this as crucial to stemming crude oil production decline.

## Former Soviet Union (FSU)

**Russia – August actual, September provisional:** Russian liquids production averaged 9.53 mb/d in August and a provisional 9.6 mb/d in September. So far in 2005, growth has averaged 260 kb/d or 2.8%, a level this Report assumes is sustained for 2005 as a whole. Despite a sharp slowing in annual growth in recent months, the fact that late-2004 production was actually in decline should lend some impetus to observed growth levels towards end-2005. Upstream investment by troubled producers Yukos and Sibneft has stagnated recently and with it production has declined. These producers aside however, growth has persisted, albeit at slower rates. TNK-BP announced expected 6.5% production growth for 2005. Early October saw start-up from the Chayvo field at ExxonMobil's Sakhalin-1 project. Some 50 kb/d of liquids supply is expected there by end-2005 and 250 kb/d by end-2006.

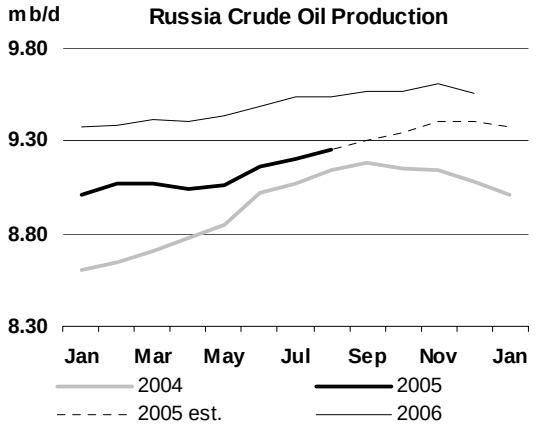
None of the above suggests that Russian production will reclaim the double digit growth seen in the first half of the decade. Increased state control over producing assets raises medium and longer term questions over production growth, but some short term clarity may be returning as regards the producing assets of Yukos and Sibneft. State Gazprom announced in September that it will purchase a 73% stake in the producing assets of Sibneft, raising the possibility that recent declines could be stemmed. With reports that Rosneft is planning to gain control over remaining Yukos assets, there is the prospect that the haemorrhage in production suffered by these two companies could temporarily abate. This Report retains its earlier projection of 250-300 kb/d growth in Russian production for 2005 and 2006, sharply below the 740 kb/d seen in 2004.

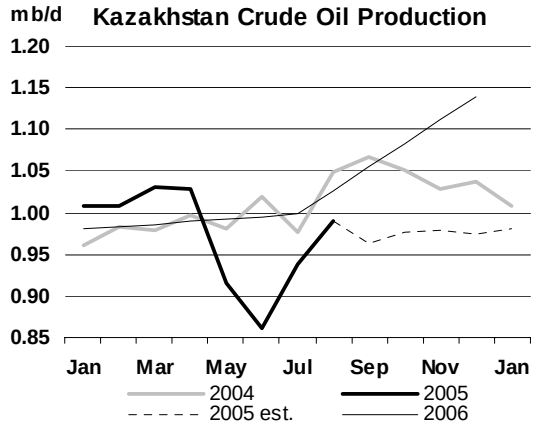
**FSU Net Exports of Crude & Petroleum Products**
(million barrels per day)

| | 2003 | 2004 | 3Q2004 | 4Q2004 | 1Q2005 | 2Q2005 | Jun-05 | Jul-05 | Aug-05 | Latest month vs. Jul-05 | Latest month vs. Aug-04 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Crude** | | | | | | | | | | | |
| Black Sea | 2.21 | 2.20 | 2.17 | 2.28 | 2.22 | 2.38 | 2.23 | 2.34 | 2.32 | -0.01 | 0.11 |
| Baltic | 1.06 | 1.51 | 1.52 | 1.48 | 1.64 | 1.61 | 1.55 | 1.48 | 1.59 | 0.10 | 0.11 |
| Artic/FarEast | 0.21 | 0.25 | 0.30 | 0.30 | 0.19 | 0.19 | 0.24 | 0.22 | 0.22 | 0.00 | -0.03 |
| **Crude Seaborne** | **3.47** | **3.96** | **3.99** | **4.06** | **4.04** | **4.18** | **4.02** | **4.04** | **4.12** | **0.09** | **0.20** |
| Druzba Pipeline | 1.07 | 1.10 | 1.13 | 1.14 | 1.13 | 1.10 | 1.10 | 1.13 | 1.12 | -0.01 | 0.01 |
| Other Routes | 0.17 | 0.23 | 0.28 | 0.25 | 0.28 | 0.35 | 0.39 | 0.33 | 0.37 | 0.04 | 0.10 |
| **Total Crude Exports** | **4.71** | **5.29** | **5.41** | **5.46** | **5.45** | **5.64** | **5.51** | **5.49** | **5.61** | **0.12** | **0.30** |
| *Of Which: Transneft* | *0.85* | *3.76* | *3.74* | *3.86* | *4.01* | *4.26* | *4.18* | *4.15* | *4.33* | *0.18* | *0.67* |
| **Products** | | | | | | | | | | | |
| Fuel oil | 0.83 | 0.90 | 0.95 | 0.87 | 0.78 | 0.91 | 1.08 | 1.11 | 0.97 | -0.14 | -0.02 |
| Gasoil | 0.82 | 0.84 | 0.81 | 0.78 | 0.89 | 0.80 | 0.79 | 0.84 | 0.83 | -0.01 | 0.01 |
| Other Products | 0.41 | 0.46 | 0.46 | 0.42 | 0.58 | 0.56 | 0.57 | 0.61 | 0.54 | -0.07 | 0.09 |
| **Total Products** | **2.05** | **2.19** | **2.22** | **2.07** | **2.25** | **2.27** | **2.45** | **2.56** | **2.34** | **-0.22** | **0.08** |
| **Total Exports** | **6.76** | **7.48** | **7.62** | **7.52** | **7.70** | **7.90** | **7.96** | **8.05** | **7.95** | **-0.10** | **0.38** |
| Imports | 0.02 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.04 | 0.01 | -0.03 | 0.00 |
| **Net Exports** | **6.74** | **7.47** | **7.61** | **7.51** | **7.69** | **7.89** | **7.95** | **8.01** | **7.94** | **-0.06** | **0.38** |

Sources: Petro-Logistics, IEA estimates

FSU net exports fell by 60 kb/d from July levels in August to average 7.94 mb/d, decline being centred on oil products. As anticipated last month, August crude exports increased with higher liftings from Baltic Ports. September Russian seaborne crude liftings increased further but may dip in October, partly in response to a $40/tonne rise in crude export duty to $180/tonne from 1 October. Scheduled liftings from the flagship port of Primorsk in particular show a decline this month. Russian exporters may increasingly turn their emphasis towards product exports and away from crude, given the imbalance in export duties between the two. Outside of Russia, uncertainty surrounds the likely first lifting date for crude from the Baku-Tbilisi-Ceyhan pipeline. Operator BP plans end-year 2005 deliveries but reports surfaced in September that these could be deferred until first quarter 2006.




**Kazakhstan – August actual:** Production from Kazakhstan was largely unchanged in August from July levels, at 1.18 mb/d. Condensate supply from the Karachaganak field fell, as producers reportedly shut in liquids output at the same time as gas, following gas processing outages in Russia.

However, crude production from the Tengiz field recovered after July electrical problems. Mixed reports emerged in September concerning prospects for further Kazakh supply expansion. Fellow shareholders in the Caspian Pipeline Consortium agreed to a number of financial conditions required by Russia, which could open the way for pipeline expansion to 1.34 mb/d to proceed. However cost increases on the 1.2 mb/d Kashagan field development project reportedly risk delaying start-up there by one year to 2009.

## Other Non-OPEC

**Revisions to other non-OPEC estimates:** For the second month in succession, downward revisions to forecast US supply due to the after-effects of Hurricanes Katrina and Rita outstrip those elsewhere among non-OPEC producers. Total non-OPEC production is revised down by 335 kb/d for 2005 and by 400 kb/d for 2006. North America accounts for 300 kb/d of the revisions in both years.

**Revisions to Non-OPEC Oil Supply**
(million barrels per day)

| | Last Month's OMR | | | This Month's OMR | | | This Month vs. Last Month | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2005 | 2006 | 06 vs. 05 | 2005 | 2006 | 06 vs. 05 | 2005 | 2006 | 06 vs. 05 |
| North America | 14.45 | 14.79 | 0.34 | 14.15 | 14.48 | 0.33 | -0.30 | -0.31 | -0.01 |
| Europe | 5.73 | 5.51 | -0.23 | 5.72 | 5.47 | -0.25 | -0.02 | -0.04 | -0.02 |
| Pacific | 0.57 | 0.58 | 0.01 | 0.56 | 0.58 | 0.02 | 0.00 | 0.00 | 0.00 |
| **Total OECD** | **20.75** | **20.87** | **0.12** | **20.43** | **20.53** | **0.09** | **-0.32** | **-0.34** | **-0.03** |
| Former USSR | 11.59 | 12.08 | 0.49 | 11.59 | 12.09 | 0.50 | 0.00 | 0.01 | 0.01 |
| Europe | 0.16 | 0.15 | -0.01 | 0.16 | 0.15 | -0.01 | 0.00 | 0.00 | 0.00 |
| China | 3.62 | 3.62 | -0.01 | 3.63 | 3.60 | -0.02 | 0.00 | -0.01 | -0.02 |
| Other Asia | 2.73 | 2.85 | 0.12 | 2.71 | 2.81 | 0.10 | -0.01 | -0.04 | -0.02 |
| Latin America | 4.32 | 4.51 | 0.20 | 4.32 | 4.51 | 0.19 | 0.01 | 0.00 | 0.00 |
| Middle East | 1.82 | 1.75 | -0.06 | 1.82 | 1.75 | -0.06 | 0.00 | 0.00 | 0.00 |
| Africa | 3.78 | 4.27 | 0.50 | 3.76 | 4.25 | 0.49 | -0.02 | -0.02 | 0.00 |
| **Total Non-OECD** | **28.00** | **29.24** | **1.24** | **27.99** | **29.18** | **1.20** | **-0.02** | **-0.06** | **-0.04** |
| Processing Gains | 1.86 | 1.90 | 0.04 | 1.86 | 1.90 | 0.04 | 0.00 | 0.00 | 0.00 |
| **Total Non-OPEC** | **50.61** | **52.01** | **1.40** | **50.28** | **51.61** | **1.33** | **-0.33** | **-0.40** | **-0.07** |

OMR = Oil Market Report

**Asian** supply estimates are again revised down, by 10 kb/d for 2005 but by some 50 kb/d for 2006. **India** accounts for 5-10 kb/d of the adjustment in both years after downward adjustments to NGL supply are carried through the forecast. For 2006, **Chinese** production is revised down by some 10 kb/d based on lower expectations for the offshore regions. **Vietnamese** production for 2006 is revised down by 20 kb/d based on lower expectations for satellites to the Ruby field and on sharper expected decline at the Bach Ho field. African supply is also revised down, based on delayed start-up of Dar Blend crude at CNPC's Blocks 3 and 7 in **Sudan**. This Report now assumes a later, November 2005 start for Dar Blend output and a slower build to 200 kb/d plateau production by autumn 2006. This cuts forecast Sudanese production by 20 kb/d in 2005 and 25 kb/d in 2006.

# OECD STOCKS

## Summary

- **OECD total industry oil stocks** fell 3.5 mb in August to 2667 mb. Draws in North America were partly offset by builds in Europe and the Pacific leaving total oil stocks 76 mb above last year. Crude inventories were little changed with offsetting moves in Europe and North America. Likewise, product inventories saw draws in gasoline largely balanced by increases in distillates. Forward demand cover by industry stocks held steady at 54 days, as downward revisions to demand compensated for lower inventories.

**Preliminary Industry Stock Change in August 2005 and Second Quarter 2005**

(million barrels per day)

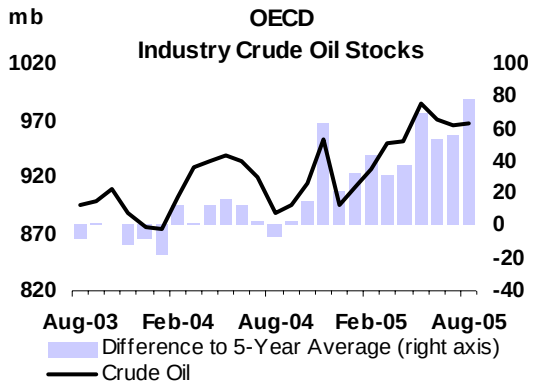
| | *August (preliminary)* | | | | *Second Quarter 2005* | | | |
|---|---|---|---|---|---|---|---|---|
| | North America | Europe | Pacific | Total | North America | Europe | Pacific | Total |
| **Crude Oil** | **-0.11** | **0.17** | **-0.03** | **0.03** | **0.16** | **-0.03** | **0.08** | **0.22** |
| Gasoline | -0.44 | -0.09 | -0.04 | -0.56 | 0.01 | -0.19 | -0.01 | -0.19 |
| Distillates | 0.18 | 0.05 | 0.22 | 0.45 | 0.16 | -0.06 | 0.11 | 0.22 |
| Residual Fuel Oil | -0.11 | 0.01 | -0.06 | -0.16 | -0.03 | 0.04 | 0.02 | 0.03 |
| Other Products | 0.15 | -0.01 | 0.04 | 0.18 | 0.42 | -0.06 | 0.07 | 0.43 |
| **Total Products** | **-0.22** | **-0.04** | **0.16** | **-0.10** | **0.56** | **-0.27** | **0.20** | **0.49** |
| Other Oils[1] | -0.03 | -0.03 | 0.01 | -0.05 | 0.11 | -0.01 | 0.08 | 0.18 |
| **Total Oil** | **-0.36** | **0.10** | **0.14** | **-0.11** | **0.83** | **-0.31** | **0.36** | **0.89** |

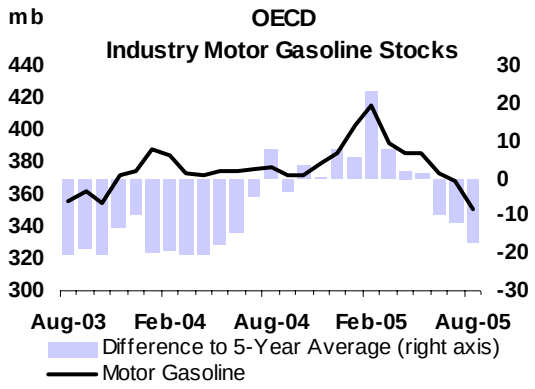
1 Other oils includes NGLs, feedstocks, and other hydrocarbons

- **OECD industry crude stocks** held flat in August, closing at 967 mb, 78 mb above last year. Draws in North America came in the US as Hurricane Katrina disrupted production and crude oil deliveries to the US Gulf Coast. This was offset by a build in Europe where refinery crude demand was weak and a contango structure for Brent futures provided an incentive to store ample regional supplies. US-50 stocks ended September higher with the closure of a significant portion of US refining capacity reducing throughputs.

- **OECD industry distillate stocks** rose by 14 mb in August to 537 mb in line with seasonal trends. The strongest gains were observed in the Pacific as Japanese refiners maximised runs to build kerosene stocks ahead of peak winter demand. In the US and Europe, forward price structures for NYMEX heating oil and IPE gasoil provided strong financial incentives to store product. US heating oil inventories ended September higher at 58 mb or 6 mb above last year, in contrast to diesel, where stocks declined by 8 mb from end-August levels.

- **OECD industry gasoline stocks** fell by 18 mb in August to close at 350 mb or 26 mb below last year. The decline was centred in the US where demand remained fairly robust and gasoline production was falling seasonally ahead of Katrina. Though gasoline stocks rebounded in September on a combination of reduced demand and record high imports, these are likely to fall below seasonal ranges. Product loss from potentially prolonged refinery outages is unlikely to be fully replaced.



## OECD Industry Stock Changes in August 2005

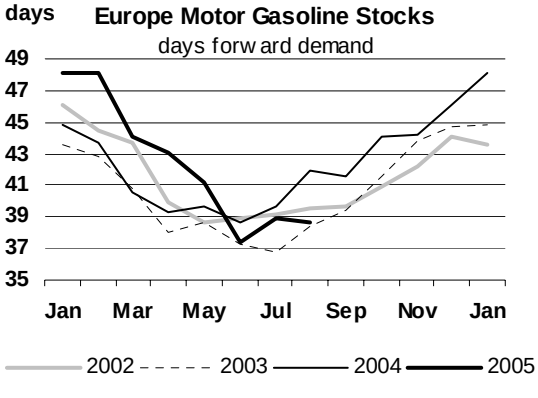
### *OECD North America*

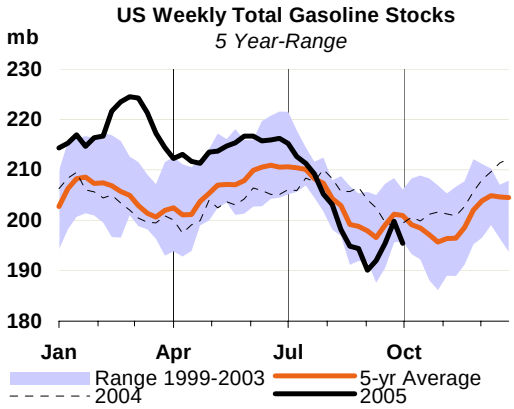
US-50 crude stocks remained at the upper end of their five-year range through the August-September period, closing at 305 mb. At 32 mb above last year, the relatively comfortable position stemmed from reduced refinery demand. August runs initially declined from the near-capacity levels observed in early July. Hurricane damage shut in a large portion of US Gulf Coast refining capacity, further reducing crude demand. These refinery losses more than offset the simultaneous disruption to imports and crude oil output from the Gulf of Mexico.

The interruption of crude deliveries into the Mid-continent saw stocks at Cushing decline rapidly over the period, supporting a shift of NYMEX WTI futures prices into backwardation. While the hurricanes tightened prompt supplies, future supplies are expected to improve as tanker deliveries and pipeline operations resume, driving forward prices lower.

US product inventories saw sharp declines in the first week following Hurricane Rita. Lost refinery output led to a fall in gasoline and distillate stocks respectively of 4.3 mb and 5.6 mb. Gasoline inventories ended September at 196 mb, 9.4 mb below last year and marginally above end-August levels. Larger stock draws in gasoline due to shuttered refinery capacity were averted as record imports, increased blending of components and slowing demand offset lost supplies. Distillate stocks fell slightly but continued to trend at the upper end of their five-year range. Most of the distillate draw in September came in diesel rather than heating oil. However, combined inventories of these products should shift lower as result of lost product output.

A contango in NYMEX heating oil futures encouraged moving product into storage in September. At the same time, a strengthening crack spread for heating oil relative to motor gasoline supported increased production ahead of winter. In other middle distillates, jet fuel stocks fell to near historic lows as product supplies suffered directly from lower refinery output and a lack of blending offsets.




### *OECD Europe*

European commercial crude stocks rose 5 mb in August ending at 351 mb, 23 mb above last year. Weak refinery demand, alongside closed arbitrage outlets for regional crudes, supported the build. A narrow WTI-Brent differential discouraged transatlantic movement of Brent-related grades and a reduction in Norwegian crude production due to field maintenance proved weaker than originally anticipated. Also, negative simple margins on Urals and similar grades led to a number of unsold cargoes at the end of August.

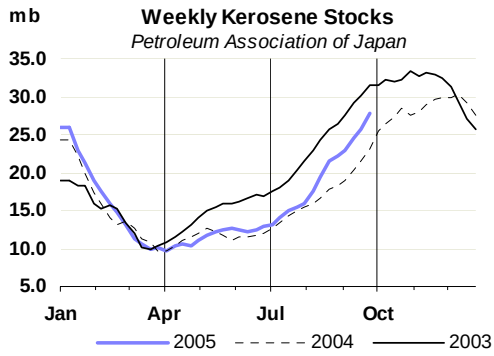
The sustained contango in Brent forward prices also encouraged increased stock holdings ahead of peak winter demand. With European refiners likely to lift runs in response to the sharp rise in refinery margins in August, the current crude stock level should provide a short-term supply cushion.

Product inventories were little changed in August with gasoline draws balanced by increases in other fuels. Gasoline stocks fell by 3 mb but held stable on a forward demand cover basis. In September, output should increase as some scheduled refinery maintenance is expected to be deferred, while at the same time, demand continues to contract. In addition, freight rates have risen as clean product tanker availability tightened following a post-Katrina and Rita surge in exports. This is likely to slow the pace of arbitrage shipments. As a result, some product will back up in Europe in September, mitigating the potential for a further draw in inventories.

Distillate inventories remained flat over August in absolute terms. Forward demand cover was also stable despite a rebound in heating oil deliveries in key consuming countries. German consumer heating oil stocks were reported rising to 52% at end-month from 47% in July as households stepped up pre-winter buying. Industry distillate stocks closed at 251 mb, or 10 mb below those of a year ago. There appeared to be some short-lived continuation of end-user buying of heating oil and firm diesel demand in September. However, refineries and importers are likely to have moved increased supplies of gasoil into storage, taking advantage of the strong contango in IPE gasoil futures.

### *OECD Pacific*

Pacific crude stocks trended sideways in August with offsetting changes in Japan and Korea. Draws in Japan in August extended through September as refiners kept runs at seasonally high levels to build kerosene inventories ahead of winter.




Middle distillate inventories ended August at 75 mb, or 5 mb above a year ago. The build in Japan was partly offset by draws in Korea on reduced refinery runs and higher distillate exports. Japanese distillate inventories continued to build into September, with kerosene stocks moving towards their seasonal peak.

## OECD Inventory Position at End-July and Revisions to Preliminary Data

July preliminary industry stock data were revised down by a total of 7 mb, mainly in product stocks. Downward revisions in Europe outpaced upward revisions elsewhere. June data were also revised down by 21 mb. The revisions stemmed largely from a change in the assessment of industry stocks in France, where 13 mb of distillates and 6 mb of gasoline were reclassified into government stockpiles.

**Revisions versus 9 September 2005 Oil Market Report**

(million barrels)

| | *North America* | | *Europe* | | *Pacific* | | *OECD* | |
|---|---|---|---|---|---|---|---|---|
| | Jun 05 | Jul 05 | Jun 05 | Jul 05 | Jun 05 | Jul 05 | Jun 05 | Jul 05 |
| **Crude Oil** | **1.4** | **-0.9** | **-3.5** | **-6.4** | **0.7** | **5.5** | **-1.4** | **-1.8** |
| Gasoline | 0.0 | 2.7 | -6.8 | -5.2 | 0.0 | -0.3 | -6.8 | -2.7 |
| Distillates | 0.0 | 4.2 | -12.8 | -9.8 | 0.0 | 1.2 | -12.8 | -4.3 |
| Residual Fuel Oil | 0.0 | 1.0 | -1.1 | 0.9 | 0.0 | 0.3 | -1.1 | 2.2 |
| Other Products | 0.0 | -7.6 | 0.2 | 0.9 | 0.0 | 0.9 | 0.2 | -5.9 |
| **Total Products** | **0.0** | **0.3** | **-20.5** | **-13.2** | **0.0** | **2.2** | **-20.5** | **-10.7** |
| Other Oils[1] | -0.9 | 2.0 | 1.8 | 3.7 | 0.0 | -0.1 | 0.9 | 5.6 |
| **Total Oil** | **0.5** | **1.5** | **-22.1** | **-16.0** | **0.7** | **7.6** | **-20.9** | **-6.9** |

1 Other oils includes NGLs, feedstocks, and other hydrocarbons

Total OECD industry stocks ended August at 2667 mb, 76 mb above a year ago. Crude inventories were up on a yearly basis across the OECD. In products, only Europe closed below its 2004 position. OECD forward demand cover was unchanged at 54 days, two days higher than in 2004. On a regional basis, forward cover came to 50 days for North America, 59 for Europe and 53 for the Pacific.

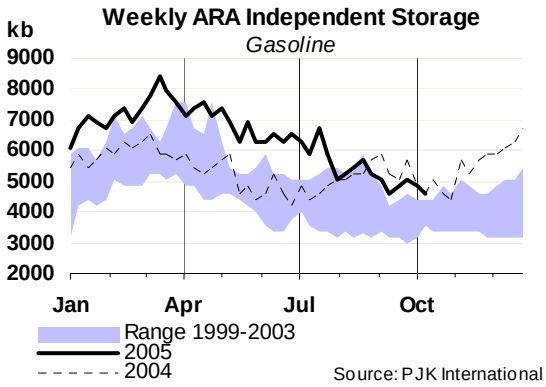
**Year-on-Year OECD Industry Stock Comparisons for August 2005**

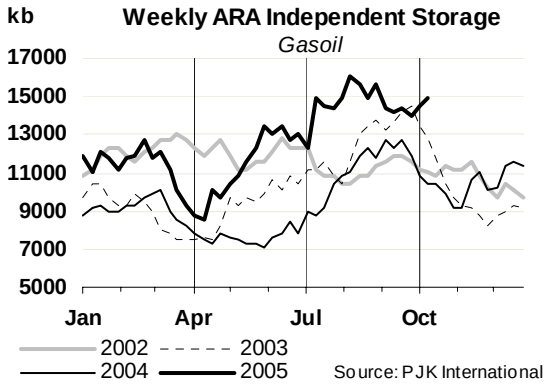
| | *(million barrels)* | | | | | *(Days of Forward Demand)* | | | |
|---|---|---|---|---|---|---|---|---|---|
| | North America | Europe | Pacific | Total | | North America | Europe | Pacific | Total |
| **Crude Oil** | **39.8** | **23.0** | **15.3** | **78.2** | **Total Oil** | **2.1** | **-0.2** | **2.5** | **1.4** |
| Total Products | 18.2 | -31.9 | 9.2 | -4.4 | *Versus 2003* | 1.3 | -0.4 | 0.0 | 0.5 |
| Other Oils[1] | -3.9 | 5.7 | 0.3 | 2.1 | *Versus 2002* | -1.8 | -0.7 | 0.8 | -1.0 |
| **Total Oil** | **54.1** | **-3.1** | **24.8** | **75.8** | **Total Products** | **0.7** | **-2.0** | **0.9** | **-0.1** |
| *Versus 2003* | 78.2 | 7.4 | -5.3 | 80.3 | *Versus 2003* | 0.6 | -1.6 | -1.0 | -0.4 |
| *Versus 2002* | 24.8 | 14.1 | -9.7 | 29.2 | *Versus 2002* | -1.3 | -3.0 | -0.5 | -1.7 |

1 includes feedstocks, NGLs and other hydrocarbons

## Recent Developments in ARA Independent Storage

Gasoline inventories in independent storage facilities in the Amsterdam-Rotterdam-Antwerp area fell in the aftermath of Hurricane Katrina as transatlantic arbitrage volumes surged on widening price differentials against New York Harbour. Gasoline fixtures to the US from Northwest Europe during September were nearly double those seen in the same period last year. Regular flows to Nigeria continued apace and material was also sent to Iran to compensate for lower Indian exports. The pace of decline was in part offset by incoming material from the rest of Europe. A tightening of tanker availability by end-month also limited cargo deliveries. In addition to increased US demand, the current backwardation in unleaded gasoline swaps in ARA also encourages sales out of storage.




Gasoil stocks held relatively flat during September, but nudged higher in the first week of October. End-user demand from France and Germany dipped in September from August, and the release of diesel by the Dutch stock management agency COVA, as part of the IEA co-ordinated release, was balanced by incoming material from Scandinavia and the Baltics.

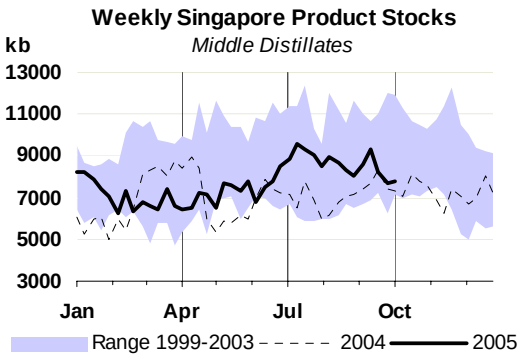
By the end of September, the lack of arbitrage opportunities for gasoil to the US (gasoline shipments were more profitable), in addition to sustained arrivals of Russian supplies, caused stocks to build. Strong absolute prices for distillates in Europe also attracted Korean material. The direction of gasoil stocks, however hinges on future arbitrage movements: gasoil from the Baltics often seasonally bypasses ARA, to head directly to the US.

In other distillates, jet fuel inventories increased to record levels in September. Imports continued to be seen from the Persian Gulf, diverted away from a weaker Asian market. A contango in swap prices and poor airline demand continue to support keeping jet fuel in storage.

## Recent Developments in Singapore Stocks

Total product stocks in Singapore surveyed by *International Enterprise* built mostly through September but fell back to August levels by end-month. Light distillates (comprising naphtha and gasoline) alongside fuel oil stocks were marginally higher while middle distillate stocks ended lower.

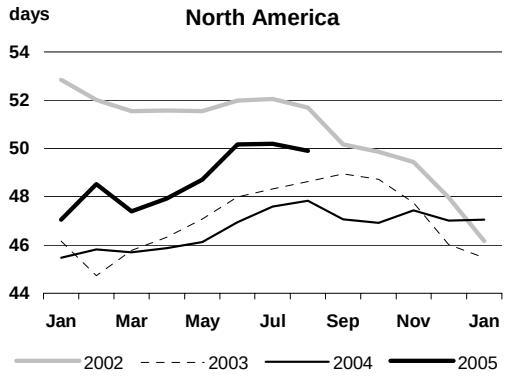
Distillate supplies tightened in September. Exports from China, Taiwan and Korea were reportedly lower in September, while Middle Eastern gasoil, along with Korean material, was shipped to the stronger European market. On the demand side, Indonesia's Pertamina was reported to be replenishing domestic stockpiles after solving its credit issues. However, Indonesian demand could dip as domestic demand falls back following a cut in retail subsides.

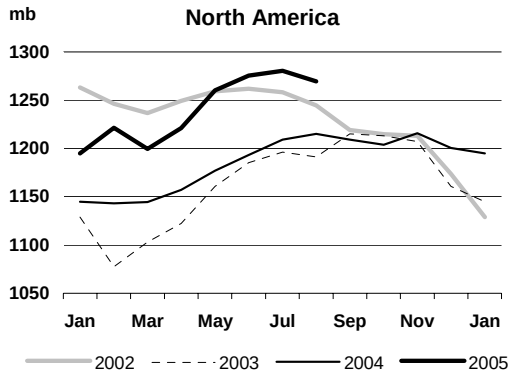


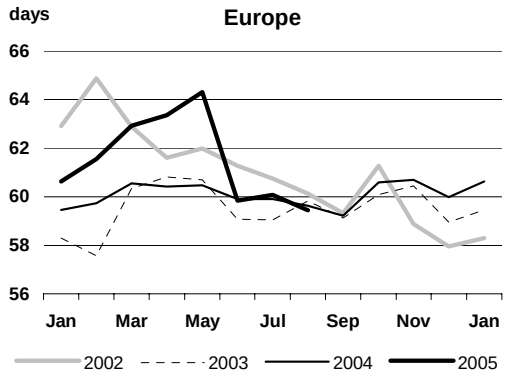

Distillate inventories are likely to build in October on higher refinery output and weaker regional demand, while a contango in Singapore forward prices encourages additions to storage.

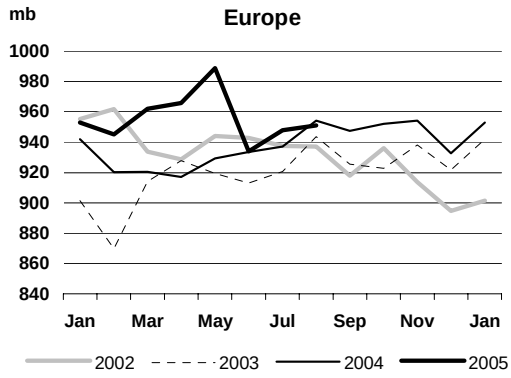
# Regional OECD End-of-Month Industry Stocks
## (in days of forward demand and millions barrels of total oil)

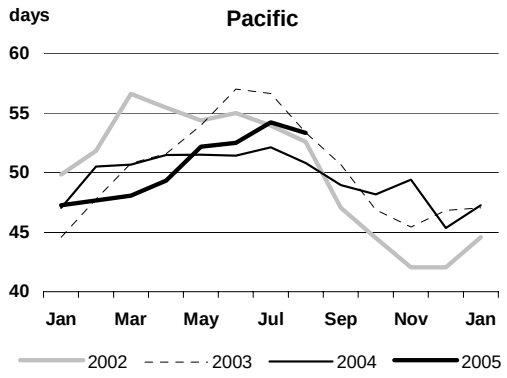
**Days[1]** **Million Barrels**

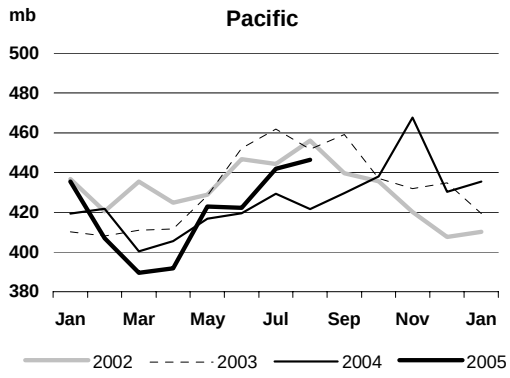


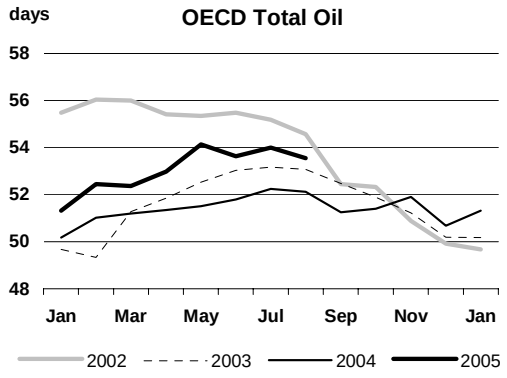



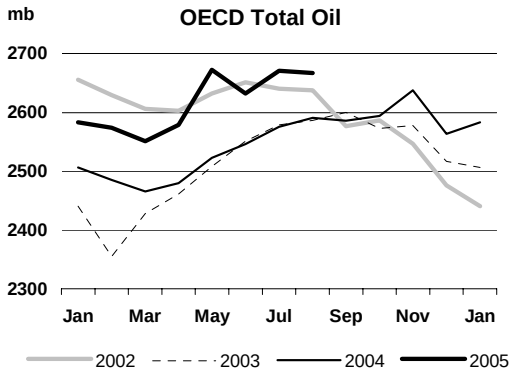




**1 Days of forward demand are based on average demand over the next three months.**

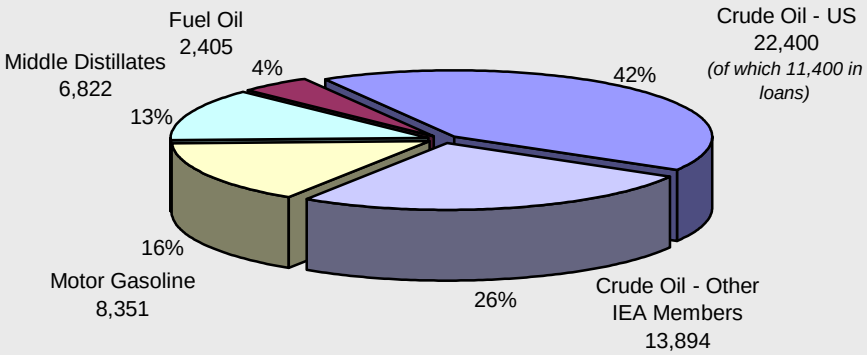
## IEA Emergency Response: Update

As stated in last month's Report, IEA Member countries agreed to make a total of 63 million barrels of oil available to the market in response to Hurricane Katrina. Just over 61 million barrels of this amount was to be from emergency stocks and increased indigenous production.

Based on current preliminary information, the effective IEA response from these measures by the end of October will be approximately 42 million barrels. Additionally, the US has made loans from the SPR available upon request. Including these loaned volumes, the total additional oil made available to the market by the end of October will reach nearly 54 million barrels.

**Stock Release and Increased Production – End-October**
(thousand barrels)

| | Total Oil | Crude Oil | Total Products | *Of which Gasoline* |
|---|---|---|---|---|
| North America | 27,545 | 27,545 | - | - |
| Pacific | 10,705 | 6,255 | 4,450 | 1,719 |
| Europe | 15,622 | 2,494 | 13,128 | 6,632 |
| **Total** | **53,872** | **36,294** | **17,578** | **8,351** |




Some supplies offered from public stocks were not taken up by the market, largely accounting for the lower total response at the end of October than the volume of supplies initially pledged. While some 39 million barrels were initially pledged from public emergency reserves, just over 17 million of these have been taken up. However, when counted together with the loans from the US SPR, a total of almost 29 million barrels will have been released from Member countries' public stocks by the end ofOctober.

**Stock Release from Public Reserves**
(thousand barrels)

| | Total Oil offered | Total Oil taken | Of which Gasoline |
|---|---|---|---|
| North America | 30,000 | 11,000 | - |
| Pacific | 2,900 | 2,900 | 145 |
| Europe | 6,454 | 3,459 | 1,535 |
| **Total** | **39,354** | **17,359** | **1,680** |
| SPR loans | 13,200 | 11,400 | - |
| **Total Public** | **52,554** | **28,759** | **1,680** |

Increased indigenous production and the lowering of minimum stock holding requirements put at the disposal of industry an additional 25 million barrels. These amounts in effect allow a potential transfer of incremental oil supply, making previously unavailable volumes accessible to the market.

*Contributed by Jason Elliott – Emergency Planning & Preparedness Division – eppd@iea.org*

# PRICES

## Summary

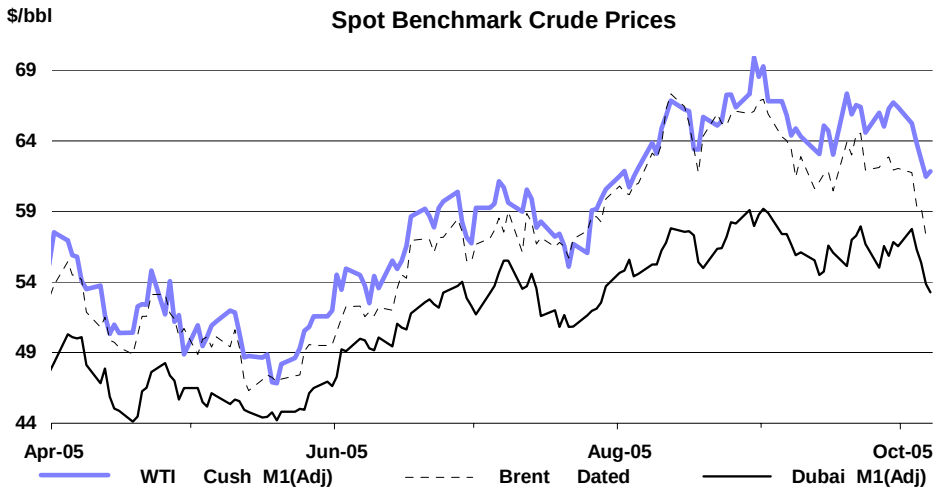
- **NYMEX Light Sweet crude** fell below $62/bbl as US refinery crude runs fell in the wake of Hurricanes Katrina and Rita and product demand fell sharply. Large refinery outages in the wake of the hurricanes reduced US throughput to the lowest level on record, more than offsetting crude and NGL output losses in the Gulf of Mexico.

- **NYMEX** gasoline prices fell sharply as US imports rose to record levels and refiners maximised gasoline yields. Heating oil futures prices moved above those of gasoline in early October with heating oil for February delivery trading at a premium to mogas of nearly 28 cents per gallon. Strong natural gas prices are also supportive for heating oil as much of the modern gas-powered generation plants with duel fuel capacity can switch to middle distillate fuels rather than fuel oil.

- **NYMEX Light Sweet crude futures** returned to a backwardation for the first time since November 2004. Supporting the switch was a sharp fall in crude stocks at the NYMEX delivery point of Cushing, Oklahoma. Further forward months remained at a premium but this was much narrower than the contango structure in place before the storm. In contrast, IPE Brent crude futures remained in contango, with spot prices depressed, among other factors, by French refinery and port strikes and other transportation issues.

- **Jet/kerosene prices** developed the strongest product premium to benchmark crudes in the US as lower refinery throughput and an emphasis on gasoline production cut into the jet fuel yield. In contrast, the European market had seen some pressure from incoming cargoes from the Middle East and Asia. The resulting wider differentials encouraged 200,000 tonnes of product to be booked from Europe to the US.

- **Strong demand for US-bound product tankers** pushed clean freight rates to their highest level this year, reflecting tight clean vessel availability in many areas. Difficulties in offloading VLCC tankers in some US crude import terminals encouraged use of smaller vessels for deliveries.




## Crude Oil Prices

*Spot Crude Prices and Differentials*

In early October, Benchmark WTI Cushing moved to its lowest level for eight weeks as refinery throughput reductions from Hurricanes Katrina and Rita on the US Gulf Coast temporarily outpaced crude output losses and US primary oil demand slowed rapidly. A sharp retrenchment of transportation fuel prices from their post-Hurricane peak added further downward pressure to the decline. Gasoline supplies fared better-than expected as unaffected domestic refiners maximised gasoline yields and imports surged in response to large price differentials with Europe and other producing centres.

**Spot Crude Oil Prices and Differentials***

(monthly and weekly averages, $/bbl)

| | Jul | Aug | Sep | Sep-Aug | | Week Commencing: | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Change | % | 05 Sep | 12 Sep | 19 Sep | 26 Sep | 03 Oct |
| **Crudes** | | | | | | | | | | |
| Brent Dated | 57.58 | 64.12 | 62.91 | -1.21 | -1.9 | 63.22 | 61.12 | 63.57 | 62.31 | 59.03 |
| WTI Cushing 1mth(adjusted) | 58.68 | 64.96 | 65.52 | 0.56 | 0.9 | 64.84 | 63.86 | 66.15 | 66.07 | 63.02 |
| Urals (Mediterranean) | 55.02 | 58.61 | 58.38 | -0.23 | -0.4 | 58.07 | 56.32 | 59.59 | 58.50 | 56.24 |
| Dubai 1mth(adjusted) | 52.83 | 56.60 | 56.54 | -0.06 | -0.1 | 56.69 | 55.50 | 56.81 | 56.15 | 55.31 |
| Tapis | 59.70 | 67.26 | 67.64 | 0.38 | 0.6 | 68.47 | 66.75 | 67.46 | 66.54 | 64.52 |
| **Differential to Dated Brent** | | | | | | | | | | |
| WTI Cushing 1mth(adjusted) | 1.10 | 0.84 | 2.61 | 1.77 | | 1.62 | 2.73 | 2.58 | 3.76 | 4.00 |
| Urals (Mediterranean) | -2.56 | -5.50 | -4.53 | 0.97 | | -5.15 | -4.81 | -3.98 | -3.81 | -2.79 |
| Dubai | -4.75 | -7.52 | -6.37 | 1.14 | | -6.53 | -5.63 | -6.76 | -6.17 | -3.71 |
| Tapis | 2.12 | 3.14 | 4.73 | 1.59 | | 5.25 | 5.63 | 3.89 | 4.22 | 5.49 |
| **Prompt Month Differential** | | | | | | | | | | |
| Brent 1mth-2mth (adjusted) | -0.72 | -0.45 | -0.68 | -0.23 | | -0.71 | -0.64 | -0.84 | -0.65 | -0.65 |
| WTI Cushing 1mth-2mth (adjusted) | -1.21 | -0.63 | -0.33 | 0.23 | | -0.56 | -0.06 | 0.01 | 0.23 | 0.23 |

*Weekly data for Brent and WTI 1st month and 2nd month are unadjusted

Crude oil differentials had to adjust rapidly after the hurricanes to move oil to where it is most needed. The effects were evident in a widening of the WTI premium to dated Brent and reports of heavy discounting of heavy sour Mexican and Venezuelan crudes in mid-September. Many of the heavier crudes are effectively custom refined in the US Gulf and it is difficult to find alternative buyers without very heavy discounting. Similarly the region is also a key refiner of some heavier, sourer Middle Eastern crudes.

NYMEX Light Sweet crude futures moved into a modest backwardation for the first time since November. Backwardations are typically associated with tightening markets; however, this modest front month premium occurred amid a downtrend in prices. Prompt prices were bolstered by strong refiner demand for light sweet crude, opening the transatlantic arbitrage for Brent-related grades in the process. US crude stocks also fell sharply, particularly in Cushing, Oklahoma, the key NYMEX pricing centre.

Dated Brent came under pressure from lower European demand prompted by French industrial action and lower runs during maintenance. While there was theoretically an opportunity to move North Sea crudes to the US, logistical difficulties offloading VLCCs in the Gulf of Mexico deterred buyers.

Refiner buying lifted Urals crude differentials across Europe relative to dated Brent. Strong hydro-skimming refinery margins and purchases ahead of a seasonal slowdown in Russian crude exports contributed to narrowing differentials. A similar trend was seen in light sweet Es Sider crude in the Mediterranean. However, reports suggested that these differentials were attracting competing supplies from the Middle East, particularly Iranian Light. There were also reports of some heavily discounted Mexican crude being offered.

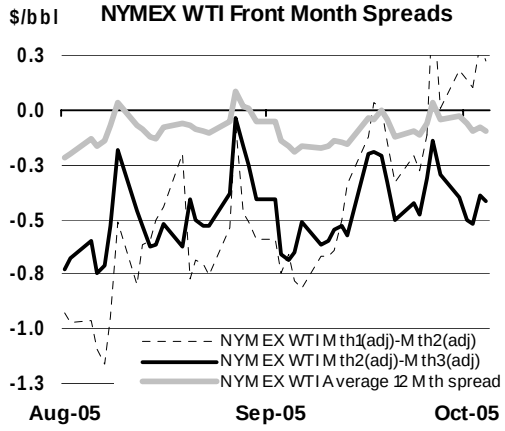
West African light sweet crudes remained at a strong premium to dated Brent as Asian buying interest improved. A weakening of fuel oil differentials, higher pre-winter kerosene output and increased refinery throughput all contributed to improved light sweet demand. Estimates put the volume of West African crude booked to move to Asia in November at 1.3 mb/d. This was roughly flat with October levels, but higher than the 1.0 mb/d seen in August.

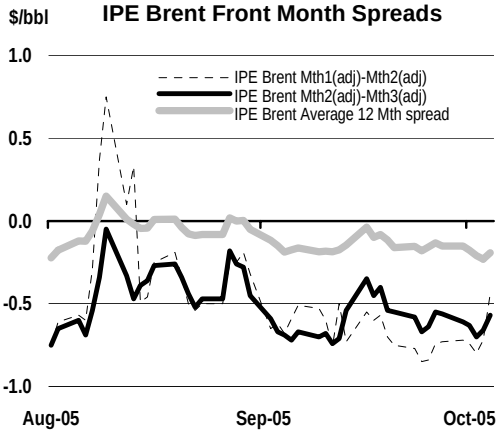
Indonesian Cinta crude saw a marked improvement in differentials relative to Tapis and Minas due to its high distillate content. In early October, traders noted regional Asian light sweet crudes had generally been fully allocated, lending further support to foreign crudes.

Dubai was largely isolated from the problems of unwanted heavy sour crudes from the Gulf of Mexico, trending higher against dated Brent in September. Prices were largely supported by Asian demand for distillates. Strong demand from Thailand for Oman crude saw its differential to dated Brent largely mirror the trend in Dubai.

### *Crude Futures*

NYMEX light sweet crude and IPE Brent forward price curves diverged as land-locked supplies of WTI tightened and logistical difficulties limited the movement of North Sea and West African crude to the US Gulf Coast. That Cushing crude stocks have fallen to the lowest level since November and front–second month NYMEX light sweet crude has moved into backwardation for the first time since November is no coincidence – this is the delivery point for the benchmark futures contract.




The inter-month contract spread can be seen as representing the relative tightness of supply, or the availability of storage in the region. Therefore as stocks fall, tightening nearby spreads reflect lower spot market availability.

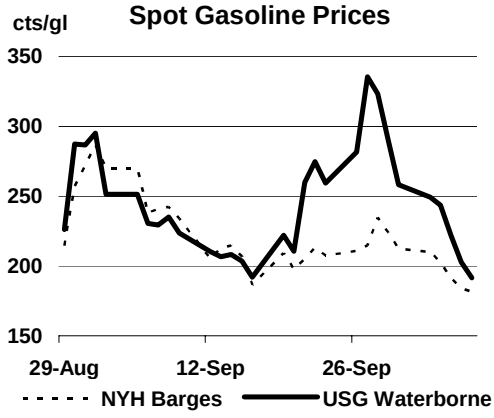
### *Delivered Crude Prices in July*

There was a marked increase in the price of the average barrel of crude oil imported into all IEA regions in July. Crude imported into the US and Canada cost $52.56/bbl in July, on average. This represented a $4.40/bbl increase on June prices. European IEA importing countries paid $4.36 more per barrel than in June, with import prices rising to $55.26/bbl in July. IEA Countries in the Pacific faced an average cost of $54.13/bbl of crude after a monthly increase of $3.75/bbl.

## Product Prices

### *Spot Product Prices*

The post-Katrina price spike in US gasoline prices was not fully mirrored after Rita, despite the second hurricane causing a far larger closure of refining capacity in the southern US states. Spot US Gulf Coast gasoline prices spiked to $3.35/gallon, but New York Harbour prices were less responsive rising to $2.24 /gallon.




Difficulties in moving product in and out of the Gulf Coast compounded the problems caused by the loss of regional production. These supply issues extended to the US Mid-Atlantic Coast, where product is delivered by pipeline from Louisiana and Texas refineries. Tanker lightering was also affected: the Gulf Coast refining hub is designed for crude rather than product imports.

High import volumes tempered prices in New York Harbour and lower demand further dampened the post-Rita gasoline market response. The duration of this demand reduction (and in particular how much of it is demand deferral), will prove a critical factor for future price movements.

The rapid decline in US gasoline prices in the first week of October, together with high freight rates, has reduced arbitrage opportunities. Product tanker costs from Northwest Europe to the US Atlantic Coast of $4.30/barrel contributed to the closed the arbitrage in early October.

European gasoline prices broadly followed US trends, with reduced flows to the US exacerbated by industrial action at French refineries and ports. Supplies were also bolstered by a reduction in MTBE prices that facilitated local blending. Strong demand however continued to be reported from the Eastern Mediterranean, the Middle East and Nigeria.

**Spot Product Prices**

(monthly and weekly averages, $/bbl)

| | Jul | Aug | Sep | Sep-Aug | | Week Commencing: | | | | | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | *Change* | % | 05 Sep | 12 Sep | 19 Sep | 26 Sep | 03 Oct | | | |
| **Rotterdam, Barges FOB** | | | | | | | | | | | **Differential to Brent** | | |
| Premium Unleaded | 69.56 | 77.00 | 84.30 | 7.31 | 9.49 | 87.40 | 77.91 | 81.65 | 84.44 | 78.69 | 11.98 | 12.88 | 21.40 |
| Unleaded | 68.09 | 75.71 | 82.69 | 6.98 | 9.22 | 85.81 | 76.18 | 80.07 | 82.75 | 76.67 | 10.51 | 11.59 | 19.78 |
| Naphtha | 51.51 | 58.16 | 62.91 | 4.75 | 8.17 | 61.78 | 60.57 | 64.22 | 64.15 | 60.38 | -6.07 | -5.96 | 0.00 |
| Jet/Kerosene | 74.22 | 79.99 | 84.01 | 4.02 | 5.02 | 84.30 | 79.41 | 83.35 | 86.46 | 83.81 | 16.64 | 15.88 | 21.10 |
| Gasoil .2% | 70.52 | 76.91 | 81.43 | 4.52 | 5.88 | 82.14 | 76.85 | 81.37 | 83.35 | 81.22 | 12.94 | 12.79 | 18.53 |
| LSFO 1% | 39.24 | 43.35 | 48.55 | 5.20 | 12.00 | 47.51 | 46.97 | 50.64 | 48.98 | 49.04 | -18.34 | -20.77 | -14.35 |
| HSFO 3.5% | 38.28 | 40.93 | 43.64 | 2.72 | 6.64 | 44.14 | 41.80 | 43.94 | 44.01 | 41.86 | -19.30 | -23.19 | -19.27 |
| **Mediterrean, FOB Cargoes** | | | | | | | | | | | **Differential to Urals** | | |
| Premium 50 ppm * | 65.21 | 74.56 | 78.93 | 4.38 | 5.87 | 80.38 | 71.07 | 76.88 | 81.67 | 77.45 | 10.19 | 15.95 | 20.56 |
| Naphtha | 50.45 | 57.92 | 61.59 | 3.67 | 6.33 | 60.53 | 59.02 | 62.82 | 62.71 | 58.61 | -4.57 | -0.69 | 3.21 |
| Jet/Kerosene | 72.17 | 78.86 | 82.33 | 3.47 | 4.40 | 82.58 | 77.37 | 81.51 | 85.30 | 82.51 | 17.15 | 20.25 | 23.95 |
| Gasoil .2% | 69.68 | 76.25 | 79.52 | 3.27 | 4.29 | 80.19 | 75.40 | 79.40 | 81.04 | 78.62 | 14.66 | 17.64 | 21.14 |
| LSFO 1% | 42.66 | 45.28 | 50.36 | 5.07 | 11.21 | 50.54 | 48.10 | 51.14 | 51.15 | 47.42 | -12.36 | -13.33 | -8.02 |
| HSFO 3.5% | 36.58 | 39.33 | 43.20 | 3.86 | 9.82 | 43.66 | 41.74 | 43.52 | 43.37 | 41.42 | -18.44 | -19.28 | -15.18 |
| **New York Harbour, Barges** | | | | | | | | | | | **Differential to WTI** | | |
| Super Unleaded | 78.78 | 92.33 | 102.55 | 10.23 | 11.08 | 110.90 | 98.20 | 92.33 | 99.66 | 92.44 | 20.10 | 27.37 | 37.04 |
| Unleaded | 66.78 | 80.18 | 90.13 | 9.95 | 12.41 | 90.14 | 81.18 | 84.59 | 91.84 | 81.76 | 8.10 | 15.22 | 24.61 |
| Jet/Kerosene | 70.53 | 79.63 | 91.36 | 11.73 | 14.73 | 87.65 | 83.32 | 91.06 | 99.67 | 98.37 | 11.85 | 14.68 | 25.85 |
| No. 2 (Heating Oil) | 68.65 | 75.57 | 82.34 | 6.78 | 8.97 | 80.57 | 76.21 | 82.97 | 86.74 | 82.59 | 9.97 | 10.61 | 16.83 |
| LSFO 1% | 42.38 | 45.72 | 50.86 | 5.14 | 11.25 | 49.72 | 48.35 | 52.28 | 52.55 | 47.62 | -16.30 | -19.24 | -14.65 |
| No. 6 3% | 36.59 | 37.81 | 43.52 | 5.72 | 15.12 | 43.47 | 42.13 | 42.90 | 45.63 | 45.28 | -22.09 | -27.15 | -21.99 |
| **Singapore, Cargoes** | | | | | | | | | | | **Differential to Dubai** | | |
| Premium Unleaded | 64.70 | 73.19 | 79.40 | 6.21 | 8.48 | 84.13 | 78.09 | 76.56 | 74.56 | 72.59 | 11.87 | 16.59 | 22.87 |
| Naphtha | 49.62 | 58.17 | 61.73 | 3.56 | 6.11 | 62.74 | 60.91 | 61.18 | 60.04 | 57.76 | -3.21 | 1.57 | 5.19 |
| Jet/Kerosene | 70.07 | 75.84 | 79.16 | 3.32 | 4.37 | 78.96 | 76.38 | 78.58 | 80.93 | 80.79 | 17.24 | 19.24 | 22.62 |
| Gasoil .5% | 69.35 | 70.66 | 75.45 | 4.79 | 6.78 | 75.48 | 72.87 | 75.52 | 76.71 | 76.08 | 16.52 | 14.06 | 18.91 |
| LSWR Cracked | 49.64 | 52.50 | 54.35 | 1.85 | 3.52 | 54.63 | 53.48 | 54.80 | 54.45 | 52.52 | -3.19 | -4.10 | -2.19 |
| HSFO 180 CST | 41.43 | 44.60 | 49.91 | 5.31 | 11.92 | 50.96 | 48.66 | 50.37 | 49.15 | 47.50 | -11.40 | -12.00 | -6.62 |
| HSFO 4% | 40.62 | 43.35 | 48.93 | 5.58 | 12.88 | 50.35 | 47.40 | 48.90 | 48.30 | 46.96 | -12.21 | -13.25 | -7.61 |

* From January 2005 Premium Unleaded 50 ppm

Singapore gasoline prices in early October remained relatively stable as lower Chinese exports offset lower imports from Indonesia. Chinese exports appear to have been curtailed by policy measures to improve local supplies, which have tightened recently due to poor refinery economics. Indonesian gasoline imports were scheduled to fall 1.5 mb in October and may remain weak following the recent sharp rise in retail prices.

Some gasoline shipments were seen from Japan to the US as part of its contribution to the IEA stock release. However, as in Europe, the theoretical arbitrage from Singapore to the US has been closed by high freight rates and a narrowing price differential.

Middle distillate prices took over from gasoline as the US market focus following the second storm. Domestic US supplies were reduced by capacity outages and a lack of desulphurisation facilities. While Russian and Indian gasoil supplies moved to the Atlantic and Gulf Coasts, there was competition from European heating oil demand and high freight rates.

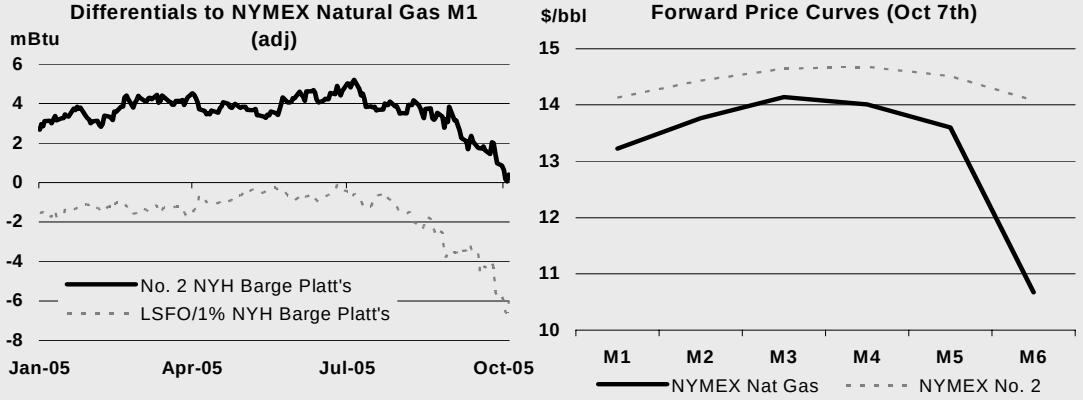
European gasoil demand improved as inland consumers started to refill heating oil tanks in August, and into early September. High US prices also diverted some Indian and Russian cargoes away from Europe and there were expectations that seasonal maintenance would lower FSU exports.

Stronger heating oil demand narrowed the diesel premium in mid-September to the lowest level this year. However, by end-September, there was a marked tightening of diesel differentials to IPE gasoil as traders eyed the Gonfreville refinery strike in France and demand picked up. Asian gasoil exports though are still flowing to Europe. These, together with additional supplies following the IEA action and postponed refinery maintenance, could help increase regional supplies.

*Natural Gas Prices Add Support to Heating Oil*

International natural gas prices rallied throughout September, lifted higher by a tightening of the US market. The increasing use of LNG has accelerated the convergence of spot international natural gas prices towards the US Henry Hub benchmark. A sharp jump in gas prices has lowered transportation costs as a percentage of the overall shipment value, facilitating inter-regional trade.

Perversely though, these high natural gas prices are contributing to positive refinery economics. High natural gas prices have increased demand for fuel oil from power generators, lifting fuel oil prices and contributing to the profitability of marginal refining capacity.




But there is a downside: much of the spare and flexible dual fuel power generation capacity in the US uses gasoil or diesel as an alternative input to natural gas. The recent rise in natural gas prices has reduced the usual spot premium of US heating oil prices to natural gas to virtually zero. This makes substitution possible and represents a potential source of demand that is difficult to fully-factor into our petroleum balances. A cold first half of the winter could therefore have a much more significant impact on heating oil demand than has previously been seen.

US jet/kerosene prices sustained a differential of over $12/bbl against Northwest European and Mediterranean values since the end of September. Refiner emphasis on gasoline production has eaten into the jet cut in recent weeks, compounding the reduction of jet output due to lower US throughputs. Tightening jet fuel supplies have prompted the Air Transport Association to step-up communications between airlines and the oil industry to ensure stable supplies.

Exceptionally wide price differentials between most major trading centres and the US are likely to lead to further imports from Europe over the next few weeks. Indian, Red Sea and Middle East Gulf cargoes have recently contributed to rising independent storage in the Amsterdam-Rotterdam-Antwerp region. But reports of up to 200,000 tonnes of jet/kerosene subsequently being booked to the US may also suggest recent arrivals into ARA could be exported. The wide US differential is also likely to attract cargoes previously destined for Europe.

US high and low sulphur fuel oil differentials moved in opposite directions in October. The shutdown of some Gulf Coast coking facilities means that proportionately more fuel oil is produced for each barrel of crude refined. However, the increased use of light sweet crude oil to maximise gasoline output has increased LSFO supplies, while reducing high sulphur availability. Overall supplies have also decreased. Since Hurricane Rita, US fuel oil production has declined by over 100 kb/d from early September levels. Weak differentials to natural gas also make it likely that more fuel oil will be used in power generation this winter.

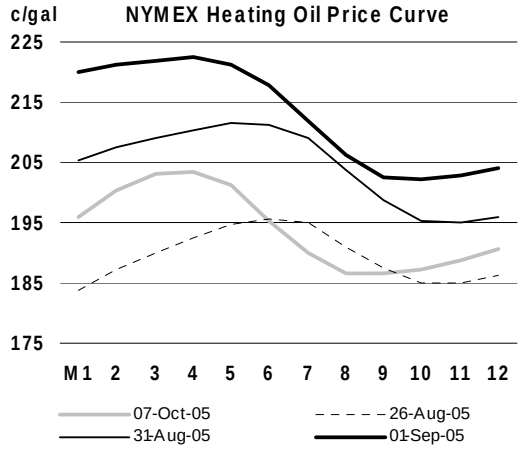
US high sulphur fuel oil prices at one point moved to near parity with the Asian market, which would have theoretically created a more attractive arbitrage for European traders. However, the US is a much smaller fuel oil consumer than Asia and the price differential largely reflected logistical difficulties that imported cargoes would have been unlikely to fix.

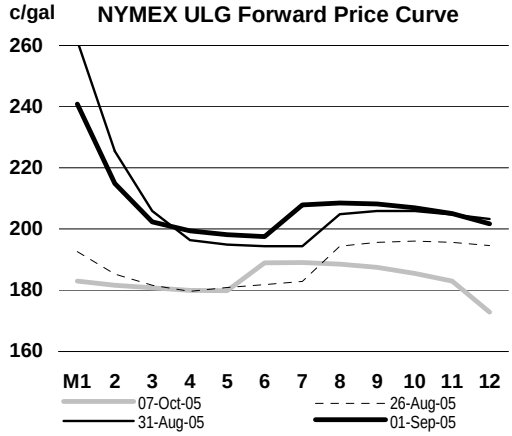
European fuel oil stocks are also in the stock-building phase of their export-led price cycle. This implies that price differentials will ultimately have to fall to move product to Asia. This would have a detrimental impact on marginal hydro-skimming margins, but might be offset to a degree by a seasonal demand increase for bunker fuel.

A sharp increase in Asian refinery throughput has increased the availability of high sulphur supplies for Chinese buyers. Lower demand has also been reported from Indonesia and Vietnam because of high prices. However, while Singapore low sulphur waxy residue differentials have weakened, there are reports that Tokyo Electric is looking to increase thermal power generation use by up to 40% if further nuclear shutdowns are seen.

### *Product Futures*

NYMEX gasoline futures have returned to a more normal seasonal forward curve as lower demand and record import levels of over 1.4 mb/d have started to rebalance the market. The need to build heating oil stocks ahead of the winter months meant that the forward structure of IPE gasoil and NYMEX heating oil prices never saw the same degree of price volatility as gasoline. However, the emphasis of US refiners and imports towards gasoline supplies has resulted in robust heating oil prices. As a result, the 60 cent/gallon premium of front month NYMEX gasoline to heating oil futures has now reversed to a 12-cent discount. That the forward discount is being maintained until April 2006 is a further indication of current market concerns over heating oil tightness this winter.




### *End-User Product Prices in September*

With global product supplies already stretched in the aftermath of hurricanes Katrina and Rita, it came as no surprise that substantial gains were seen in the average end-user prices of gasoline, diesel, heating oil and fuel oil in every OECD country surveyed in September.

Compared to August, US gasoline prices at the pump increased by 15.7% in September, reaching 75.1 cents per litre on average. Canadian gasoline rose by 12.3% in US dollar terms over the same period. On the same US dollar basis, retail gasoline prices for European consumers were up by 5% to 6% in France, Germany, Spain and the UK, with the British now paying the equivalent of $1.71 per litre. Percentage increases in Europe are lower because of a higher tax component in the final price. Japanese gasoline prices rose by a more modest 1.3%.

Gains in average diesel prices were more moderate in all countries surveyed, with a monthly increase of 11.9% hitting US consumers. While some end-user product price data was unavailable for the US, widespread gains were seen in average end-user prices for domestic heating oil in September, especially in France and Germany, where prices (in national currency terms) were up over 10 per cent from August. Low sulphur fuel oil prices also rose by around 10 percent in all countries surveyed.

## Freight

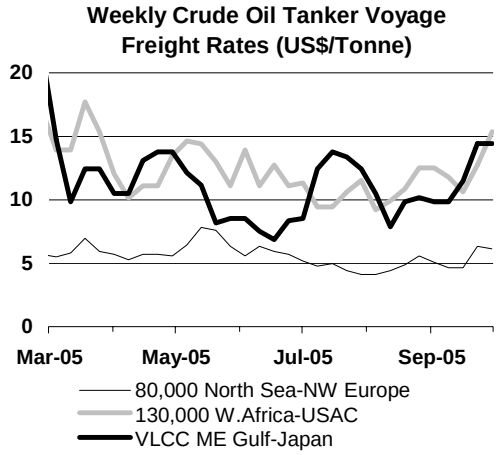
The immediate post-hurricane surge in clean product imports to the US, especially of gasoline and diesel, has drawn market attention towards potential capacities within the seaborne oil transportation sector. Underscoring tightness in clean tanker markets was a post-Katrina rise in freight rates from Europe to the US to W465 for the 37,000 tonne marker cargo from around W200 at the start of

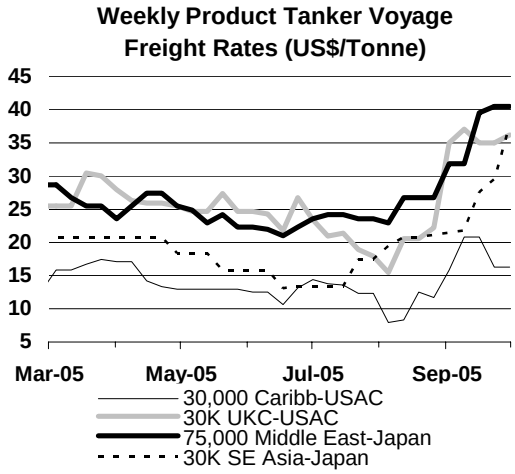
August. Rita added several Texan refineries to the list of potentially longer-term hurricane casualties and further reduced US clean product output. The prospect of a greater demand for product imports prompted clean tanker rates to rebound from W370 up to around the W450 mark in the first few days of October.

High freight rates have caused owners of vessels not normally involved with this type of trade (such as vessels normally carrying ore) to consider the additional cost of tank-cleaning. This highlights a further degree of flexibility in the freight market, but also a knock-on effect of tight clean product rates to a broader shipping market.

The tight Atlantic market also affects other regions. Brokers have reported increases in the number of vessels booked to carry gasoline or diesel to the US from other areas such as the Baltic and Asia. Furthermore, the drawing of Asian vessels towards better business in the West has left tanker capacity stretched in the East. Poor vessel availability often leads to high transportation costs and therefore generally higher costs of importing crude oil and products.

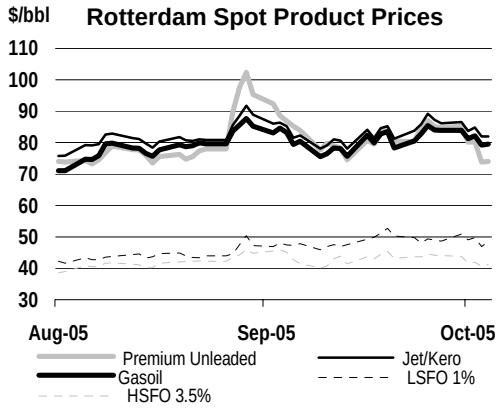
In the crude sector, seasonal increases in imports into Asia meant increased demand for VLCCs to the region. Accordingly, fixture rates for 2 million barrel cargoes from the Middle East to Japan rose from below W70 in early September to W110 in the first week of October. Strong demand for light, sweet crude, particularly in the US, has helped VLCC charter rates from West Africa to the US Gulf increase from W65 to W140 over the second half of September and into October. Larger vessels exporting some of this grade crude from Northern Europe have prompted similar increases in regional freight rates.

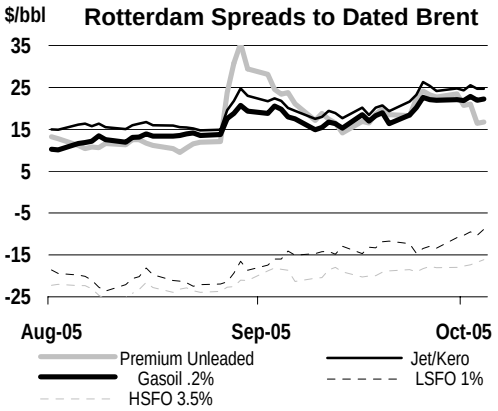


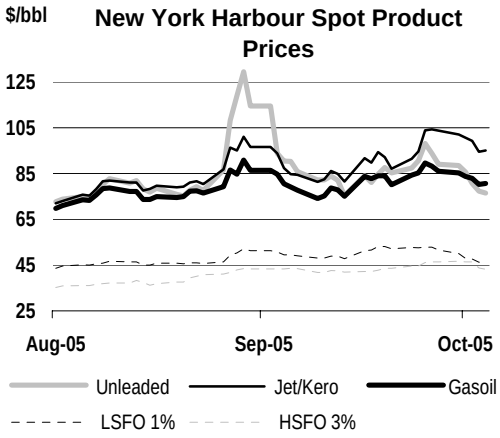



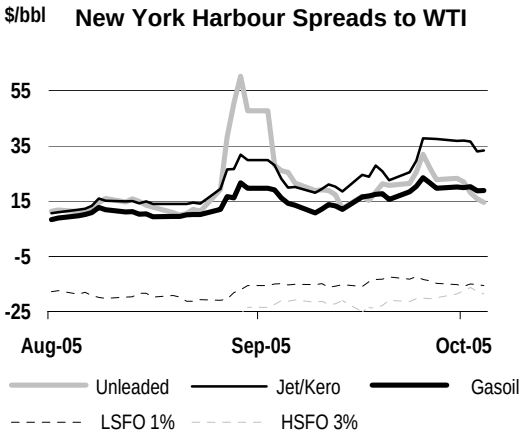

Some VLCCs travelling to the US have been left stranded offshore fully laden, due to hurricane-induced closures of certain import terminals. This has raised demand for smaller Suezmax vessels, which have been able to discharge oil in America. Consequently, Suezmaxes have been in great demand: charter rates for million-barrel cargoes from West Africa to US Gulf rose from W112.5 towards the W200 level in the three weeks running into early October. There are also reports that some larger vessels are reported to have been used for temporary off-shore storage of Mexican crude.

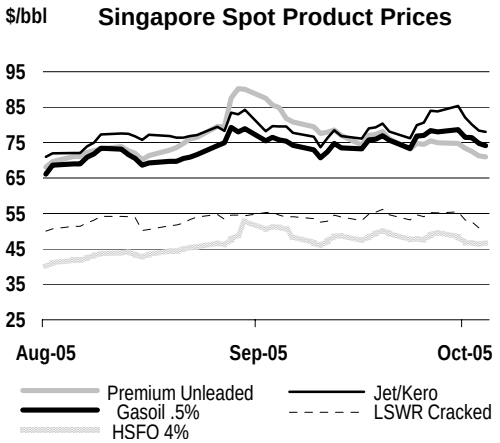
Elsewhere, French strikes and fog in the Bosporus have caused smaller transportation bottlenecks. These have generally affected ships of between 70,000 and 200,000 tonnes bringing oil into mainland Europe from, for example, North Africa or the Black Sea. In the Caribbean, the key tanker trade involves Aframax shipments of around 70,000 tonnes of crude or dirty oil products from Venezuela or Mexico to the US. These trades were initially affected by uncertainty surrounding post-hurricane US Gulf downstream logistics and scheduling but rates have now increased to over W260 for the 70,000 tonne cargo from levels of around W180 at the end of September.

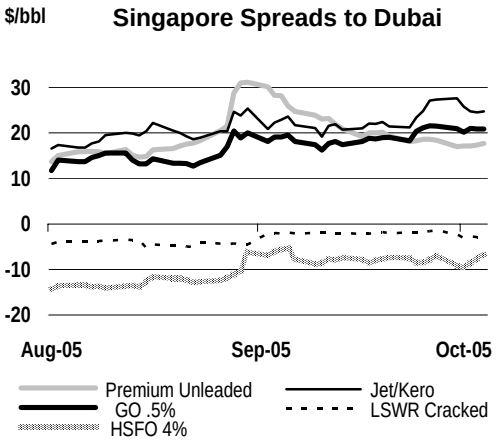

$/bbl
Rotterdam Spot Product Prices
110
100
90
80
70
60
50
40
30
Aug-05
Sep-05
Oct-05
Premium Unleaded
Jet/Kero
Gasoil
LSFO 1%
HSFO 3.5%


$/bbl
Rotterdam Spreads to Dated Brent
35
25
15
5
-5
-15
-25
Aug-05
Sep-05
Oct-05
Premium Unleaded
Jet/Kero
Gasoil .2%
LSFO 1%
HSFO 3.5%


$/bbl
New York Harbour Spot Product Prices
125
105
85
65
45
25
Aug-05
Sep-05
Oct-05
Unleaded
Jet/Kero
Gasoil
LSFO 1%
HSFO 3%


$/bbl
New York Harbour Spreads to WTI
55
35
15
-5
-25
Aug-05
Sep-05
Oct-05
Unleaded
Jet/Kero
Gasoil
LSFO 1%
HSFO 3%


$/bbl
Singapore Spot Product Prices
95
85
75
65
55
45
35
25
Aug-05
Sep-05
Oct-05
Premium Unleaded
Jet/Kero
Gasoil .5%
LSWR Cracked
HSFO 4%


$/bbl
Singapore Spreads to Dubai
30
20
10
0
-10
-20
Aug-05
Sep-05
Oct-05
Premium Unleaded
Jet/Kero
GO .5%
LSWR Cracked
HSFO 4%

# REFINERY ACTIVITY

## Summary

- **Full-cost refinery margins** reached record levels across much of the western hemisphere in September. Refinery outages caused by Hurricanes Katrina and Rita shut-in 5 mb/d at their peak, or 60% of Gulf Coast refining capacity. Unsurprisingly, Gulf Coast margins saw the strongest gains and in general, the closer the proximity to the Gulf Coast, the more pronounced the impact on margins has been. Hydro-skimming margins increased globally to encourage additional crude throughputs to offset product losses associated with shuttered capacity.

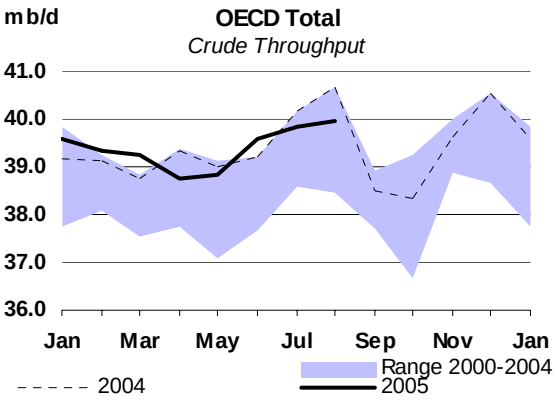
- **US Gulf Coast margins** in September were double, and in some cases triple, those achieved in August. Notionally, calculated Light Louisiana Sweet cracking margins were $19.07/bbl while Mars coking margins averaged $24.05/bbl. Gasoline prices drove margins higher initially and soaring jet fuel values further boosted margins towards month-end. Maya coking margins were the strongest ever seen, averaging $29.63/bbl and finishing September at $37.59/bbl.

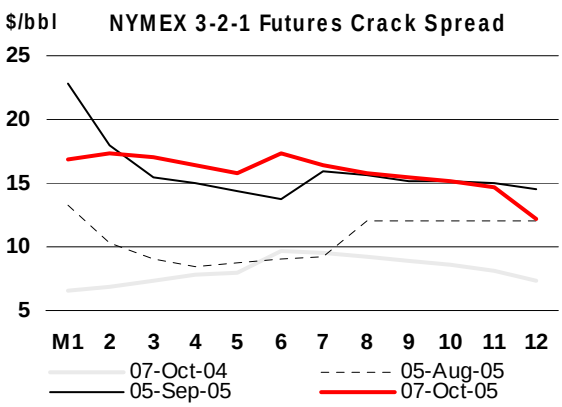
- **European margins** strengthened in line with those on the US Gulf Coast. Brent cracking margins reached record levels, more than doubling from August levels to average $10.82/bbl. Hydro-skimming margins turned positive for light sweet and medium sour crude grades in Northwest Europe and the Mediterranean, providing a financial incentive for additional crude throughput where possible.

- **Asian margins** rose, but the response was more muted than elsewhere. Dubai cracking margins in Singapore averaged $7.78/bbl, an increase of $4.60/bbl from August. Product prices failed to keep up with the increases in other refining centres, and relative prompt supply availability kept forward swap prices in contango.

- **OECD refinery throughputs** in August were broadly flat versus July. Higher throughputs in Europe and Asia Pacific were offset by weaker runs in North America. US refinery runs in September were on average reduced by about 2.2 mb/d as a result of precautionary shut-ins and damage from Hurricanes Katrina and Rita. Long-term outages at several large Gulf Coast refineries will depress US throughputs in the fourth quarter, partially offset by likely higher runs in Europe due to strong hydroskimming margins.

- **The 3-2-1 NYMEX crack spread** in the front-month fell back under $20/bbl by the end of the first week of October. Gasoline prices, that supported the crack above $25/bbl, spiked following each of the hurricanes. Market sentiment appeared driven by short-term concerns over gasoline demand reduction. Yet, the potential for a strong rebound in demand cannot be ruled out and projected capacity offline until year-end remains sizable. The heating oil crack consolidated above that of gasoline at the beginning of October, assuming its seasonal predominance over gasoline and encouraging heightened production ahead of winter.



## Refining Margins

Refining margins globally have seldom been as strong as they were in September. Average margins in the US and Europe were at record levels and Asian margins improved significantly though gains proved relatively modest in comparison. The regional differences were a function of proximity to, and product arbitrage opportunities with, the US. The US Gulf Coast, unsurprisingly, saw the strongest margins as the hurricane related disruptions at their peak shut down 4.9 million barrels of capacity, roughly equivalent to 60% of Gulf Coast capacity, and 29% of total US capacity.

US Gulf Coast refining margins on domestic grades peaked at record highs in September, driven by surging gasoline prices. Margins fell back towards pre-hurricane levels mid-month, before increasing again due to refinery and logistical disruptions from Hurricane Rita. Margins finished the month very strongly on the back of increasing jet prices and narrowing fuel oil discounts to crude.

Light Louisiana Sweet cracking margins averaged $19.07/bbl, almost triple the already strong margins achieved in August, ending the month at $30.93/bbl or near record highs. Early strength in gasoline prices was supplemented by strengthening jet fuel prices, the latter outperforming gasoline and distillate by month's end. US Gulf Coast LSFO prices also rallied against crude, narrowing their discount to LLS by $8.25/bbl to $10.35/bbl.

**Selected Refining Margins in Major Refining Centres**

($/bbl)

| | | Monthly Average | | | Change | Week Ending: | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Jul 05 | Aug 05 | Sep 05 | Sep 05-Aug 05 | 02 Sep | 09 Sep | 16 Sep | 23 Sep | 30 Sep |
| **NW Europe** | Brent (Cracking) | 4.74 | 4.28 | 10.82 | 6.54 | 13.84 | 9.93 | 6.86 | 8.88 | 12.99 |
| | Urals (Cracking) | 5.98 | 8.02 | 12.76 | 4.74 | 16.54 | 11.78 | 8.94 | 10.63 | 14.37 |
| | Brent (Hydroskimming) | -0.89 | -2.44 | 4.10 | 6.54 | 4.96 | 3.15 | 1.34 | 3.09 | 6.41 |
| | Urals (Hydroskimming) | -1.80 | -0.96 | 3.11 | 4.07 | 4.58 | 1.90 | 0.94 | 1.89 | 4.77 |
| **Mediterranean** | Es Sider (Cracking) | 4.97 | 7.10 | 11.75 | 4.64 | 14.71 | 10.60 | 8.28 | 10.31 | 12.65 |
| | Urals (Cracking) | 4.34 | 7.19 | 12.17 | 4.98 | 15.24 | 10.74 | 9.14 | 10.47 | 13.33 |
| | Es Sider (Hydroskimming) | -0.36 | 0.12 | 4.87 | 4.75 | 5.72 | 4.00 | 2.67 | 3.91 | 5.82 |
| | Urals (Hydroskimming) | -3.27 | -2.17 | 2.68 | 4.85 | 3.64 | 1.30 | 1.57 | 1.31 | 3.96 |
| **US Gulf Coast** | Brent (Cracking) | 0.23 | 3.89 | 17.73 | 13.85 | 17.38 | 10.50 | 3.20 | 19.50 | 27.57 |
| | LLS (Cracking) | 3.02 | 6.77 | 19.07 | 12.30 | 19.99 | 11.97 | 4.75 | 20.11 | 30.93 |
| | Mars (Cracking) | 0.05 | 3.98 | 12.95 | 8.97 | 13.88 | 8.35 | 0.01 | 15.31 | 21.07 |
| | Mars (Coking) | 6.49 | 12.55 | 24.05 | 11.50 | 25.52 | 17.69 | 7.10 | 26.12 | 34.98 |
| | Maya (Coking) | 11.57 | 18.40 | 29.63 | 11.23 | 31.93 | 23.82 | 12.92 | 31.52 | 37.59 |
| **US West Coast** | ANS (Cracking) | 4.22 | 6.22 | 12.21 | 5.99 | 15.23 | 8.86 | 8.52 | 11.96 | 15.01 |
| | Kern (Cracking) | 3.70 | 3.30 | 9.13 | 5.83 | 7.15 | 7.46 | 6.18 | 8.03 | 11.60 |
| | Oman (Cracking) | 4.33 | 8.54 | 14.07 | 5.53 | 16.17 | 10.06 | 8.56 | 12.64 | 17.11 |
| | Kern (Coking) | 18.45 | 20.52 | 25.32 | 4.80 | 28.27 | 21.38 | 18.44 | 22.13 | 26.90 |
| **Singapore** | Dubai (Hydroskimming) | -1.89 | -1.96 | 2.64 | 4.60 | 4.76 | 2.61 | 1.87 | 2.11 | 3.83 |
| | Tapis (Hydroskimming) | -2.32 | -5.40 | -1.95 | 3.45 | -0.99 | -2.37 | -2.86 | -2.07 | -0.85 |
| | Dubai (Hydrocracking) | 2.67 | 3.18 | 7.78 | 4.60 | 10.45 | 7.86 | 6.58 | 6.82 | 8.77 |
| | Tapis (Hydrocracking) | -0.26 | -3.05 | 0.99 | 4.05 | 2.79 | 0.57 | -0.21 | 0.65 | 2.15 |
| **China** | Cabinda (Hydroskimming) | -0.52 | -4.02 | 0.26 | 4.28 | -0.36 | 0.20 | 1.32 | 0.92 | 1.52 |
| | Daqing (Hydroskimming) | -1.52 | -2.52 | -0.68 | 1.84 | -2.23 | -0.90 | -0.80 | -0.67 | -0.28 |
| | Dubai (Hydroskimming) | -2.33 | -2.26 | 2.34 | 4.59 | 4.37 | 2.31 | 1.64 | 1.75 | 3.52 |
| | Daqing (Hydrocracking) | 1.64 | 1.93 | 4.87 | 2.95 | 5.28 | 4.91 | 4.32 | 4.16 | 4.74 |
| | Dubai (Hydrocracking) | 2.25 | 2.91 | 7.52 | 4.61 | 10.09 | 7.61 | 6.40 | 6.49 | 8.47 |

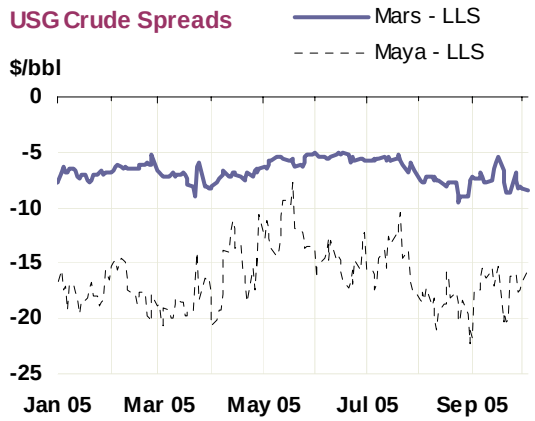
For the purposes of this Report, refining margins are calculated for various complexity configurations, each optimized for processing the specific crude in a specific refining centre on a 'full-cost' basis. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crudes for pricing purposes.

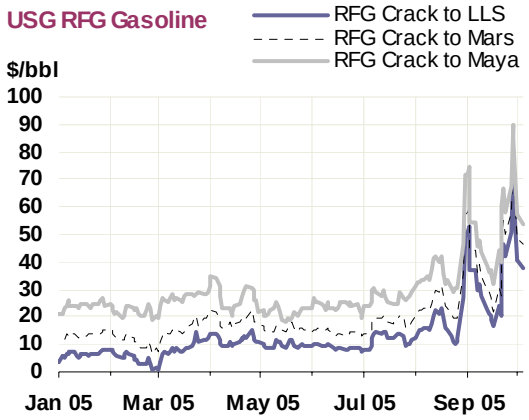
*The China refinery margin calculation represents a model based on spot product import/export parity, and does not reflect internal pricing regulations.
Sources: IEA, Purvin & Gertz Inc.

The temporary loss of coking capacity on the Gulf Coast depressed prices for foreign and domestic heavy sour crude grades, notionally boosting calculated margins. Maya cargoes being exported to Europe (or placed in floating storage) further supported reports of price discounting and those refineries still able to process Maya will have benefited from strength in gasoline prices. Maya coking margins averaged nearly $30/bbl in September and finished the month at $37.59/bbl, an all-time record level. A similar trend was seen in notional Mars coking and cracking margins, with a pick-up in HSFO prices lifting Mars cracking margins to $21/bbl by the end of September.

Gasoline cracks peaked on 27 September, some $68-90/bbl above crude values. They rapidly moderated towards $40/bbl, suggesting supply bottlenecks eased. Weekly EIA data points to higher imports of finished gasoline and components allowing refineries to increase supply through blending. Increased blending was aided by temporary specification waivers designed to alleviate production shortfalls.

The recent rise in jet fuel prices, left cracks between $55-71/bbl by end-September. The increase essentially reflects that output of this product tends to fall when cuts of gasoline or diesel are maximised. As well, additional jet supply can not be achieved through blending as production is typically a function of crude throughputs. Finally, Gulf Coast imports have essentially remained at zero.



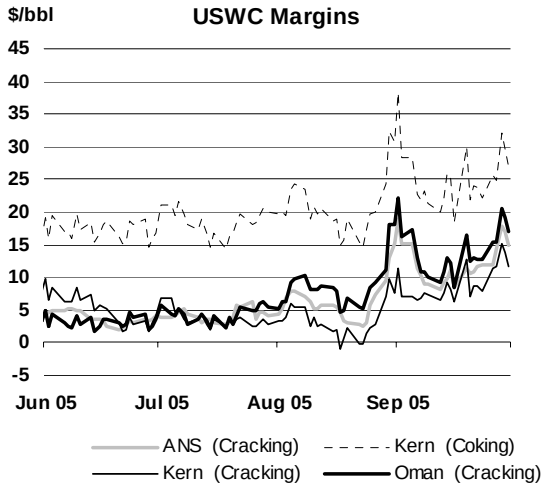

US West Coast margins, usually some of the highest in the world, continued to strengthen in September from August levels, but gains were overshadowed by the increases seen on the Gulf Coast. Margins on the West Coast were held back in part by a limited reaction of distillate cracks in comparison to those observed on the Gulf Coast. The isolated nature of the West Coast market and the design of its installed refinery base to meet its tight product specifications means that there is little room for product trade.

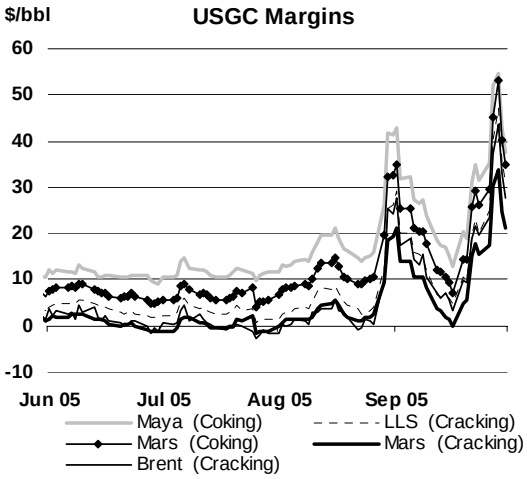
European margins improved for all refinery complexities running either sour or sweet crudes. In North West Europe and the Mediterranean cracking margins rose on the back of stronger gasoline cracks as arbitrage opportunities to the US East Coast pulled product from Europe. Brent cracking margins in Northwest Europe increased by $6.54/bbl to $10.82/bbl. Urals cracking margins also improved in Northwest Europe by $4.74/bbl to $12.76/bbl and in the Mediterranean by $4.98/bbl to $12.17/bbl. Urals margins were held back by the narrowing of Urals' discount to Brent over the month.

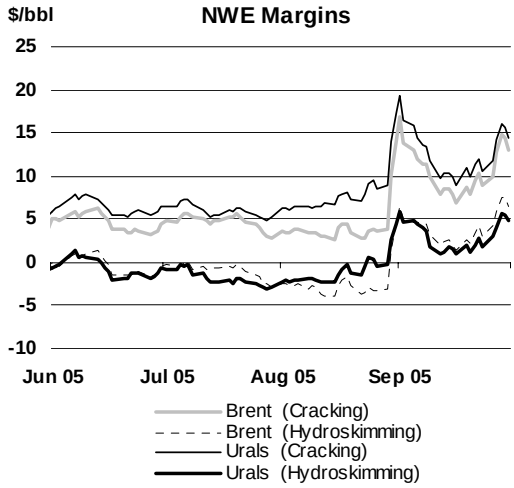
More importantly hydro-skimming margins across Europe were positive in September, for both light sweet and medium sour crudes. This provided an incentive for refiners to use spare capacity where possible. Brent hydro-skimming margins averaged $4.10/bbl, an increase of $6.54/bbl over August. Urals margins in Northwest Europe and the Mediterranean showed similar improvements, despite the crude crude's higher yield of fuel oil.

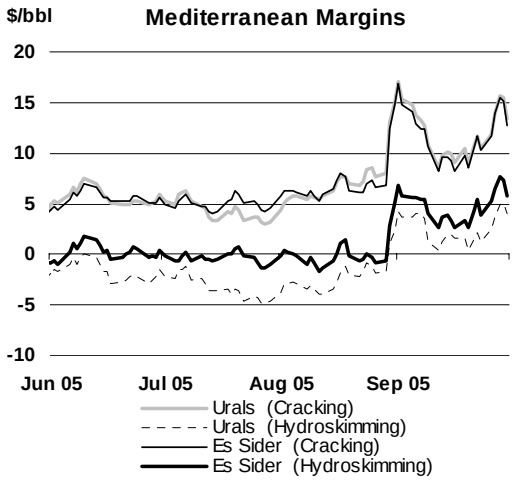
Asia Pacific margins improved sufficiently during September to support incremental refinery runs in the region, despite sluggish Japanese demand and forward swap prices remaining in contango. Individual product cracks responded in a similar fashion to those elsewhere, but thin LSWR prices limited the overall gains to refiners.

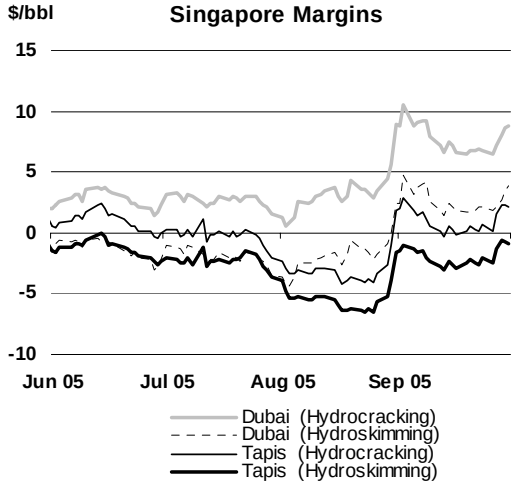
# Regional Full-Cost Refining Margins

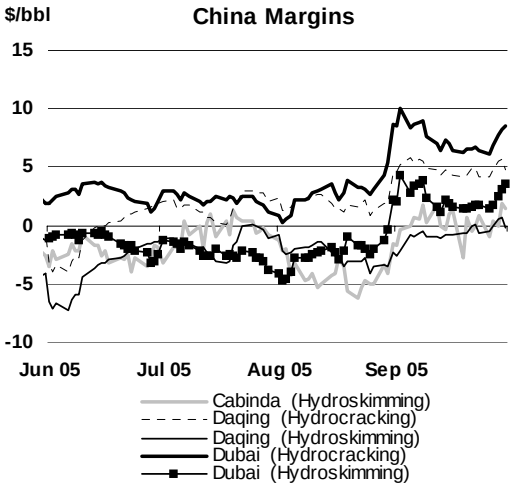


## Refinery Throughput

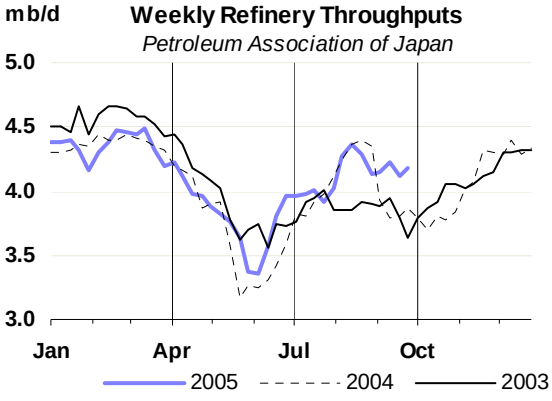
OECD refinery throughputs in August averaged about 40 mb/d, broadly in line with July. This represents an increase of 124 kb/d, or 0.3%. Higher throughputs in Europe (+264 kb/d) and Asia Pacific (+210 kb/d) were offset by weaker runs in North America (-350 kb/d). Lower North American throughputs are largely due to lower runs in the United States, down 274 kb/d, in addition to Canada's throughputs falling 81 kb/d. The fall in US throughput was due to precautionary shutdowns in addition to damage suffered by Gulf Coast refineries from Hurricane Katrina which made landfall on 29 August. This impact alone would imply an average monthly loss of 300-350 kb/d, in excess of the recorded US month-on-month decline of 274 kb/d.

**Refinery Crude Throughput and Utilisation in OECD Countries**

| | million barrels per day | | | | | | *Change from* | *Aug 04* | Utilisation rate[2] | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mar 05 | Apr 05 | May 05 | Jun 05 | Jul 05 | Aug 05 | mb/d | % | Aug 05 | Aug 04 |
| **OECD North America** | | | | | | | | | | |
| US[3] | 15.14 | 15.49 | 15.89 | 16.40 | 15.91 | 15.63 | -0.51 | -3.2 | 91.68 | 95.58 |
| Canada | 1.86 | 1.64 | 1.58 | 1.84 | 1.87 | 1.79 | -0.03 | -1.8 | 88.83 | 91.75 |
| Mexico | 1.32 | 1.33 | 1.27 | 1.27 | 1.23 | 1.24 | -0.03 | -2.0 | 73.64 | 71.96 |
| Total | 18.32 | 18.45 | 18.75 | 19.52 | 19.01 | 18.66 | -0.57 | -3.0 | 89.94 | 93.54 |
| **OECD Europe** | | | | | | | | | | |
| France | 1.84 | 1.79 | 1.56 | 1.62 | 1.76 | 1.78 | 0.01 | 0.3 | 91.31 | 91.04 |
| Germany | 2.35 | 2.22 | 2.33 | 2.30 | 2.30 | 2.42 | 0.06 | 2.6 | 98.79 | 96.33 |
| Italy | 1.71 | 1.89 | 1.95 | 1.90 | 1.93 | 1.91 | -0.04 | -1.8 | 82.46 | 84.28 |
| Netherlands | 0.98 | 1.12 | 1.13 | 1.09 | 0.95 | 1.02 | -0.06 | -5.2 | 83.43 | 88.39 |
| Spain | 1.09 | 1.19 | 1.18 | 1.11 | 1.26 | 1.20 | -0.03 | -2.7 | 94.03 | 96.63 |
| UK | 1.64 | 1.58 | 1.62 | 1.59 | 1.75 | 1.69 | -0.04 | -2.2 | 92.59 | 95.12 |
| Other OECD Europe | 3.89 | 3.58 | 3.76 | 3.93 | 3.98 | 4.15 | 0.01 | 0.2 | 88.74 | 88.52 |
| Total | 13.50 | 13.37 | 13.54 | 13.54 | 13.91 | 14.17 | -0.09 | -0.6 | 90.16 | 90.84 |
| **OECD Pacific** | | | | | | | | | | |
| Japan | 4.24 | 3.96 | 3.58 | 3.69 | 3.96 | 4.29 | 0.05 | 1.2 | 91.15 | 90.16 |
| Korea | 2.46 | 2.24 | 2.33 | 2.12 | 2.25 | 2.16 | -0.02 | -1.0 | 83.89 | 85.81 |
| Other OECD Pacific | 0.72 | 0.74 | 0.66 | 0.72 | 0.70 | 0.67 | -0.07 | -10.0 | 77.99 | 86.59 |
| Total | 7.42 | 6.94 | 6.57 | 6.53 | 6.91 | 7.12 | -0.05 | -0.6 | 87.46 | 88.42 |
| **OECD Total** | 39.24 | 38.76 | 38.85 | 39.59 | 39.83 | 39.96 | -0.70 | -1.7 | 89.57 | 91.65 |

1 Estimate
2 Based on crude throughput and current operable refining capacity
3 US50

Disruption to September US refinery runs peaked at around 5 mb/d and reduced runs on average by around 2.2 mb/d as a result of hurricane damage and precautionary shut-ins. Long-term outages at several large Gulf Coast refineries will continue to depress US throughputs through the fourth quarter. Offline capacity peaked in excess of 3.5 mb/d in early October but this is expected to decline to under 1.0 mb/d by December.




As highlighted above, the strong margin environment is conducive to higher utilisation of crude distillation capacity in spite of constraints in conversion and upgrading capacity. Indicative of this course of development is a number of announcements by companies that non-essential refinery maintenance is being deferred into next year, where possible. However, the mandated specification changes for US products on 1 June next year may limit refiners' flexibility in this respect.

Weekly data in Japan show refiners operating above seasonal trends into early October. Runs in Japan generally observe a dip in the late September early October period before increasing steadily through to the end of the year. Japanese refineries held throughputs firm in order to replenish stocks of kerosene (used as a heating fuel) ahead of peak winter demand.

## Post Hurricane Katrina and Rita US Product Output Loss: An Evaluation

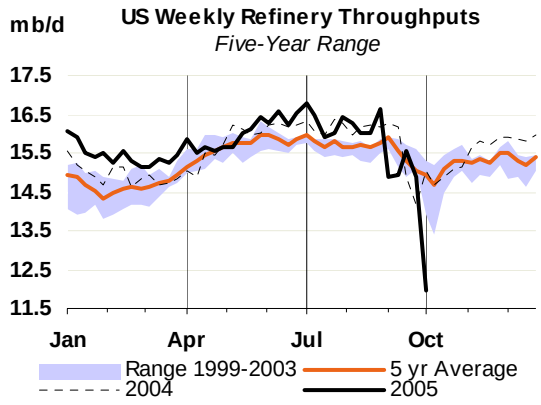
As of October 7, about 20% of US refining capacity was offline or in the process of re-starting as a result of damage caused by Hurricanes Katrina and Rita. Of this total, Rita accounted for around 15% of capacity while Katrina's impact was around 5%. Initial estimates for capacity offline due to Katrina through December were initially pegged at 889 kb/d. This amount is expected to be lower with two out of the four severely impacted refineries anticipated to re-start in mid-October and in November. Some 16 refineries suspended operations ahead of Hurricane Rita and at the time of writing, it appears that half of these refineries had experienced relatively minor damage. Most are expected to normalise operations by the end of October but a schedule for re-start for the remainder of the facilities remains, to-date, uncertain.

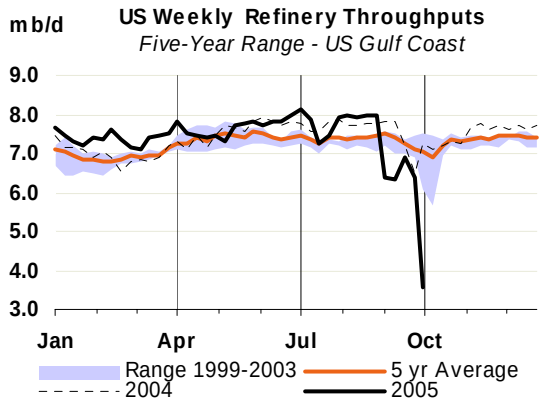
**Refineries and Refinery Crude Distillation Capacity Impacted by Hurricanes**

| Hurricane Rita | | Hurricane Katrina | |
|---|---|---|---|
| **Refinery** | **Capacity** | **Refinery** | **Capacity** |
| BP *Texas City* | 437 kb/d | Exxon *Chalmette* | 190 kb/d |
| Calcasieu *Lake Charles* | 32 kb/d | ConocoPhillips *Belle Chasse* | 247 kb/d |
| Citgo *Westlake* | 316 kb/d | Murphy *Meraux* | 120 kb/d |
| ConocoPhillips *Sweeny* | 229 kb/d | Chevron *Pascagoula* | 325 kb/d |
| ConocoPhillips *Lake Charles* | 250 kb/d | | |
| Astra *Pasadena* | 100 kb/d | | |
| Exxon *Baytown* | 557 kb/d | | |
| Exxon *Beaumont* | 349 kb/d | | |
| Lyondell-Citgo *Houston* | 270 kb/d | | |
| Marathon *Texas City* | 72 kb/d | | |
| Motiva *Port Arthur* | 285 kb/d | | |
| Shell *Deer Park* | 334 kb/d | | |
| Total *Port Arthur* | 234 kb/d | | |
| Valero *Port Arthur* | 255 kb/d | | |
| Valero *Texas City* | 210 kb/d | | |
| Valero *Houston* | 83 kb/d | | |

A prolonged outage of a significant portion of the US refining system follows a pre-existing tight situation in terms of capacity. The outages also come ahead of peak winter demand in the fourth quarter and first quarter of 2006. Per se, despite prompt crude availability with current inventories or incremental supplies, the ensuing product shortage will be difficult to offset.

The loss of refinery capacity is likely to lead to, in addition to a decline in gasoline stocks, to a reduction of distillate inventories. The absence of a normal seasonal build in heating oil inventories, in particular, is of concern should the winter season prove colder than average. This tightening of products could spill into next year as the postponement of some autumn refinery maintenance will inevitably lead to a heavier maintenance schedule in 2006. Scheduled work cannot be postponed indefinitely, more so if mandated changes in sulphur specifications, scheduled for June 2006, are maintained.



The charts on the following page show the potential product supply loss (the red line in the charts) associated with refinery outages due to Hurricanes Katrina and Rita. They also show sources of potential offset through increased refinery runs elsewhere in the OECD (the top columns in the charts) and a reduction in US product demand (the bottom columns in the charts). In the scenario shown, the cumulative loss of US product supply by the end of December can potentially reach 163 mb. Half of the amount is in motor gasoline alone. Lost gasoline output by year-end can reach up to 80 mb, markedly higher than that for gasoil/diesel (43 mb) and kerosene (16 mb). Heavy losses of gasoline output reflect the yield structure of the US refining system, which is geared to meet gasoline demand, the greatest component of US oil product consumption.

The profile of lost US output shown here represents an average value for the US Gulf Coast. It also assumes increased runs in the neighbouring areas of the Mid-continent and Atlantic Coast. As such, it tries to capture an element of domestic offset. A stronger refining margin environment should lead to higher runs and reduced product deliveries via pipelines in those regions. This in turn would allow for more product to remain on the Gulf Coast. At the same time, a provision is made for identified scheduled imports at the end of August early September into the US over and above year-ago levels. Estimating a product profile ultimately rests on some fundamental tenets. Product loss or incremental product output is highly dependent on:

- the duration of the outages (as indicated earlier, for which a degree of uncertainty remains)
- the utilisation rate of available capacity
- the assumed refinery yields in the regions involved for each of the months considered
- transportation logistics (that can limit the actual amounts delivered and which are not covered here).

The product loss or gain profiles shown are obtained as the difference between expected refinery output in the case of a no-hurricane case (including scheduled maintenance where known), with that which is expected through December (assuming maintenance is postponed until next year).

Results shown in the charts below are based on implicit refinery yields (the ratio of refinery product output over crude inputs). The use of these yields, however, has clear limitations. They represent average values that capture a wide range of refinery configuration and as such, do not necessarily adequately cover refinery specifics. A case in point can be illustrated with 'coking units' commonly found on the Gulf Coast. Refineries with these units produce a higher volume of gasoline than implied by implicit yields alone. Secondly, implicit yields reflect the quality of the crude used as feedstock. While refineries may receive base load amounts of various crudes of differing quality, grades delivered going forward may not necessarily possess the same qualities. Finally, increased product supply does not make a provision for additional supply through blending. In the case of gasoline, refiners can make additional volumes of motor fuel by mixing their finished stocks with imported components from abroad for which some specifications restrictions have been relaxed in the wake of the hurricanes.

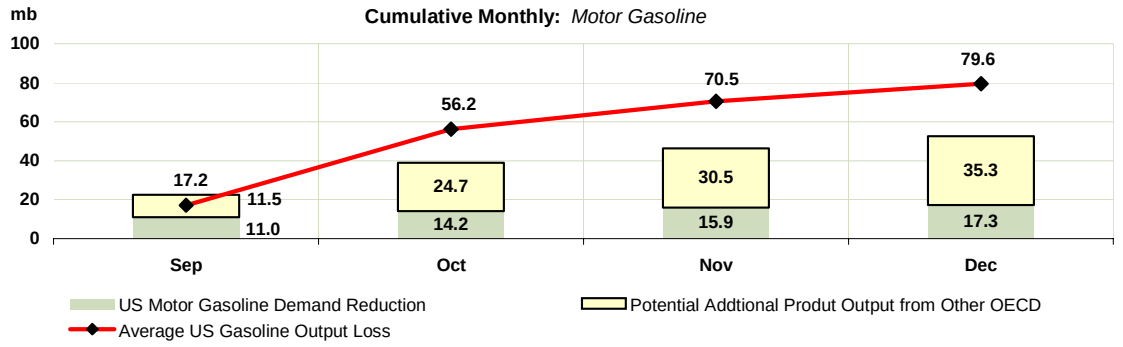
On a gross basis, the potential product volumes lost in the US are large. They can be somewhat mitigated when viewed against hurricane-related reductions in US demand as well as some flexibility in the refining system in other OECD Member countries. However, even under the very optimistic assumptions shown here, reduced demand and increased refinery output elsewhere in the OECD does not fully offset total product loss and falls short of making up for lost gasoline output.

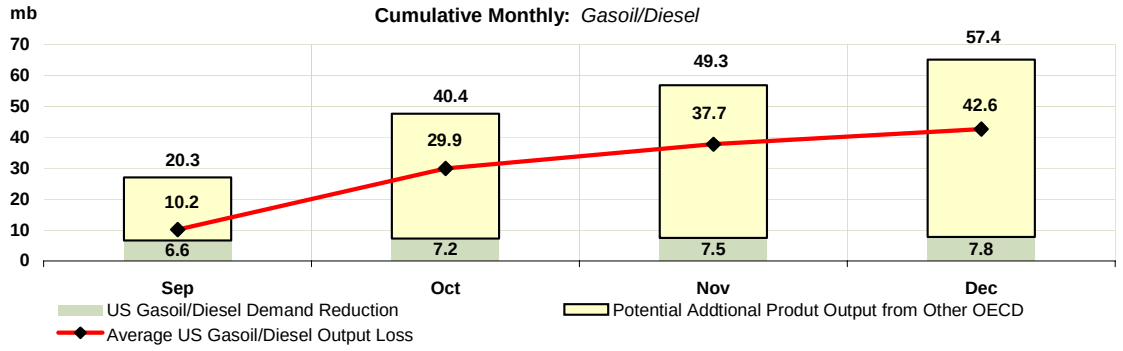
The cumulative reduction in US product demand is estimated at 30 mb by the end of December. Gasoline represents the largest component of that reduction with 17 mb. The total offset from reduced demand is potentially higher when viewed on a world basis in light of associated losses in other regions due to higher product prices. Nevertheless, the reduction in US demand may prove only temporary as deliveries rebound with a normalisation of driving conditions and continued relief and repair operations.

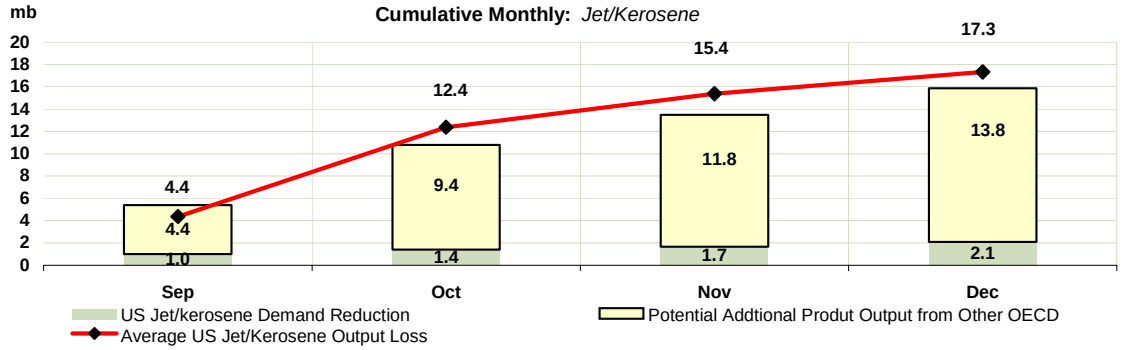
Higher refinery runs in Canada, Mexico, Europe, Japan and Korea can potentially add an extra 156 mb of product supply by December, but strong assumptions are required for this to happen. In particular, there has to be sufficient light sweet crude, sustained high margins and no unscheduled outages. Individual countries have attained levels of runs assumed in this scenario but only in short bursts. These levels have never been achieved simultaneously in all countries, nor sustained for three months. On a product basis, offsets in US distillate loss are realised at an early stage, while increases in gasoline output fall short of the loss envisaged in the US. This reflects the contrast between Europe's and the Pacific refinery configuration compared to the US, as product demand in the former regions is more heavily skewed toward diesel and gasoil rather than gasoline.

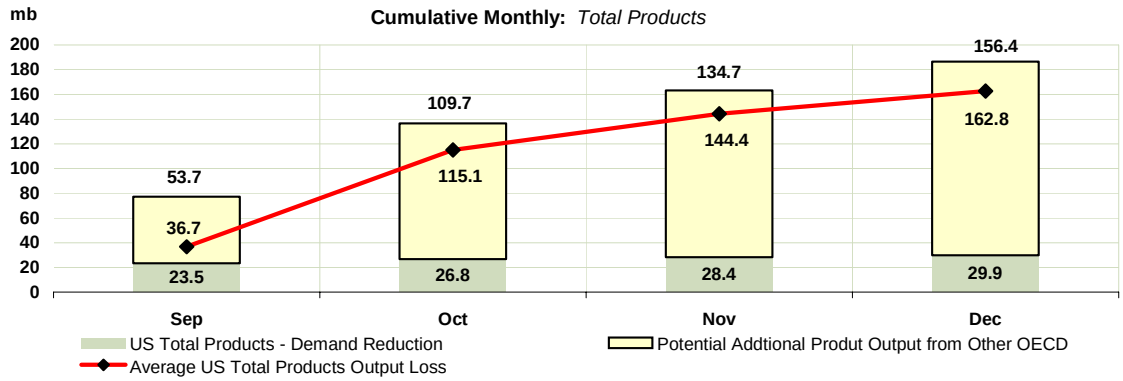
## US Cumulative Monthly Product Loss Profile

**Product Supply Loss Vs US Demand Reduction & Increased Other OECD Product Supply[1]**



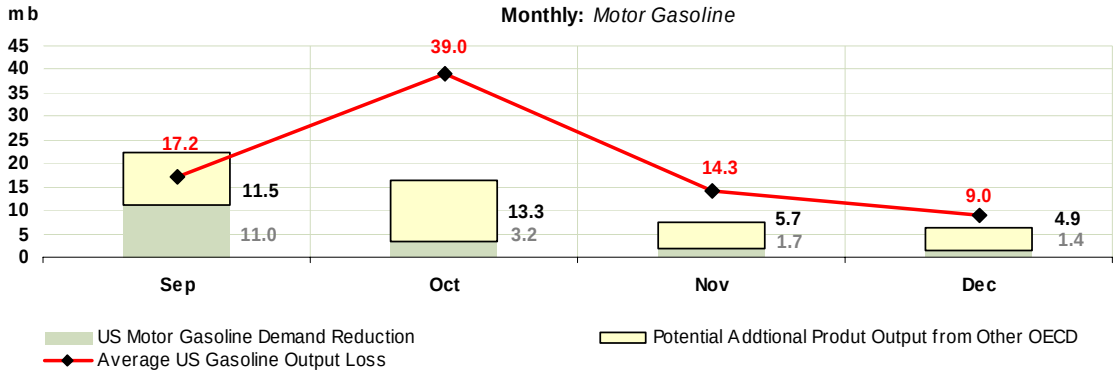



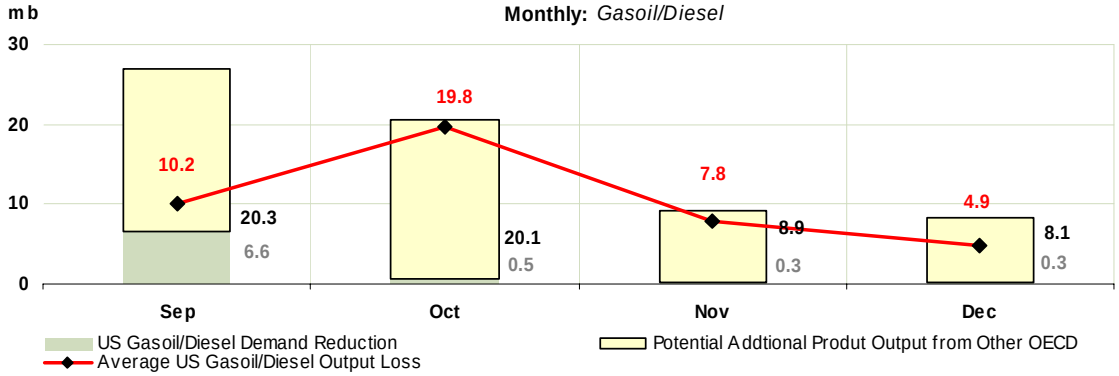



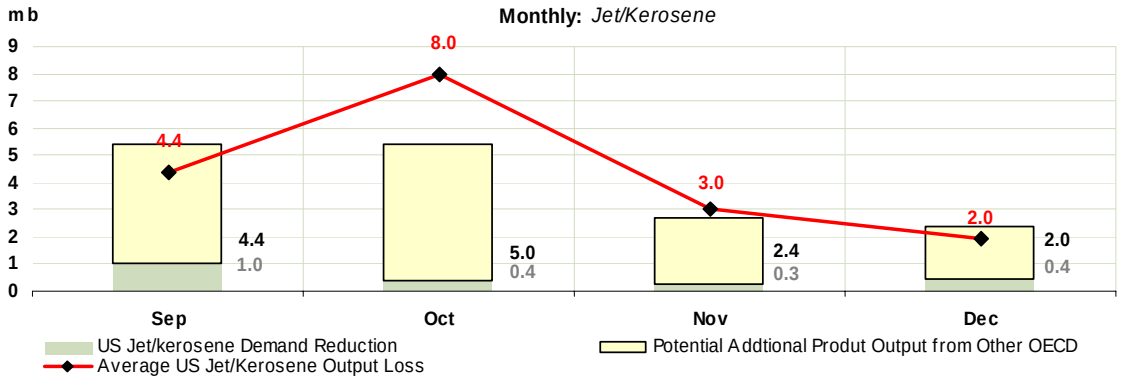

1. **Output profile contingent on yield configuration, offline cdu capacity, average utilisation of online CDU capacity**

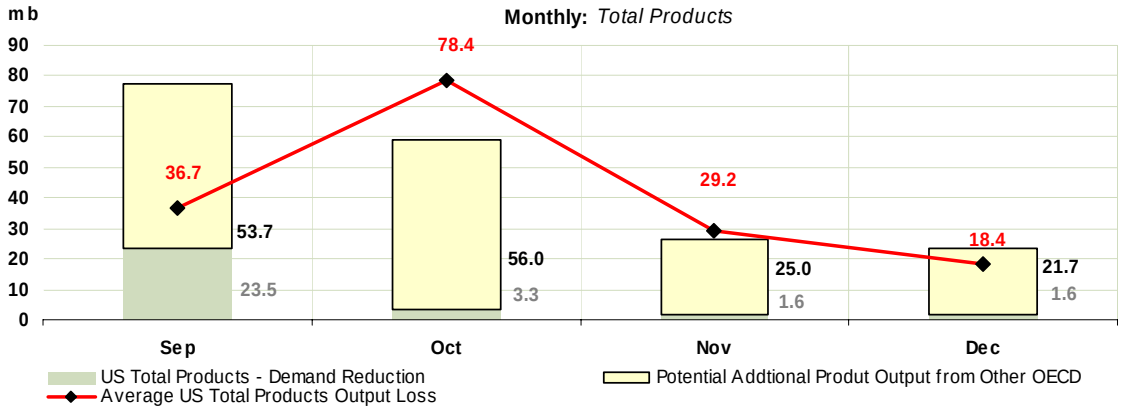
## US Monthly Product Loss Profile

**Product Supply Loss Vs US Demand Reduction & Increased Other OECD Product Supply[1]**



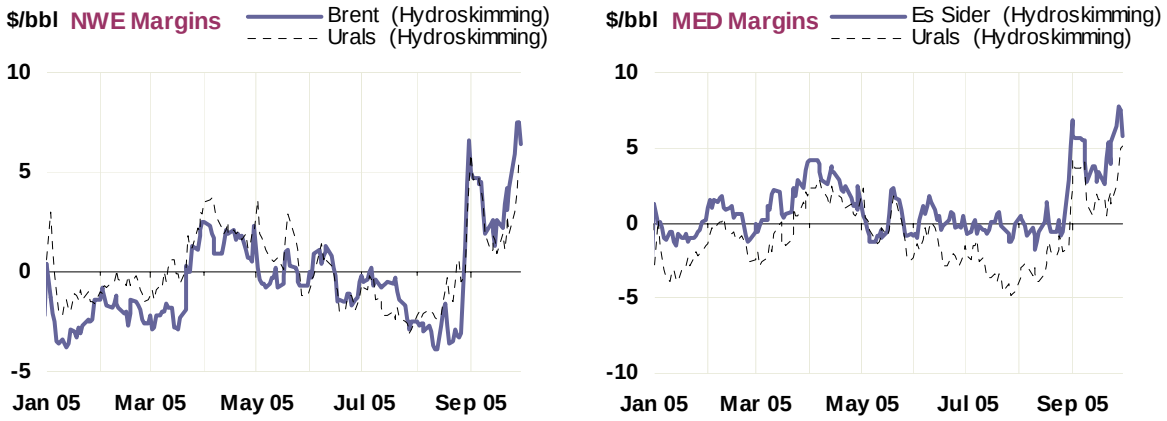




1. **Output profile contingent on yield configuration, offline cdu capacity, average utilisation of online CDU capacity**

Underlying the offsets through increased refinery activity, be it in the US or elsewhere in the OECD, is the assumption that refining margins will remain strong throughout the period considered. It is important to emphasise however, that high and sustained hydro-skimming or simple margins are required to prompt incremental use of spare crude distillation capacity. The immediate effect of the hurricanes, as discussed earlier, was to induce a sharp rise in light product prices, outpacing gains seen in crude and cause crack spreads to widen. The strength of products has been sufficient to lift hydro-skimming margins in the Atlantic Basin back into positive territory in September after several months of poor or negative returns. These margins appear to be sufficiently high to reward incremental crude runs, providing the incentive to sustain runs at higher levels where possible.

The market for now, continues to signal the need for additional product supply from marginal producers and a prolonged loss of product output in the US will be supportive of higher imports. This in turn is expected to support product prices globally. As such, hydro-skimming margins and cracking margins are likely to be sustained in the near term and extra product supplies can be expected from within the OECD.




One important caveat however, remains the level and duration of reduced demand in the US. In the near term, some downward pressure on product prices may come as US supplies improve, only to diminish or revert at a latter stage as demand rebounds. However, the depressing impact of higher prices on demand, be it in the US or in the rest of the world, from a broad macroeconomic viewpoint remains an uncertainty. As such margin dynamics also become uncertain. As product supply grows, potentially depressing prices, and crude demand increases, margins could be squeezed, particularly if product demand were to show signs of weakness. Under such a scenario, the post-hurricane utilisation rates assumed here may be overstated and additional product supplies lower.

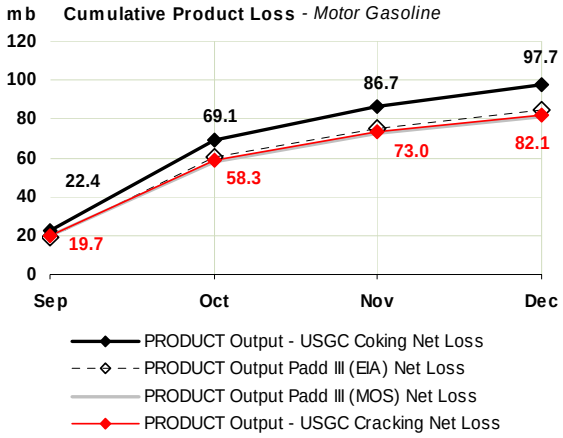
Finally, the charts below provide alternative scenarios for product loss in the US and incremental product supply in Europe in an effort to illustrate the sensitivity of results for different types of refinery yields. For the US, alternative loss scenarios are shown using implicit yields derived from weekly DOE/EIA and IEA monthly oil data (MOS) alongside average yields for a coking and cracking refinery on the Gulf Coast. Similarly, in Europe, IEA (MOS) implicit yields are compared to average yields for simple refining for light sweet and medium sour crudes.

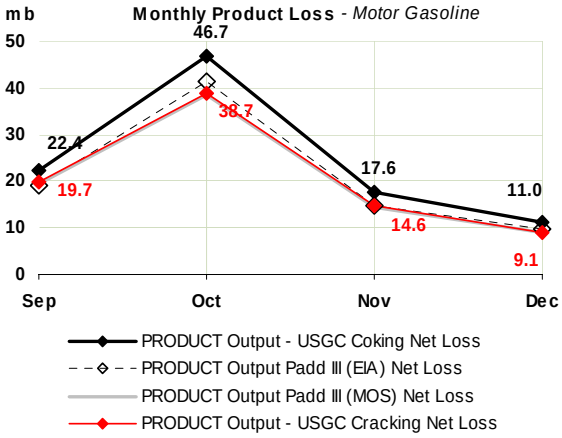
Total product loss can easily become sensitive to the dynamics of individual components. A case in point, as mentioned earlier, comes in gasoline production. Gasoline output loss under an average coking configuration can reach a cumulative 98 mb by end-December as compared to 80 mb under an implicit yields case. In Europe, extra gasoline output by end-December under implicit MOS yields can theoretically reach 23 mb, much beyond the 17 mb produced by a simple refinery using light sweet Brent in Northwest Europe or the 10 mb derived from medium sour Urals in the same region.

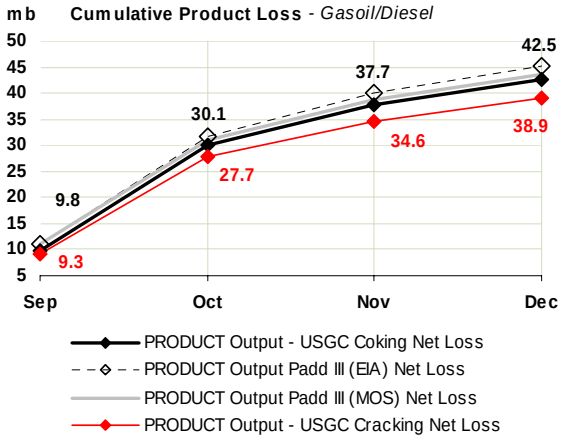
In this connection, irrespective of demand dynamics, with additional runs limited mostly to crude distillation units, the increases of product output elsewhere in the OECD may in the end fail to materialise in full. As such, attaining the gasoline and middle distillate yields assumed in the calculations could prove to be beyond the limits of current marginal capacity. *While market forces are strong, there is a significant risk to assuming that all product shown here will be made available.*

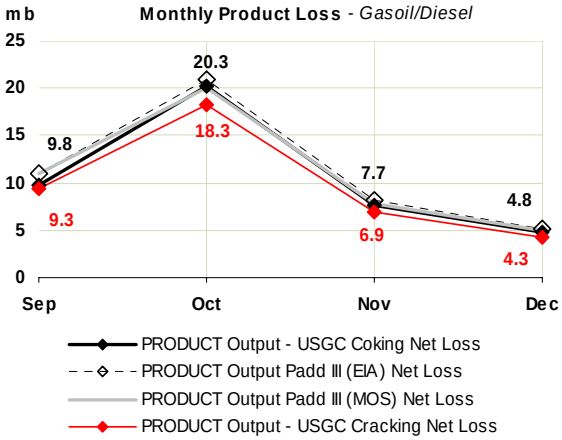
## US Product Profile: Monthly Product Loss Vs Refinery Configuration[1]

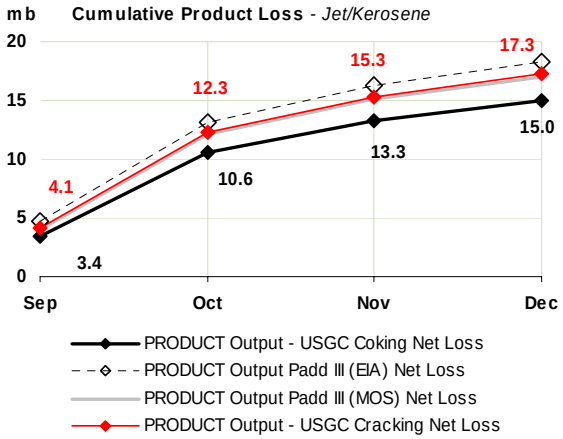
**Pontential Product Loss Profiles Post Hurricanes**

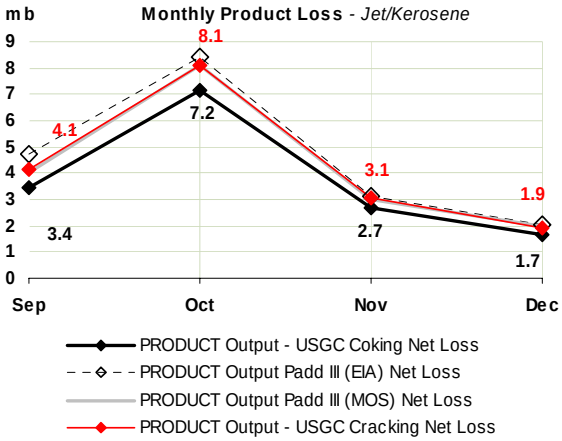


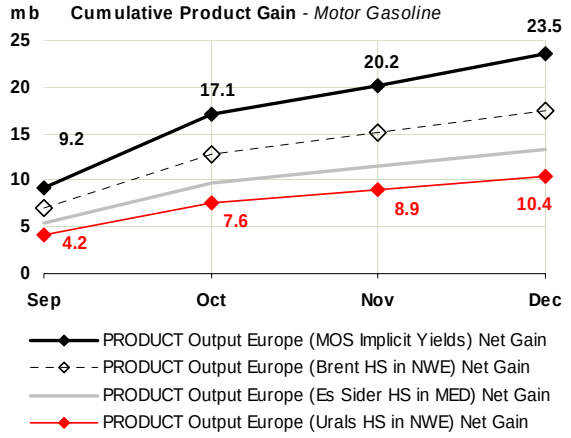



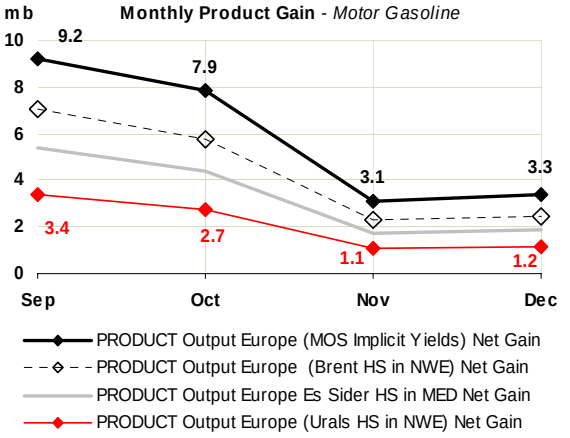



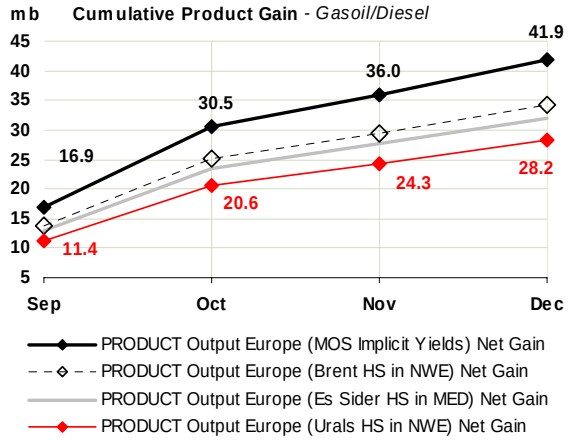

1. **Output profile contingent on yield configuration, offline cdu capacity, average utilisation of online cdu capacity**

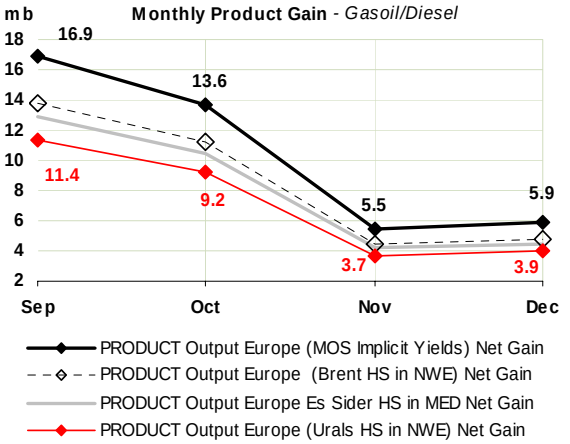
## Europe Cumulative Monthly Product Profile: Incremental Output Vs Refinery Configuration[1]

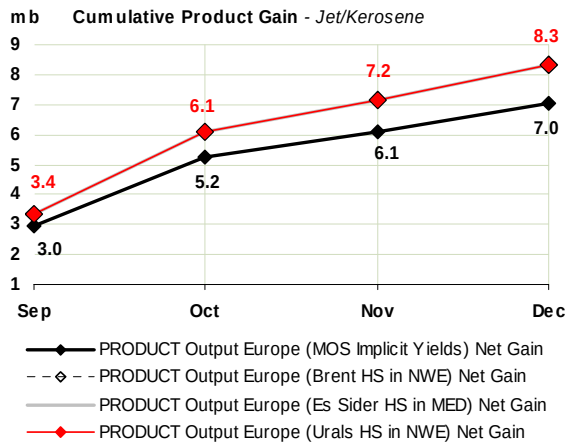
**Pontential Product Ouput Gain on Increased Refinery Runs**

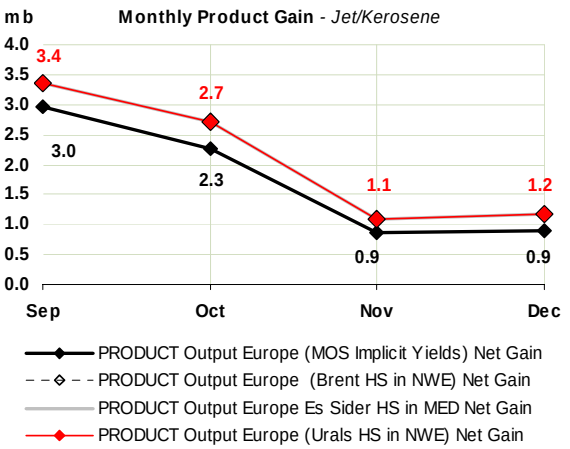



1. **Output profile contingent on yield configuration, offline cdu capacity, average utilisation of online cdu capacity**

# Table 1
# WORLD OIL SUPPLY AND DEMAND

(million barrels per day)

| | 2002 | 2003 | 1Q04 | 2Q04 | 3Q04 | 4Q04 | 2004 | 1Q05 | 2Q05 | 3Q05 | 4Q05 | 2005 | 1Q06 | 2Q06 | 3Q06 | 4Q06 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **OECD DEMAND** | | | | | | | | | | | | | | | | | |
| North America | 24.1 | 24.5 | 25.2 | 25.0 | 25.4 | 25.7 | 25.3 | 25.5 | 25.3 | 25.4 | 26.0 | 25.6 | 25.9 | 25.5 | 26.1 | 26.4 | 26.0 |
| Europe | 15.3 | 15.4 | 15.6 | 15.2 | 15.6 | 16.0 | 15.6 | 15.5 | 15.3 | 15.6 | 16.0 | 15.6 | 15.5 | 15.3 | 15.7 | 16.0 | 15.6 |
| Pacific | 8.6 | 8.7 | 9.3 | 7.9 | 8.2 | 8.8 | 8.5 | 9.5 | 8.1 | 8.0 | 8.9 | 8.6 | 9.5 | 8.1 | 8.3 | 9.1 | 8.7 |
| Total OECD | 48.0 | 48.6 | 50.1 | 48.1 | 49.2 | 50.5 | 49.5 | 50.6 | 48.7 | 49.1 | 50.9 | 49.8 | 50.9 | 48.9 | 50.0 | 51.5 | 50.3 |
| **NON-OECD DEMAND** | | | | | | | | | | | | | | | | | |
| FSU | 3.5 | 3.6 | 3.5 | 3.7 | 3.8 | 4.0 | 3.7 | 3.7 | 3.6 | 3.6 | 4.1 | 3.8 | 3.8 | 3.6 | 3.8 | 4.1 | 3.8 |
| Europe | 0.7 | 0.7 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 |
| China | 5.0 | 5.6 | 6.3 | 6.5 | 6.3 | 6.6 | 6.4 | 6.5 | 6.4 | 6.6 | 7.0 | 6.6 | 6.9 | 6.9 | 7.1 | 7.4 | 7.1 |
| Other Asia | 8.0 | 8.0 | 8.4 | 8.7 | 8.3 | 8.7 | 8.5 | 8.7 | 8.9 | 8.5 | 8.9 | 8.7 | 8.9 | 9.1 | 8.7 | 9.1 | 9.0 |
| Latin America | 4.8 | 4.7 | 4.7 | 4.9 | 5.0 | 4.9 | 4.9 | 4.8 | 5.0 | 5.0 | 5.0 | 5.0 | 4.9 | 5.1 | 5.2 | 5.1 | 5.1 |
| Middle East | 5.2 | 5.3 | 5.5 | 5.5 | 5.8 | 5.6 | 5.6 | 5.8 | 5.7 | 6.1 | 5.9 | 5.9 | 6.1 | 6.0 | 6.4 | 6.2 | 6.2 |
| Africa | 2.7 | 2.7 | 2.8 | 2.8 | 2.7 | 2.8 | 2.8 | 2.9 | 2.9 | 2.8 | 2.9 | 2.9 | 3.0 | 3.0 | 2.9 | 3.0 | 3.0 |
| Total Non-OECD | 29.7 | 30.6 | 32.0 | 32.8 | 32.6 | 33.3 | 32.7 | 33.3 | 33.2 | 33.3 | 34.5 | 33.6 | 34.4 | 34.5 | 34.7 | 35.7 | 34.8 |
| **Total Demand**[1] | 77.7 | 79.2 | 82.1 | 80.9 | 81.7 | 83.8 | 82.1 | 83.8 | 81.9 | 82.4 | 85.5 | 83.4 | 85.4 | 83.4 | 84.7 | 87.2 | 85.2 |
| **OECD SUPPLY** | | | | | | | | | | | | | | | | | |
| North America | 14.5 | 14.6 | 14.8 | 14.7 | 14.4 | 14.4 | 14.6 | 14.4 | 14.6 | 13.8 | 13.8 | 14.2 | 14.5 | 14.6 | 14.3 | 14.4 | 14.5 |
| Europe | 6.6 | 6.3 | 6.4 | 6.2 | 5.7 | 6.0 | 6.1 | 5.9 | 5.7 | 5.5 | 5.7 | 5.7 | 5.8 | 5.5 | 5.2 | 5.5 | 5.5 |
| Pacific | 0.8 | 0.7 | 0.6 | 0.6 | 0.6 | 0.5 | 0.6 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| Total OECD | 21.9 | 21.6 | 21.8 | 21.5 | 20.8 | 21.0 | 21.3 | 20.9 | 20.9 | 19.8 | 20.2 | 20.4 | 20.9 | 20.6 | 20.1 | 20.5 | 20.5 |
| **NON-OECD SUPPLY** | | | | | | | | | | | | | | | | | |
| FSU | 9.4 | 10.3 | 10.9 | 11.1 | 11.4 | 11.5 | 11.2 | 11.4 | 11.5 | 11.6 | 11.8 | 11.6 | 11.9 | 12.0 | 12.2 | 12.3 | 12.1 |
| Europe | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| China | 3.4 | 3.4 | 3.4 | 3.5 | 3.5 | 3.5 | 3.5 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 |
| Other Asia | 2.5 | 2.6 | 2.7 | 2.7 | 2.8 | 2.8 | 2.8 | 2.7 | 2.6 | 2.7 | 2.8 | 2.7 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| Latin America | 3.9 | 4.0 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.2 | 4.4 | 4.3 | 4.4 | 4.3 | 4.5 | 4.5 | 4.5 | 4.6 | 4.5 |
| Middle East | 2.1 | 2.0 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.7 | 1.7 | 1.8 |
| Africa | 3.0 | 3.0 | 3.3 | 3.3 | 3.5 | 3.5 | 3.4 | 3.6 | 3.6 | 3.9 | 4.0 | 3.8 | 4.1 | 4.2 | 4.3 | 4.4 | 4.3 |
| Total Non-OECD | 24.5 | 25.6 | 26.5 | 26.8 | 27.3 | 27.5 | 27.0 | 27.5 | 27.7 | 28.1 | 28.6 | 28.0 | 28.8 | 29.0 | 29.3 | 29.6 | 29.2 |
| Processing Gains[2] | 1.8 | 1.8 | 1.9 | 1.8 | 1.8 | 1.9 | 1.8 | 1.9 | 1.9 | 1.8 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| Total Non-OPEC | 48.1 | 49.0 | 50.1 | 50.1 | 49.9 | 50.3 | 50.1 | 50.3 | 50.4 | 49.8 | 50.7 | 50.3 | 51.6 | 51.5 | 51.3 | 52.0 | 51.6 |
| **OPEC** | | | | | | | | | | | | | | | | | |
| Crude[3] | 25.1 | 26.8 | 27.9 | 28.1 | 29.1 | 29.5 | 28.6 | 28.8 | 29.3 | 29.7 | | | | | | | |
| NGLs | 3.7 | 3.9 | 4.3 | 4.3 | 4.3 | 4.4 | 4.3 | 4.7 | 4.7 | 4.8 | 4.9 | 4.8 | 5.0 | 5.1 | 5.2 | 5.3 | 5.1 |
| Total OPEC | 28.8 | 30.7 | 32.2 | 32.3 | 33.4 | 33.9 | 33.0 | 33.5 | 34.0 | 34.5 | | | | | | | |
| **Total Supply**[4] | 76.9 | 79.7 | 82.3 | 82.5 | 83.3 | 84.2 | 83.1 | 83.8 | 84.4 | 84.3 | | | | | | | |
| **STOCK CHANGES AND MISCELLANEOUS** | | | | | | | | | | | | | | | | | |
| **Reported OECD** | | | | | | | | | | | | | | | | | |
| Industry | -0.4 | 0.1 | -0.6 | 0.9 | 0.4 | -0.2 | 0.1 | -0.1 | 0.9 | | | | | | | | |
| Government | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.4 | | | | | | | | |
| Total | -0.3 | 0.3 | -0.4 | 0.9 | 0.5 | -0.1 | 0.2 | 0.0 | 1.3 | | | | | | | | |
| Floating Storage/Oil in Transit | 0.0 | 0.2 | -0.2 | -0.2 | 0.3 | 0.3 | 0.0 | -0.4 | 0.0 | | | | | | | | |
| Miscellaneous to balance[5] | -0.4 | 0.0 | 0.9 | 0.8 | 0.8 | 0.3 | 0.7 | 0.3 | 1.2 | | | | | | | | |
| **Total Stock Ch. & Misc** | -0.7 | 0.5 | 0.2 | 1.5 | 1.6 | 0.5 | 0.9 | -0.1 | 2.5 | 1.9 | | | | | | | |
| **Memo items:** | | | | | | | | | | | | | | | | | |
| Call on OPEC crude + Stock ch.[6] | 25.9 | 26.3 | 27.7 | 26.5 | 27.5 | 29.0 | 27.7 | 28.9 | 26.8 | 27.8 | 29.9 | 28.4 | 28.8 | 26.7 | 28.3 | 29.8 | 28.4 |
| Total Demand ex. FSU | 74.2 | 75.6 | 78.6 | 77.2 | 77.9 | 79.8 | 78.4 | 80.1 | 78.3 | 78.8 | 81.3 | 79.6 | 81.5 | 79.7 | 81.0 | 83.1 | 81.3 |
| Total demand exc. FSU (% ch)[7] | 1.1 | 1.9 | 3.4 | 4.9 | 3.4 | 3.1 | 3.7 | 1.9 | 1.4 | 1.1 | 1.9 | 1.6 | 1.8 | 1.8 | 2.7 | 2.1 | 2.1 |

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

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

3 Upgraded Venezuelan Orinoco extra-heavy production is classified as non-conventional crude.

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

5 Includes changes in non-reported stocks in OECD and non-OECD areas

6 Equals the arithmetic difference between total demand minus total non-OPEC supply minus OPEC NGLs

7 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)

| | 2002 | 2003 | 1Q04 | 2Q04 | 3Q04 | 4Q04 | 2004 | 1Q05 | 2Q05 | 3Q05 | 4Q05 | 2005 | 1Q06 | 2Q06 | 3Q06 | 4Q06 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **OECD DEMAND** | | | | | | | | | | | | | | | | | |
| North America | - | - | - | - | - | - | - | - | - | -0.3 | - | -0.1 | - | - | -0.1 | - | - |
| Europe | - | - | - | - | - | - | - | - | - | 0.1 | - | - | - | - | - | - | - |
| Pacific | - | - | - | - | - | - | - | - | - | -0.1 | - | - | - | - | - | - | - |
| Total OECD | - | - | - | - | - | - | - | - | - | -0.3 | - | -0.1 | - | - | -0.1 | - | - |
| **NON-OECD DEMAND** | | | | | | | | | | | | | | | | | |
| FSU | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Europe | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| China | - | - | - | - | - | - | - | - | - | - | - | - | - | - | -0.1 | -0.1 | - |
| Other Asia | - | - | - | - | - | - | - | - | - | 0.1 | - | - | - | - | - | -0.1 | - |
| Latin America | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Middle East | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Africa | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total Non-OECD | - | - | - | - | - | - | - | - | - | - | -0.1 | - | - | - | -0.1 | -0.2 | -0.1 |
| **Total Demand** | - | - | - | - | - | - | - | - | - | -0.2 | -0.1 | -0.1 | - | - | -0.2 | -0.2 | -0.1 |
| **OECD SUPPLY** | | | | | | | | | | | | | | | | | |
| North America | - | - | - | - | - | - | - | - | - | -0.4 | -0.8 | -0.3 | -0.4 | -0.3 | -0.3 | -0.3 | -0.3 |
| Europe | - | - | - | - | - | - | - | - | - | - | -0.1 | - | - | - | -0.1 | - | - |
| Pacific | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total OECD | - | - | - | - | - | - | - | - | - | -0.4 | -0.9 | -0.3 | -0.4 | -0.3 | -0.4 | -0.3 | -0.3 |
| **NON-OECD SUPPLY** | | | | | | | | | | | | | | | | | |
| FSU | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Europe | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| China | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other Asia | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Latin America | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Middle East | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Africa | - | - | - | - | - | - | - | - | - | - | -0.1 | - | - | - | - | - | - |
| Total Non-OECD | - | - | - | - | - | - | - | - | - | - | - | - | - | - | -0.1 | -0.1 | -0.1 |
| Processing Gains | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total Non-OPEC | - | - | - | - | - | - | - | - | - | -0.4 | -0.9 | -0.3 | -0.4 | -0.3 | -0.5 | -0.4 | -0.4 |
| **OPEC** | | | | | | | | | | | | | | | | | |
| Crude | - | - | - | - | - | - | - | - | - | | | | | | | | |
| NGLs | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total OPEC | - | - | - | - | - | - | - | - | - | | | | | | | | |
| **Total Supply** | - | - | - | - | - | - | - | - | - | | | | | | | | |
| **STOCK CHANGES AND MISCELLANEOUS** | | | | | | | | | | | | | | | | | |
| **REPORTED OECD** | | | | | | | | | | | | | | | | | |
| Industry | - | - | - | - | - | - | - | - | -0.2 | | | | | | | | |
| Government | - | - | - | - | - | - | - | - | 0.3 | | | | | | | | |
| Total | - | - | - | - | - | - | - | - | 0.1 | | | | | | | | |
| Floating Storage/Oil in Transit | - | - | - | - | - | - | - | - | - | | | | | | | | |
| Miscellaneous to balance | - | - | - | - | - | - | - | - | -0.1 | | | | | | | | |
| **Total Stock Ch. & Misc** | - | - | - | - | - | - | - | - | - | | | | | | | | |
| **Memo items:** | | | | | | | | | | | | | | | | | |
| Call on OPEC crude + Stock ch. | - | - | - | - | - | - | - | - | - | 0.2 | 0.8 | 0.3 | 0.4 | 0.3 | 0.3 | 0.2 | 0.3 |
| Total Demand ex. FSU | - | - | - | - | - | - | - | - | - | -0.2 | -0.1 | -0.1 | - | - | -0.2 | -0.2 | -0.1 |

When submitting their monthly oil statistics, OECD Member countries periodically update data for prior periods. Similar updates to non-OECD data can occur.

## Table 2

## Summary of Global Oil Demand

| | 2003 | 1Q04 | 2Q04 | 3Q04 | 4Q04 | 2004 | 1Q05 | 2Q05 | 3Q05 | 4Q05 | 2005 | 1Q06 | 2Q06 | 3Q06 | 4Q06 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Demand (mb/d)** | | | | | | | | | | | | | | | | |
| North America | 24.53 | 25.22 | 25.05 | 25.41 | 25.69 | 25.34 | 25.53 | 25.31 | 25.42 | 26.00 | 25.57 | 25.90 | 25.51 | 26.07 | 26.40 | 25.97 |
| Europe | 15.43 | 15.63 | 15.20 | 15.58 | 16.00 | 15.60 | 15.55 | 15.29 | 15.61 | 15.99 | 15.61 | 15.54 | 15.26 | 15.66 | 16.00 | 15.62 |
| Pacific | 8.69 | 9.28 | 7.90 | 8.16 | 8.77 | 8.53 | 9.49 | 8.10 | 8.04 | 8.93 | 8.64 | 9.51 | 8.09 | 8.25 | 9.06 | 8.73 |
| Total OECD | 48.65 | 50.14 | 48.15 | 49.15 | 50.46 | 49.48 | 50.57 | 48.70 | 49.07 | 50.92 | 49.81 | 50.95 | 48.86 | 49.99 | 51.46 | 50.32 |
| FSU | 3.59 | 3.51 | 3.71 | 3.78 | 3.97 | 3.74 | 3.73 | 3.57 | 3.62 | 4.13 | 3.76 | 3.81 | 3.62 | 3.75 | 4.08 | 3.82 |
| Europe | 0.69 | 0.76 | 0.70 | 0.66 | 0.71 | 0.71 | 0.78 | 0.72 | 0.67 | 0.72 | 0.72 | 0.79 | 0.73 | 0.68 | 0.74 | 0.74 |
| China | 5.58 | 6.28 | 6.53 | 6.32 | 6.60 | 6.43 | 6.55 | 6.41 | 6.61 | 6.98 | 6.64 | 6.91 | 6.94 | 7.13 | 7.43 | 7.10 |
| Other Asia | 8.05 | 8.42 | 8.67 | 8.33 | 8.68 | 8.53 | 8.71 | 8.85 | 8.53 | 8.87 | 8.74 | 8.90 | 9.07 | 8.73 | 9.11 | 8.95 |
| Latin America | 4.67 | 4.71 | 4.87 | 4.96 | 4.89 | 4.86 | 4.82 | 4.98 | 5.02 | 5.00 | 4.95 | 4.92 | 5.09 | 5.16 | 5.11 | 5.07 |
| Middle East | 5.27 | 5.51 | 5.45 | 5.79 | 5.62 | 5.59 | 5.79 | 5.74 | 6.08 | 5.91 | 5.88 | 6.10 | 6.05 | 6.37 | 6.21 | 6.18 |
| Africa | 2.73 | 2.80 | 2.83 | 2.73 | 2.84 | 2.80 | 2.89 | 2.92 | 2.81 | 2.92 | 2.89 | 2.98 | 3.00 | 2.89 | 3.01 | 2.97 |
| Total Non-OECD | 30.56 | 31.99 | 32.76 | 32.56 | 33.33 | 32.66 | 33.27 | 33.19 | 33.34 | 34.54 | 33.59 | 34.42 | 34.50 | 34.72 | 35.70 | 34.84 |
| World | 79.21 | 82.13 | 80.91 | 81.71 | 83.78 | 82.14 | 83.84 | 81.89 | 82.41 | 85.46 | 83.40 | 85.36 | 83.36 | 84.70 | 87.16 | 85.15 |
| ***of which:*** | | | | | | | | | | | | | | | | |
| *US* | *20.03* | *20.60* | *20.54* | *20.82* | *20.97* | *20.73* | *20.80* | *20.66* | *20.74* | *21.21* | *20.85* | *21.06* | *20.81* | *21.28* | *21.52* | *21.17* |
| *Euro4* | *8.30* | *8.39* | *8.10* | *8.36* | *8.45* | *8.33* | *8.18* | *8.05* | *8.33* | *8.35* | *8.23* | *8.12* | *8.03* | *8.28* | *8.35* | *8.19* |
| *Japan* | *5.50* | *5.98* | *4.87* | *5.12* | *5.45* | *5.35* | *6.05* | *4.99* | *4.99* | *5.53* | *5.39* | *6.05* | *4.93* | *5.10* | *5.59* | *5.42* |
| *Korea* | *2.18* | *2.30* | *2.02* | *2.00* | *2.27* | *2.15* | *2.40* | *2.06* | *2.01* | *2.33* | *2.20* | *2.40* | *2.09* | *2.07* | *2.37* | *2.23* |
| *Mexico* | *1.95* | *1.96* | *1.96* | *1.95* | *2.01* | *1.97* | *2.01* | *2.08* | *2.03* | *2.04* | *2.04* | *2.09* | *2.09* | *2.08* | *2.11* | *2.10* |
| *Canada* | *2.21* | *2.30* | *2.22* | *2.31* | *2.36* | *2.30* | *2.35* | *2.23* | *2.31* | *2.40* | *2.32* | *2.36* | *2.27* | *2.36* | *2.41* | *2.35* |
| *Brazil* | *2.04* | *2.06* | *2.12* | *2.21* | *2.18* | *2.14* | *2.09* | *2.15* | *2.20* | *2.21* | *2.17* | *2.13* | *2.19* | *2.27* | *2.26* | *2.21* |
| *India* | *2.47* | *2.66* | *2.65* | *2.47* | *2.61* | *2.60* | *2.77* | *2.64* | *2.52* | *2.67* | *2.65* | *2.83* | *2.71* | *2.57* | *2.74* | *2.71* |
| **Annual Change (% per annum)** | | | | | | | | | | | | | | | | |
| North America | 1.7 | 3.1 | 3.9 | 2.9 | 3.5 | 3.3 | 1.2 | 1.0 | 0.0 | 1.2 | 0.9 | 1.4 | 0.8 | 2.6 | 1.5 | 1.6 |
| Europe | 1.0 | 1.3 | 0.3 | 0.8 | 2.2 | 1.2 | -0.6 | 0.6 | 0.2 | -0.1 | 0.0 | 0.0 | -0.2 | 0.4 | 0.1 | 0.1 |
| Pacific | 1.5 | -4.2 | -2.4 | 2.8 | -3.2 | -1.9 | 2.2 | 2.5 | -1.4 | 1.8 | 1.3 | 0.2 | -0.1 | 2.6 | 1.4 | 1.0 |
| Total OECD | 1.4 | 1.1 | 1.7 | 2.2 | 1.8 | 1.7 | 0.8 | 1.1 | -0.2 | 0.9 | 0.7 | 0.8 | 0.3 | 1.9 | 1.1 | 1.0 |
| FSU | 3.2 | -8.4 | 15.8 | 10.2 | 2.2 | 4.4 | 6.4 | -3.7 | -4.2 | 3.9 | 0.6 | 2.2 | 1.3 | 3.7 | -1.1 | 1.4 |
| Europe | 3.8 | 2.5 | 2.5 | 3.0 | 3.1 | 2.8 | 2.6 | 2.6 | 2.1 | 2.0 | 2.3 | 2.1 | 2.1 | 2.2 | 2.2 | 2.1 |
| China | 11.0 | 18.0 | 23.4 | 9.2 | 12.0 | 15.4 | 4.3 | -1.9 | 4.7 | 5.7 | 3.2 | 5.6 | 8.2 | 7.8 | 6.5 | 7.0 |
| Other Asia | 1.2 | 6.5 | 9.5 | 4.5 | 3.4 | 5.9 | 3.4 | 2.1 | 2.4 | 2.2 | 2.5 | 2.2 | 2.5 | 2.4 | 2.6 | 2.4 |
| Latin America | -1.8 | 4.9 | 5.0 | 3.9 | 2.8 | 4.1 | 2.2 | 2.2 | 1.2 | 2.1 | 1.9 | 2.1 | 2.2 | 2.7 | 2.4 | 2.3 |
| Middle East | 1.9 | 5.3 | 8.9 | 5.5 | 4.7 | 6.0 | 5.1 | 5.3 | 5.1 | 5.2 | 5.2 | 5.3 | 5.3 | 4.8 | 5.1 | 5.1 |
| Africa | 1.6 | 2.2 | 3.0 | 3.1 | 2.6 | 2.7 | 3.3 | 3.3 | 2.9 | 2.8 | 3.1 | 2.8 | 2.9 | 3.0 | 3.0 | 2.9 |
| Total Non-OECD | 2.8 | 5.7 | 11.1 | 6.0 | 4.9 | 6.9 | 4.0 | 1.3 | 2.4 | 3.7 | 2.8 | 3.4 | 3.9 | 4.1 | 3.3 | 3.7 |
| World | 2.0 | 2.8 | 5.3 | 3.7 | 3.0 | 3.7 | 2.1 | 1.2 | 0.9 | 2.0 | 1.5 | 1.8 | 1.8 | 2.8 | 2.0 | 2.1 |
| **Annual Change (mb/d)** | | | | | | | | | | | | | | | | |
| North America | 0.40 | 0.76 | 0.95 | 0.71 | 0.86 | 0.82 | 0.31 | 0.26 | 0.01 | 0.31 | 0.22 | 0.37 | 0.20 | 0.65 | 0.40 | 0.41 |
| Europe | 0.16 | 0.19 | 0.05 | 0.12 | 0.34 | 0.18 | -0.09 | 0.09 | 0.02 | -0.01 | 0.00 | -0.01 | -0.03 | 0.06 | 0.01 | 0.01 |
| Pacific | 0.13 | -0.41 | -0.19 | 0.23 | -0.29 | -0.16 | 0.20 | 0.20 | -0.11 | 0.16 | 0.11 | 0.02 | -0.01 | 0.21 | 0.13 | 0.09 |
| Total OECD | 0.69 | 0.54 | 0.81 | 1.05 | 0.91 | 0.83 | 0.42 | 0.55 | -0.08 | 0.46 | 0.34 | 0.38 | 0.16 | 0.92 | 0.54 | 0.50 |
| FSU | 0.11 | -0.32 | 0.51 | 0.35 | 0.09 | 0.16 | 0.23 | -0.14 | -0.16 | 0.15 | 0.02 | 0.08 | 0.05 | 0.13 | -0.05 | 0.05 |
| Europe | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.01 | 0.02 | 0.02 |
| China | 0.55 | 0.96 | 1.24 | 0.53 | 0.71 | 0.86 | 0.27 | -0.12 | 0.29 | 0.38 | 0.20 | 0.37 | 0.53 | 0.52 | 0.45 | 0.47 |
| Other Asia | 0.09 | 0.51 | 0.75 | 0.36 | 0.29 | 0.48 | 0.29 | 0.18 | 0.20 | 0.20 | 0.22 | 0.19 | 0.22 | 0.20 | 0.23 | 0.21 |
| Latin America | -0.08 | 0.22 | 0.23 | 0.19 | 0.13 | 0.19 | 0.11 | 0.11 | 0.06 | 0.10 | 0.09 | 0.10 | 0.11 | 0.14 | 0.12 | 0.12 |
| Middle East | 0.10 | 0.27 | 0.44 | 0.30 | 0.25 | 0.32 | 0.28 | 0.29 | 0.29 | 0.29 | 0.29 | 0.31 | 0.30 | 0.29 | 0.30 | 0.30 |
| Africa | 0.04 | 0.06 | 0.08 | 0.08 | 0.07 | 0.07 | 0.09 | 0.09 | 0.08 | 0.08 | 0.09 | 0.08 | 0.09 | 0.08 | 0.09 | 0.08 |
| Total Non-OECD | 0.84 | 1.72 | 3.27 | 1.83 | 1.56 | 2.10 | 1.28 | 0.43 | 0.78 | 1.22 | 0.93 | 1.15 | 1.31 | 1.37 | 1.16 | 1.25 |
| World | 1.53 | 2.26 | 4.08 | 2.89 | 2.48 | 2.93 | 1.71 | 0.98 | 0.70 | 1.68 | 1.26 | 1.53 | 1.47 | 2.29 | 1.70 | 1.75 |
| **Changes from Last Month's Report** | | | | | | | | | | | | | | | | |
| North America | - | - | - | - | - | - | - | 0.01 | -0.28 | -0.01 | -0.07 | -0.01 | -0.04 | -0.08 | -0.01 | -0.04 |
| Europe | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | - | 0.08 | -0.01 | 0.02 | 0.01 | - | 0.01 | - | 0.01 |
| Pacific | - | - | - | - | - | - | - | 0.01 | -0.07 | -0.01 | -0.02 | 0.02 | - | - | -0.01 | - |
| Total OECD | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | -0.27 | -0.03 | -0.07 | 0.01 | -0.04 | -0.07 | -0.01 | -0.03 |
| FSU | -0.01 | - | - | - | - | - | - | - | 0.03 | 0.02 | 0.01 | 0.03 | 0.01 | 0.01 | -0.02 | 0.01 |
| Europe | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| China | - | - | - | - | - | - | - | - | - | -0.04 | -0.01 | -0.03 | 0.02 | -0.09 | -0.07 | -0.04 |
| Other Asia | - | - | - | 0.01 | - | - | - | - | 0.06 | -0.04 | 0.01 | -0.02 | -0.02 | -0.03 | -0.06 | -0.03 |
| Latin America | - | - | - | - | - | - | - | - | -0.03 | -0.01 | -0.01 | - | - | -0.02 | - | - |
| Middle East | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Africa | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total Non-OECD | -0.01 | - | - | 0.01 | - | - | - | - | 0.05 | -0.07 | -0.01 | -0.02 | 0.01 | -0.13 | -0.16 | -0.07 |
| World | -0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 | -0.22 | -0.10 | -0.08 | -0.01 | -0.02 | -0.20 | -0.17 | -0.10 |

# Table 3
## WORLD OIL PRODUCTION
(million barrels per day)

| | 2004 | 2005 | 2006 | 2Q05 | 3Q05 | 4Q05 | 1Q06 | 2Q06 | Jul 05 | Aug 05 | Sep 05 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **OPEC** | | | | | | | | | | | |
| Crude Oil | | | | | | | | | | | |
| Saudi Arabia | 8.75 | | | 9.21 | 9.27 | | | | 9.27 | 9.28 | 9.28 |
| Iran | 3.93 | | | 3.96 | 3.96 | | | | 3.95 | 3.98 | 3.97 |
| Iraq | 1.99 | | | 1.84 | 1.95 | | | | 1.96 | 1.92 | 1.97 |
| UAE | 2.35 | | | 2.35 | 2.50 | | | | 2.48 | 2.51 | 2.52 |
| Kuwait | 2.05 | | | 2.12 | 2.13 | | | | 2.11 | 2.13 | 2.17 |
| Neutral Zone | 0.60 | | | 0.57 | 0.57 | | | | 0.57 | 0.57 | 0.57 |
| Qatar | 0.78 | | | 0.78 | 0.80 | | | | 0.80 | 0.80 | 0.81 |
| Nigeria | 2.32 | | | 2.43 | 2.46 | | | | 2.48 | 2.46 | 2.46 |
| Libya | 1.55 | | | 1.65 | 1.65 | | | | 1.65 | 1.65 | 1.65 |
| Algeria | 1.20 | | | 1.34 | 1.36 | | | | 1.35 | 1.35 | 1.37 |
| Venezuela | 2.17 | | | 2.13 | 2.12 | | | | 2.12 | 2.12 | 2.11 |
| Indonesia | 0.97 | | | 0.94 | 0.94 | | | | 0.95 | 0.94 | 0.93 |
| Total Crude Oil | 28.65 | | | 29.32 | 29.71 | | | | 29.66 | 29.69 | 29.79 |
| Total NGLs[1] | 4.32 | 4.77 | 5.14 | 4.70 | 4.79 | 4.88 | 5.01 | 5.10 | 4.78 | 4.79 | 4.79 |
| **Total OPEC** | 32.97 | | | 34.02 | 34.50 | | | | 34.44 | 34.48 | 34.57 |
| **NON-OPEC[2]** | | | | | | | | | | | |
| **OECD** | | | | | | | | | | | |
| **North America** | 14.58 | 14.15 | 14.48 | 14.60 | 13.77 | 13.84 | 14.55 | 14.60 | 13.93 | 14.40 | 12.96 |
| United States | 7.66 | 7.33 | 7.43 | 7.74 | 7.08 | 6.80 | 7.48 | 7.57 | 7.43 | 7.58 | 6.21 |
| Mexico | 3.83 | 3.79 | 3.78 | 3.87 | 3.70 | 3.85 | 3.82 | 3.80 | 3.48 | 3.84 | 3.79 |
| Canada | 3.09 | 3.03 | 3.26 | 3.00 | 2.99 | 3.19 | 3.25 | 3.24 | 3.02 | 2.99 | 2.95 |
| **Europe** | 6.10 | 5.72 | 5.47 | 5.70 | 5.49 | 5.74 | 5.76 | 5.46 | 5.56 | 5.39 | 5.51 |
| UK | 2.06 | 1.86 | 1.66 | 1.90 | 1.70 | 1.82 | 1.80 | 1.64 | 1.75 | 1.66 | 1.70 |
| Norway | 3.19 | 3.01 | 3.01 | 2.94 | 2.94 | 3.09 | 3.14 | 3.01 | 2.97 | 2.89 | 2.97 |
| Others | 0.85 | 0.85 | 0.80 | 0.86 | 0.84 | 0.83 | 0.82 | 0.81 | 0.84 | 0.85 | 0.84 |
| **Pacific** | 0.58 | 0.56 | 0.58 | 0.55 | 0.57 | 0.57 | 0.59 | 0.56 | 0.55 | 0.59 | 0.58 |
| Australia | 0.54 | 0.52 | 0.53 | 0.51 | 0.53 | 0.53 | 0.54 | 0.51 | 0.50 | 0.54 | 0.54 |
| Others | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.05 | 0.04 | 0.04 |
| **Total OECD** | 21.25 | 20.43 | 20.53 | 20.86 | 19.83 | 20.16 | 20.89 | 20.62 | 20.04 | 20.38 | 19.05 |
| **NON-OECD** | | | | | | | | | | | |
| **Former USSR** | 11.22 | 11.59 | 12.09 | 11.46 | 11.62 | 11.85 | 11.89 | 11.95 | 11.54 | 11.60 | 11.74 |
| Russia | 9.23 | 9.49 | 9.79 | 9.38 | 9.54 | 9.68 | 9.69 | 9.74 | 9.49 | 9.53 | 9.60 |
| Others | 1.99 | 2.10 | 2.30 | 2.08 | 2.08 | 2.16 | 2.20 | 2.21 | 2.05 | 2.07 | 2.14 |
| **Asia** | 6.24 | 6.34 | 6.42 | 6.26 | 6.33 | 6.41 | 6.40 | 6.44 | 6.36 | 6.30 | 6.33 |
| China | 3.48 | 3.63 | 3.60 | 3.61 | 3.63 | 3.63 | 3.62 | 3.61 | 3.64 | 3.63 | 3.62 |
| Malaysia | 0.86 | 0.83 | 0.85 | 0.77 | 0.84 | 0.86 | 0.86 | 0.85 | 0.82 | 0.85 | 0.84 |
| India | 0.80 | 0.76 | 0.78 | 0.80 | 0.72 | 0.72 | 0.73 | 0.80 | 0.76 | 0.67 | 0.71 |
| Others | 1.10 | 1.13 | 1.19 | 1.08 | 1.15 | 1.20 | 1.19 | 1.19 | 1.14 | 1.15 | 1.16 |
| **Europe** | 0.17 | 0.16 | 0.15 | 0.16 | 0.16 | 0.15 | 0.15 | 0.15 | 0.16 | 0.16 | 0.16 |
| **Latin America** | 4.09 | 4.32 | 4.51 | 4.38 | 4.32 | 4.43 | 4.46 | 4.51 | 4.38 | 4.20 | 4.39 |
| Brazil | 1.80 | 2.01 | 2.26 | 2.03 | 2.02 | 2.12 | 2.18 | 2.24 | 2.03 | 1.94 | 2.10 |
| Argentina | 0.80 | 0.76 | 0.71 | 0.77 | 0.76 | 0.75 | 0.72 | 0.71 | 0.76 | 0.76 | 0.75 |
| Colombia | 0.53 | 0.52 | 0.51 | 0.53 | 0.52 | 0.50 | 0.50 | 0.50 | 0.52 | 0.52 | 0.51 |
| Ecuador | 0.53 | 0.54 | 0.55 | 0.54 | 0.52 | 0.56 | 0.56 | 0.55 | 0.55 | 0.49 | 0.53 |
| Others | 0.44 | 0.49 | 0.49 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.51 | 0.50 | 0.50 |
| **Middle East[3]** | 1.91 | 1.82 | 1.75 | 1.81 | 1.81 | 1.80 | 1.78 | 1.76 | 1.81 | 1.81 | 1.81 |
| Oman | 0.79 | 0.75 | 0.73 | 0.75 | 0.75 | 0.75 | 0.75 | 0.74 | 0.75 | 0.75 | 0.75 |
| Syria | 0.50 | 0.48 | 0.45 | 0.48 | 0.47 | 0.47 | 0.46 | 0.45 | 0.48 | 0.47 | 0.47 |
| Yemen | 0.42 | 0.39 | 0.37 | 0.38 | 0.39 | 0.39 | 0.37 | 0.37 | 0.39 | 0.39 | 0.39 |
| **Africa** | 3.40 | 3.76 | 4.25 | 3.61 | 3.86 | 3.99 | 4.09 | 4.20 | 3.73 | 3.91 | 3.95 |
| Egypt | 0.71 | 0.69 | 0.67 | 0.69 | 0.69 | 0.69 | 0.68 | 0.68 | 0.70 | 0.69 | 0.69 |
| Angola | 0.99 | 1.25 | 1.49 | 1.15 | 1.34 | 1.41 | 1.41 | 1.43 | 1.21 | 1.39 | 1.41 |
| Gabon | 0.24 | 0.23 | 0.23 | 0.23 | 0.24 | 0.24 | 0.24 | 0.24 | 0.23 | 0.24 | 0.24 |
| Others | 1.47 | 1.58 | 1.86 | 1.54 | 1.60 | 1.66 | 1.76 | 1.85 | 1.58 | 1.60 | 1.61 |
| **Total Non-OECD** | 27.02 | 27.99 | 29.18 | 27.69 | 28.11 | 28.63 | 28.78 | 29.01 | 27.97 | 27.99 | 28.38 |
| Processing Gains[4] | 1.83 | 1.86 | 1.90 | 1.85 | 1.84 | 1.88 | 1.92 | 1.89 | 1.84 | 1.84 | 1.84 |
| **TOTAL NON-OPEC** | 50.11 | 50.28 | 51.61 | 50.40 | 49.78 | 50.66 | 51.59 | 51.52 | 49.85 | 50.21 | 49.27 |
| **TOTAL SUPPLY** | 83.08 | | | 84.42 | 84.28 | | | | 84.29 | 84.69 | 83.84 |

1 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. Orimulsion Orinoco extra-heavy oil, and non-oil inputs to Saudi Arabian MTBE
2 Comprises crude oil, condensates, NGLs and oil from non-conventional sources
3 Includes small amounts of production from Israel, Jordan and Bahrain
4 Net volumetric gains and losses in refining (excludes net gain/loss in FSU, China and non-OECD Europe) and marine transportation losses

# Table 4

## OECD INDUSTRY STOCKS[1] AND QUARTERLY STOCK CHANGES

| | RECENT MONTHLY STOCKS[2] in Million Barrels | | | | | PRIOR YEARS' STOCKS[2] in Million Barrels | | | STOCK CHANGES in mb/d | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Apr2005 | May2005 | Jun2005 | Jul2005 | Aug2005* | Aug2002 | Aug2003 | Aug2004 | 3Q2004 | 4Q2004 | 1Q2005 | 2Q2005 |
| **North America** | | | | | | | | | | | | |
| Crude | 448.7 | 449.4 | 449.1 | 436.2 | 432.9 | 407.0 | 390.6 | 393.1 | -0.26 | 0.06 | 0.38 | 0.16 |
| Motor Gasoline | 242.0 | 245.2 | 245.4 | 237.4 | 223.8 | 234.3 | 222.4 | 237.9 | -0.04 | 0.11 | 0.00 | 0.01 |
| Middle Distillate | 174.4 | 180.6 | 190.1 | 205.1 | 210.7 | 203.4 | 199.6 | 203.9 | 0.14 | 0.04 | -0.26 | 0.16 |
| Residual Fuel Oil | 45.6 | 46.6 | 45.9 | 46.3 | 42.8 | 41.9 | 39.0 | 44.6 | -0.04 | 0.10 | -0.02 | -0.03 |
| Total Products[3] | 635.3 | 666.1 | 676.8 | 690.8 | 683.9 | 678.8 | 644.1 | 665.7 | 0.26 | 0.01 | -0.32 | 0.56 |
| Total[4] | 1221.2 | 1260.6 | 1275.6 | 1280.6 | 1269.4 | 1244.7 | 1191.2 | 1215.3 | 0.18 | -0.10 | -0.01 | 0.83 |
| **Europe** | | | | | | | | | | | | |
| Crude | 345.2 | 364.3 | 344.7 | 345.7 | 350.9 | 311.5 | 329.3 | 327.9 | -0.07 | -0.09 | 0.25 | -0.03 |
| Motor Gasoline | 118.4 | 114.4 | 103.6 | 106.2 | 103.4 | 115.9 | 108.5 | 115.5 | 0.01 | 0.04 | 0.05 | -0.19 |
| Middle Distillate | 252.0 | 256.0 | 240.6 | 249.3 | 250.9 | 266.9 | 258.4 | 260.5 | 0.18 | -0.10 | 0.05 | -0.06 |
| Residual Fuel Oil | 70.3 | 77.6 | 72.2 | 73.0 | 73.3 | 71.4 | 69.6 | 78.3 | -0.01 | -0.03 | -0.07 | 0.04 |
| Total Products[3] | 543.9 | 549.0 | 516.1 | 528.1 | 527.0 | 560.7 | 544.8 | 558.8 | 0.22 | -0.08 | 0.05 | -0.27 |
| Total[4] | 965.9 | 989.0 | 934.0 | 947.9 | 951.1 | 937.0 | 943.7 | 954.2 | 0.15 | -0.16 | 0.33 | -0.31 |
| **Pacific** | | | | | | | | | | | | |
| Crude | 158.5 | 171.9 | 176.6 | 183.8 | 182.8 | 175.8 | 176.3 | 167.5 | -0.09 | 0.03 | -0.02 | 0.08 |
| Motor Gasoline | 25.3 | 25.7 | 24.5 | 24.4 | 23.3 | 25.6 | 25.4 | 23.3 | -0.01 | 0.00 | 0.01 | -0.01 |
| Middle Distillate | 55.1 | 62.5 | 58.9 | 68.1 | 74.9 | 86.1 | 78.7 | 69.6 | 0.16 | 0.00 | -0.29 | 0.11 |
| Residual Fuel Oil | 21.5 | 24.7 | 23.4 | 25.7 | 23.8 | 25.0 | 25.3 | 23.3 | -0.01 | 0.01 | -0.01 | 0.02 |
| Total Products[3] | 164.1 | 178.1 | 173.2 | 186.4 | 191.4 | 203.1 | 202.1 | 182.2 | 0.15 | 0.02 | -0.37 | 0.20 |
| Total[4] | 391.8 | 422.8 | 422.2 | 441.9 | 446.4 | 456.1 | 451.7 | 421.6 | 0.11 | 0.01 | -0.45 | 0.36 |
| **Total OECD** | | | | | | | | | | | | |
| Crude | 952.4 | 985.6 | 970.3 | 965.7 | 966.7 | 894.3 | 896.3 | 888.5 | -0.41 | -0.01 | 0.61 | 0.22 |
| Motor Gasoline | 385.8 | 385.3 | 373.6 | 368.0 | 350.5 | 375.8 | 356.2 | 376.6 | -0.03 | 0.15 | 0.06 | -0.19 |
| Middle Distillate | 481.4 | 499.1 | 489.6 | 522.5 | 536.5 | 556.4 | 536.7 | 534.0 | 0.47 | -0.06 | -0.50 | 0.22 |
| Residual Fuel Oil | 137.3 | 148.8 | 141.5 | 144.9 | 139.9 | 138.2 | 133.9 | 146.1 | -0.06 | 0.08 | -0.10 | 0.03 |
| Total Products[3] | 1343.3 | 1393.2 | 1366.1 | 1405.3 | 1402.3 | 1442.6 | 1390.9 | 1406.7 | 0.63 | -0.05 | -0.64 | 0.49 |
| Total[4] | 2578.8 | 2672.4 | 2631.8 | 2670.4 | 2666.9 | 2637.7 | 2586.6 | 2591.1 | 0.44 | -0.25 | -0.14 | 0.89 |

## OECD GOVERNMENT-CONTROLLED STOCKS[5] AND QUARTERLY STOCK CHANGES

| | RECENT MONTHLY STOCKS[2] in Million Barrels | | | | | PRIOR YEARS' STOCKS[2] in Million Barrels | | | STOCK CHANGES in mb/d | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Apr2005 | May2005 | Jun2005 | Jul2005 | Aug2005* | Aug2002 | Aug2003 | Aug2004 | 3Q2004 | 4Q2004 | 1Q2005 | 2Q2005 |
| **North America** | | | | | | | | | | | | |
| Crude | 691.9 | 693.9 | 696.4 | 698.8 | 700.8 | 582.3 | 618.3 | 669.0 | 0.09 | 0.06 | 0.14 | 0.09 |
| Products | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Europe** | | | | | | | | | | | | |
| Crude | 161.0 | 161.0 | 164.9 | 165.2 | 165.2 | 148.7 | 152.0 | 158.1 | 0.00 | 0.07 | -0.04 | 0.05 |
| Products | 206.0 | 207.8 | 232.8 | 235.6 | 235.6 | 196.6 | 208.2 | 205.6 | 0.00 | 0.00 | 0.04 | 0.26 |
| **Pacific** | | | | | | | | | | | | |
| Crude | 384.5 | 384.5 | 383.4 | 384.2 | 383.9 | 379.1 | 382.8 | 386.7 | -0.02 | 0.00 | 0.00 | -0.01 |
| Products | 11.0 | 11.0 | 11.1 | 11.3 | 11.5 | 7.3 | 10.3 | 11.0 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total OECD** | | | | | | | | | | | | |
| Crude | 1237.4 | 1239.5 | 1244.8 | 1248.2 | 1249.9 | 1110.0 | 1153.1 | 1213.7 | 0.06 | 0.12 | 0.10 | 0.13 |
| Products | 219.1 | 220.9 | 245.9 | 249.0 | 249.1 | 205.9 | 220.5 | 218.6 | 0.00 | 0.00 | 0.04 | 0.26 |
| Total[4] | 1457.5 | 1461.3 | 1491.6 | 1498.2 | 1500.0 | 1316.9 | 1374.5 | 1433.3 | 0.07 | 0.13 | 0.14 | 0.39 |

* estimated

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) and 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 5

## TOTAL STOCKS ON LAND IN OECD COUNTRIES[1]

('millions of barrels' and 'days')

| | End June 2004 | | End September 2004 | | End December 2004 | | End March 2005 | | End June 2005 [3] | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Stock 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 |
| **North America** | | | | | | | | | | |
| Canada | 163.0 | 71 | 174.5 | 74 | 167.8 | 72 | 164.7 | 74 | 165.7 | - |
| Mexico | 39.5 | 20 | 41.4 | 21 | 41.3 | 21 | 44.2 | 21 | 45.6 | - |
| United States[4] | 1632.9 | 78 | 1643.5 | 78 | 1646.8 | 80 | 1658.8 | 81 | 1740.5 | - |
| Total[5] | 1857.5 | 73 | 1881.5 | 73 | 1878.0 | 74 | 1889.8 | 75 | 1974.0 | 78 |
| **Pacific** | | | | | | | | | | |
| Australia | 34.9 | 39 | 34.3 | 38 | 33.2 | 38 | 34.8 | 38 | 35.9 | - |
| Japan | 622.0 | 121 | 632.0 | 116 | 635.3 | 105 | 604.9 | 121 | 629.4 | - |
| Korea | 152.9 | 76 | 152.1 | 67 | 149.4 | 62 | 137.4 | 67 | 142.5 | - |
| New Zealand | 7.7 | 52 | 7.1 | 48 | 8.0 | 49 | 7.9 | 53 | 9.0 | - |
| Total | 817.4 | 100 | 825.5 | 94 | 825.9 | 87 | 785.0 | 97 | 816.8 | 102 |
| **Europe**[6] | | | | | | | | | | |
| Austria | 20.3 | 66 | 20.2 | 70 | 21.0 | 75 | 20.6 | 72 | 20.8 | - |
| Belgium | 26.5 | 46 | 27.7 | 39 | 27.2 | 40 | 26.9 | 49 | 29.8 | - |
| Czech Republic | 15.9 | 73 | 16.9 | 81 | 16.3 | 86 | 17.0 | 78 | 15.9 | - |
| Denmark | 15.8 | 89 | 18.1 | 94 | 16.2 | 86 | 16.3 | 88 | 17.2 | - |
| Finland | 23.4 | 106 | 24.0 | 105 | 24.4 | 110 | 26.2 | 125 | 27.0 | - |
| France | 183.5 | 94 | 188.5 | 94 | 186.2 | 90 | 187.4 | 99 | 185.6 | - |
| Germany | 267.1 | 99 | 264.1 | 96 | 267.2 | 106 | 280.5 | 111 | 279.4 | - |
| Greece | 30.8 | 78 | 34.1 | 76 | 35.7 | 77 | 35.7 | 94 | 34.4 | - |
| Hungary | 20.1 | 152 | 18.7 | 128 | 17.8 | 140 | 21.1 | 148 | 18.5 | - |
| Ireland | 10.7 | 63 | 11.1 | 60 | 11.7 | 60 | 10.6 | 58 | 11.6 | - |
| Italy | 134.6 | 71 | 138.7 | 73 | 135.8 | 73 | 133.7 | 75 | 132.1 | - |
| Luxembourg | 1.0 | 16 | 0.9 | 14 | 0.9 | 14 | 0.9 | 13 | 0.8 | - |
| Netherlands | 102.3 | 110 | 110.2 | 113 | 108.3 | 109 | 109.4 | 103 | 116.6 | - |
| Norway | 30.0 | 131 | 23.3 | 84 | 24.0 | 98 | 26.6 | 118 | 18.4 | - |
| Poland | 30.1 | 64 | 31.1 | 66 | 30.6 | 74 | 33.9 | 79 | 34.5 | - |
| Portugal | 26.2 | 76 | 25.0 | 73 | 24.3 | 68 | 25.6 | 77 | 26.5 | - |
| Slovak Republic | 6.6 | 90 | 6.1 | 83 | 6.2 | 95 | 7.0 | 99 | 6.5 | - |
| Spain | 127.3 | 82 | 126.8 | 79 | 119.8 | 72 | 126.7 | 80 | 129.4 | - |
| Sweden | 31.1 | 88 | 31.5 | 87 | 33.8 | 93 | 32.0 | 88 | 35.1 | - |
| Switzerland | 37.5 | 138 | 37.8 | 135 | 36.3 | 131 | 37.1 | 147 | 38.0 | - |
| Turkey | 54.8 | 78 | 55.2 | 82 | 55.9 | 101 | 55.4 | 80 | 52.2 | - |
| United Kingdom | 101.6 | 56 | 101.4 | 56 | 104.1 | 60 | 102.2 | 56 | 102.3 | - |
| Total | 1297.3 | 83 | 1311.5 | 82 | 1303.5 | 84 | 1332.7 | 87 | 1332.6 | 85 |
| **Total OECD** | 3972.2 | 81 | 4018.5 | 80 | 4007.4 | 80 | 4007.5 | 83 | 4123.4 | 84 |
| **DAYS OF IEA Net Imports**[7] | - | 113 | - | 114 | - | 114 | - | 114 | - | 117 |

1 Total Stocks are industry and government-controlled stocks (see breakdown in table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.
2 Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used for the calculation of IEA Emergency Reserves.
3 End June 2005 forward demand figures are IEA Secretariat forecasts.
4 US figures exclude US territories.
5 Total includes US territories.
6 Data not available for Iceland.
7 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] controlled | Industry | Total | Government[1] controlled | Industry |
|---|---|---|---|---|---|---|
| | *Millions of Barrels* | | | *Days of Fwd. Demand*[2] | | |
| 2Q2002 | 3967 | 1316 | 2651 | 83 | 28 | 55 |
| 3Q2002 | 3898 | 1321 | 2577 | 79 | 27 | 52 |
| 4Q2002 | 3821 | 1345 | 2476 | 77 | 27 | 50 |
| 1Q2003 | 3787 | 1359 | 2428 | 80 | 29 | 51 |
| 2Q2003 | 3913 | 1362 | 2551 | 81 | 28 | 53 |
| 3Q2003 | 3981 | 1380 | 2600 | 80 | 28 | 52 |
| 4Q2003 | 3925 | 1408 | 2517 | 78 | 28 | 50 |
| 1Q2004 | 3886 | 1421 | 2466 | 81 | 30 | 51 |
| 2Q2004 | 3972 | 1426 | 2546 | 81 | 29 | 52 |
| 3Q2004 | 4018 | 1432 | 2586 | 80 | 28 | 51 |
| 4Q2004 | 4007 | 1444 | 2563 | 80 | 29 | 51 |
| 1Q2005 | 4007 | 1456 | 2551 | 83 | 30 | 53 |
| 2Q2005 | 4123 | 1492 | 2632 | 84 | 30 | 54 |

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 2Q2005 (when latest forecasts are used).

# Table 6

## IEA Member Country Destinations of Selected Crude Streams[1]

(million barrels per day)

| | 2002 | 2003 | 2004 | 3Q04 | 4Q04 | 1Q05 | 2Q05 | May 05 | Jun 05 | Jul 05 | Year Earlier Jul 04 | Year Earlier change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Saudi Light & Extra Light** | | | | | | | | | | | | |
| North America | 0.64 | 0.64 | 0.55 | 0.56 | 0.52 | 0.45 | 0.45 | 0.54 | 0.39 | 0.59 | 0.51 | 0.08 |
| Europe | 0.92 | 1.00 | 1.03 | 1.04 | 1.08 | 0.88 | 0.84 | 0.92 | 0.78 | 0.70 | 1.12 | -0.42 |
| Pacific | 1.22 | 1.18 | 1.24 | 1.23 | 1.47 | 1.40 | 1.22 | 1.29 | 1.20 | 1.24 | 1.23 | 0.01 |
| **Saudi Medium** | | | | | | | | | | | | |
| North America | 0.70 | 0.83 | 0.80 | 0.86 | 0.90 | 0.97 | 0.89 | 0.77 | 0.97 | 0.74 | 0.85 | -0.11 |
| Europe | 0.11 | 0.11 | 0.11 | 0.11 | 0.16 | 0.12 | 0.13 | 0.13 | 0.13 | 0.21 | 0.07 | 0.14 |
| Pacific | 0.16 | 0.24 | 0.23 | 0.18 | 0.23 | 0.21 | 0.24 | 0.23 | 0.21 | 0.25 | 0.16 | 0.09 |
| **Saudi Heavy** | | | | | | | | | | | | |
| North America | 0.20 | 0.30 | 0.22 | 0.30 | 0.26 | 0.18 | 0.15 | 0.20 | 0.15 | 0.26 | 0.27 | -0.01 |
| Europe | 0.09 | 0.19 | 0.23 | 0.31 | 0.20 | 0.19 | 0.20 | 0.18 | 0.23 | 0.21 | 0.33 | -0.12 |
| Pacific | 0.12 | 0.16 | 0.15 | 0.16 | 0.18 | 0.25 | 0.20 | 0.21 | 0.20 | 0.21 | 0.18 | 0.04 |
| **Iraqi Basrah Light[2]** | | | | | | | | | | | | |
| North America | 0.35 | 0.44 | 0.71 | 0.68 | 0.67 | 0.56 | 0.69 | 0.87 | 0.53 | 0.85 | 0.48 | 0.37 |
| Europe | 0.08 | 0.09 | 0.21 | 0.21 | 0.13 | 0.19 | 0.19 | 0.20 | 0.16 | 0.31 | 0.24 | 0.08 |
| Pacific | 0.02 | 0.03 | 0.12 | 0.12 | 0.15 | 0.07 | 0.06 | .. | 0.07 | 0.06 | 0.12 | -0.05 |
| **Iraqi Kirkuk** | | | | | | | | | | | | |
| North America | 0.14 | 0.06 | 0.02 | 0.01 | 0.01 | .. | .. | .. | .. | .. | .. | .. |
| Europe | 0.32 | 0.12 | 0.08 | 0.03 | 0.16 | 0.02 | 0.04 | 0.02 | 0.07 | 0.14 | .. | .. |
| Pacific | 0.00 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| **Iranian Light** | | | | | | | | | | | | |
| North America | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Europe | 0.17 | 0.19 | 0.24 | 0.23 | 0.27 | 0.23 | 0.15 | 0.17 | 0.08 | 0.11 | 0.21 | -0.10 |
| Pacific | 0.12 | 0.17 | 0.16 | 0.16 | 0.16 | 0.19 | 0.13 | 0.15 | 0.15 | 0.14 | 0.18 | -0.04 |
| **Iranian Heavy[3]** | | | | | | | | | | | | |
| North America | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Europe | 0.44 | 0.59 | 0.57 | 0.65 | 0.54 | 0.62 | 0.60 | 0.66 | 0.50 | 0.81 | 0.58 | 0.23 |
| Pacific | 0.54 | 0.69 | 0.65 | 0.58 | 0.63 | 0.76 | 0.59 | 0.61 | 0.49 | 0.58 | 0.58 | 0.00 |
| **Venezuelan Light & Medium** | | | | | | | | | | | | |
| North America | 0.68 | 0.69 | 0.67 | 0.64 | 0.63 | 0.78 | 0.88 | 0.98 | 0.78 | 0.74 | 0.64 | 0.09 |
| Europe | 0.08 | 0.02 | 0.01 | 0.02 | 0.01 | 0.02 | 0.03 | 0.01 | 0.05 | 0.01 | 0.03 | -0.02 |
| Pacific | 0.00 | 0.00 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| **Venezuelan 22 API and heavier** | | | | | | | | | | | | |
| North America | 0.55 | 0.60 | 0.88 | 0.86 | 0.95 | 0.83 | 0.82 | 0.76 | 0.75 | 0.68 | 0.94 | -0.26 |
| Europe | 0.05 | 0.06 | 0.05 | 0.06 | 0.04 | 0.06 | 0.06 | 0.05 | 0.06 | 0.07 | 0.09 | -0.02 |
| Pacific | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| **Mexican Maya** | | | | | | | | | | | | |
| North America | 0.92 | 1.32 | 1.36 | 1.34 | 1.37 | 1.30 | 1.36 | 1.41 | 1.40 | 1.09 | 1.30 | -0.21 |
| Europe | 0.17 | 0.16 | 0.16 | 0.20 | 0.13 | 0.18 | 0.17 | 0.22 | 0.17 | 0.13 | 0.21 | -0.07 |
| Pacific | 0.00 | 0.00 | 0.00 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| **Mexican Isthmus** | | | | | | | | | | | | |
| North America | 0.01 | 0.00 | .. | .. | .. | 0.01 | 0.00 | .. | 0.01 | .. | .. | .. |
| Europe | 0.01 | 0.00 | 0.01 | .. | 0.02 | 0.02 | 0.01 | .. | 0.03 | 0.03 | .. | .. |
| Pacific | 0.01 | 0.00 | 0.00 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| **Russian Urals** | | | | | | | | | | | | |
| North America | 0.03 | 0.14 | 0.12 | 0.12 | 0.21 | 0.14 | 0.14 | 0.03 | 0.05 | 0.20 | 0.26 | -0.06 |
| Europe | 1.32 | 1.62 | 1.86 | 1.78 | 1.56 | 1.72 | 1.91 | 2.21 | 1.53 | 1.57 | 1.84 | -0.28 |
| Pacific | 0.01 | 0.00 | 0.01 | 0.01 | .. | .. | 0.00 | .. | .. | 0.03 | 0.04 | 0.00 |
| **Nigerian Light[4]** | | | | | | | | | | | | |
| North America | 0.38 | 0.63 | 0.80 | 0.78 | 0.73 | 0.87 | 0.87 | 1.01 | 0.76 | 0.99 | 0.76 | 0.23 |
| Europe | 0.32 | 0.41 | 0.28 | 0.30 | 0.30 | 0.30 | 0.27 | 0.30 | 0.28 | 0.38 | 0.36 | 0.02 |
| Pacific | 0.06 | 0.08 | 0.11 | 0.09 | 0.13 | 0.06 | 0.06 | 0.06 | 0.07 | 0.10 | 0.08 | 0.02 |
| **Nigerian Medium** | | | | | | | | | | | | |
| North America | 0.16 | 0.17 | 0.23 | 0.22 | 0.20 | 0.18 | 0.22 | 0.13 | 0.31 | 0.13 | 0.27 | -0.14 |
| Europe | 0.06 | 0.06 | 0.04 | 0.05 | 0.02 | 0.07 | 0.04 | 0.06 | 0.06 | 0.06 | 0.03 | 0.03 |
| Pacific | 0.01 | 0.01 | 0.01 | .. | .. | 0.03 | 0.02 | 0.03 | .. | .. | .. | .. |

1 Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report.
IEA North America includes United States and Canada.
IEA Europe includes all countries in OECD Europe except Hungary, Poland and the Slovak Republic.
IEA Pacific data includes Australia, New Zealand, Korea and Japan.

2 Iraqi Total minus Kirkuk.

3 Iranian Total minus Iranian Light.

4 33 API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

# Table 7
## Regional OECD Imports[1,2]
(thousand barrels per day)

| | 2002 | 2003 | 2004 | 3Q2004 | 4Q2004 | 1Q2005 | 2Q2005 | May-05 | Jun-05 | Jul-05 | Year Earlier Jul-04 | Year Earlier % change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Crude Oil** | | | | | | | | | | | | |
| North America | 7584 | 8069 | 8394 | 8547 | 8442 | 8577 | 8615 | 8297 | 8942 | 8699 | 8689 | 0% |
| Europe | 8734 | 9096 | 9477 | 9701 | 9543 | 9695 | 9647 | 10153 | 9315 | 10187 | 9712 | 5% |
| Pacific | 6422 | 6711 | 6659 | 6457 | 6998 | 7166 | 6434 | 6645 | 6353 | 6948 | 6565 | 6% |
| Total OECD | 22740 | 23876 | 24531 | 24706 | 24984 | 25438 | 24696 | 25095 | 24610 | 25835 | 24966 | 3% |
| **LPG** | | | | | | | | | | | | |
| North America | 39 | 27 | 24 | 20 | 45 | 23 | 3 | 0 | 2 | 12 | 4 | 65% |
| Europe | 225 | 193 | 225 | 207 | 264 | 293 | 149 | 154 | 110 | 178 | 225 | -26% |
| Pacific | 553 | 541 | 541 | 469 | 561 | 532 | 591 | 604 | 549 | 547 | 493 | 10% |
| Total OECD | 817 | 760 | 790 | 697 | 870 | 848 | 743 | 758 | 660 | 737 | 722 | 2% |
| **Naphtha** | | | | | | | | | | | | |
| North America | 42 | 67 | 86 | 96 | 144 | 124 | 89 | 96 | 91 | 188 | 52 | 72% |
| Europe | 298 | 305 | 283 | 237 | 254 | 279 | 231 | 247 | 238 | 316 | 253 | 20% |
| Pacific | 705 | 770 | 769 | 787 | 748 | 772 | 759 | 741 | 746 | 674 | 771 | -14% |
| Total OECD | 1045 | 1142 | 1138 | 1120 | 1146 | 1175 | 1080 | 1083 | 1075 | 1178 | 1076 | 9% |
| **Gasoline[3]** | | | | | | | | | | | | |
| North America | 643 | 669 | 765 | 806 | 744 | 849 | 1006 | 999 | 1074 | 993 | 934 | 6% |
| Europe | 152 | 150 | 140 | 118 | 146 | 172 | 151 | 144 | 175 | 215 | 85 | 61% |
| Pacific | 58 | 70 | 105 | 90 | 106 | 95 | 130 | 141 | 138 | 99 | 87 | 12% |
| Total OECD | 853 | 888 | 1010 | 1014 | 997 | 1115 | 1286 | 1284 | 1387 | 1308 | 1106 | 15% |
| **Jet & Kerosene** | | | | | | | | | | | | |
| North America | 97 | 97 | 88 | 88 | 116 | 67 | 42 | 51 | 39 | 162 | 69 | 58% |
| Europe | 253 | 271 | 292 | 356 | 335 | 274 | 363 | 332 | 400 | 434 | 382 | 12% |
| Pacific | 97 | 102 | 77 | 52 | 103 | 97 | 72 | 80 | 57 | 45 | 62 | -36% |
| Total OECD | 448 | 470 | 456 | 496 | 554 | 438 | 476 | 463 | 496 | 641 | 512 | 20% |
| **Gasoil/Diesel** | | | | | | | | | | | | |
| North America | 102 | 126 | 122 | 108 | 91 | 110 | 93 | 113 | 87 | 72 | 118 | -64% |
| Europe | 656 | 652 | 751 | 770 | 875 | 931 | 699 | 639 | 702 | 737 | 781 | -6% |
| Pacific | 53 | 73 | 74 | 79 | 66 | 60 | 94 | 102 | 83 | 84 | 80 | 5% |
| Total OECD | 811 | 850 | 946 | 957 | 1033 | 1101 | 885 | 854 | 873 | 893 | 979 | -10% |
| **Heavy Fuel Oil** | | | | | | | | | | | | |
| North America | 237 | 326 | 388 | 346 | 524 | 489 | 435 | 394 | 479 | 533 | 335 | 37% |
| Europe | 470 | 398 | 408 | 441 | 404 | 415 | 552 | 539 | 479 | 506 | 440 | 13% |
| Pacific | 89 | 88 | 76 | 87 | 64 | 83 | 82 | 95 | 69 | 111 | 90 | 19% |
| Total OECD | 796 | 812 | 872 | 874 | 993 | 988 | 1069 | 1028 | 1027 | 1150 | 865 | 25% |
| **Other Products** | | | | | | | | | | | | |
| North America | 689 | 680 | 824 | 951 | 774 | 735 | 1061 | 1079 | 1258 | 1129 | 932 | 17% |
| Europe | 735 | 690 | 679 | 716 | 662 | 718 | 807 | 754 | 866 | 837 | 681 | 19% |
| Pacific | 256 | 235 | 256 | 261 | 252 | 254 | 248 | 208 | 228 | 246 | 233 | 5% |
| Total OECD | 1681 | 1605 | 1759 | 1927 | 1688 | 1708 | 2116 | 2041 | 2352 | 2212 | 1846 | 17% |
| **Total Products** | | | | | | | | | | | | |
| North America | 1849 | 1991 | 2297 | 2416 | 2439 | 2399 | 2728 | 2732 | 3029 | 3089 | 2443 | 21% |
| Europe | 2790 | 2657 | 2777 | 2845 | 2941 | 3083 | 2953 | 2810 | 2972 | 3223 | 2847 | 12% |
| Pacific | 1811 | 1879 | 1898 | 1825 | 1901 | 1894 | 1975 | 1970 | 1870 | 1806 | 1816 | -1% |
| Total OECD | 6451 | 6527 | 6973 | 7085 | 7281 | 7375 | 7656 | 7512 | 7871 | 8118 | 7105 | 12% |
| **Total Oil** | | | | | | | | | | | | |
| North America | 9434 | 10061 | 10691 | 10963 | 10881 | 10976 | 11343 | 11029 | 11971 | 11788 | 11132 | 6% |
| Europe | 11524 | 11753 | 12255 | 12546 | 12484 | 12777 | 12600 | 12963 | 12287 | 13411 | 12559 | 6% |
| Pacific | 8233 | 8590 | 8558 | 8282 | 8899 | 9059 | 8409 | 8615 | 8223 | 8754 | 8380 | 4% |
| Total OECD | 29190 | 30403 | 31503 | 31791 | 32264 | 32813 | 32352 | 32607 | 32481 | 33953 | 32071 | 6% |

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.

2 Excludes intra-regional trade

3 Includes additives

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## User's Guide to the IEA Oil Market Report

Readers are referred to the User's Guide, published in conjunction with the Annual Statistical Supplement (current issue dated 11 August 2005), for information on the data sources, definitions, technical terms and general approach used in preparing the Report. It should be noted that the spot crude and product price assessments are based on daily Platt's prices, converted when appropriate to US$ per barrel according to the Platt's specification of products (©2005 Platt's - a division of McGraw-Hill Inc.).



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