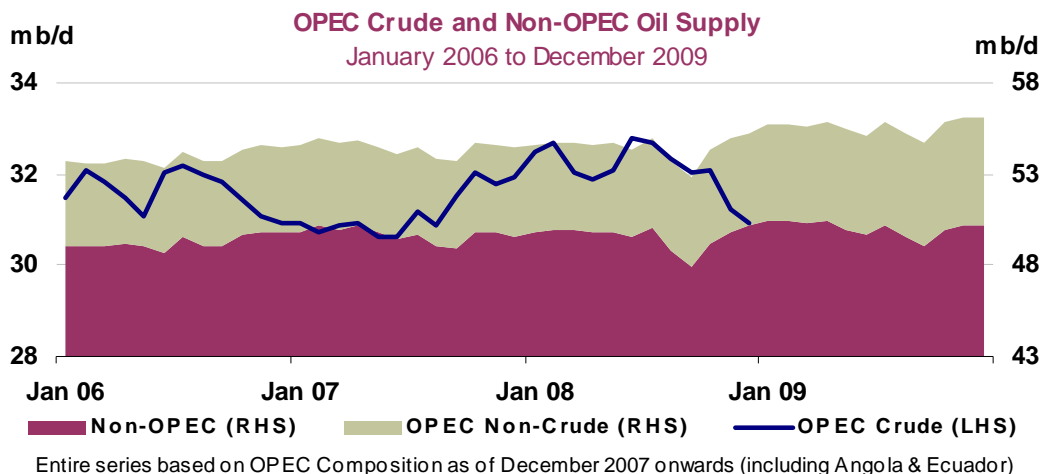


# SUPPLY

## Summary

- **Global oil supply was unchanged in December at 86.2 mb/d**, with reduced OPEC output offset by gains in OECD North America, Brazil and China. Year-on-year, monthly average production is down around 200 kb/d, largely due to recent OPEC production curbs having taken output well below December 2007 levels.
- **Non-OPEC forecasts for 4Q08 and 1Q09 are revised down by 140 kb/d and 90 kb/d, respectively**, following several oil field-related incidents and some project slippage in Brazil, China and Russia, though this is partly offset by a higher 4Q08 number for Norway.
- **Total non-OPEC output is now forecast at 49.5 mb/d and 50.0 mb/d for 2008 and 2009**, following downward revisions of 60 kb/d and 30 kb/d, respectively. This implies a year-on-year drop of nearly 150 kb/d for 2008, the first decline since 2005. Disrupted US and Azeri supply in 2008 was compounded by the first decline in Russian output since 1996. Renewed 2009 non-OPEC growth of around 0.5 mb/d derives from the Caspian, US ethanol, offshore GOM, Brazil and OECD and non-OECD Asia. Moreover, OPEC NGLs are forecast to add a further 0.6 mb/d to total supply in 2009.
- **December OPEC crude supply averaged 30.9 mb/d**, down 330 kb/d versus November. This was 1 mb/d below levels of both a year ago and those of September 2008, and almost 2 mb/d below mid-2008 highs. Supply curbs were widespread, most notably from Saudi Arabia and Kuwait, albeit partly offset by increases from Iran, the UAE and Iraq. OPEC Ministers agreed a new collective target of 24.8 mb/d effective from January. Leaving aside for now Indonesia's OPEC membership suspension, this equates to OPEC-13 output of around 28.2 mb/d, versus a now-reduced 2009 'call' of between 29.5-30.0 mb/d.



All world oil supply figures for December discussed in this report are IEA estimates. Estimates for OPEC countries, Alaska, and Russia are supported by preliminary December 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. Specific 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. In addition, from July 2007, a nationally allocated (but not field-specific) reliability adjustment has also been applied for the non-OPEC forecast to reflect a historical tendency for unexpected events to reduce actual supply compared with the initial forecast. This totals –410 kb/d for non-OPEC as a whole, with downward adjustments focused in the OECD.

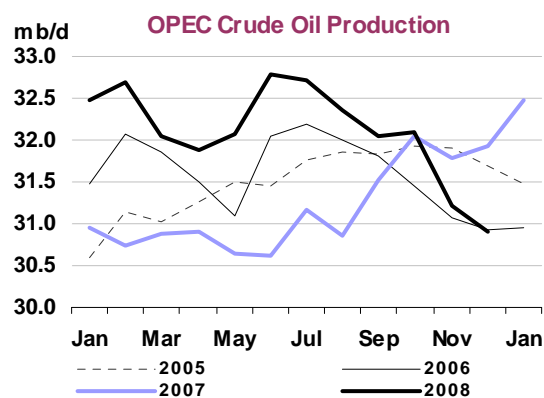
## OPEC Crude

OPEC crude supply in December averaged 30.9 mb/d, down 330 kb/d versus November. The December total was 1 mb/d below both levels of a year ago and our own estimate for September 2008, the apparent reference point for recent adjustments in OPEC target. It was, however, a more fulsome 2 mb/d below the recent high point in production attained in June 2008. December curbs in supply were widespread, and volumetrically most significant from Saudi Arabia and Kuwait. However, these cuts were partly offset by increases from Iran, the UAE and Iraq, with the latter two seeing, respectively, field recovery after maintenance and higher supplies for export in December.

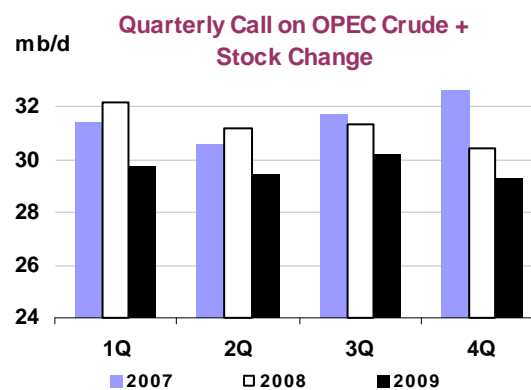
This month's installed OPEC capacity estimates remain unchanged from last month, totalling 35.8 mb/d. Nonetheless, as producers cut supply to keep pace with weakening demand, so spare capacity is inevitably freed up, potentially undermining OPEC's efforts to support prices. While notional spare capacity is approaching 5 mb/d, we think that readily available, effective spare capacity may be closer to 3.8 mb/d based on December production levels. This latter level excludes notional spare capacity held by producers who have, for some time, experienced problems boosting supply, namely Indonesia, Iraq, Nigeria and Venezuela (Indonesia's OPEC membership is suspended from January 2009, and remains in our estimates here, but will be removed from OPEC calculations in next month's report).

Regardless of the ambiguities of spare capacity, it is clear that if OPEC continues to reduce supply in early 2009, as looks likely, one side effect could be a wider margin of spare capacity, something that has tended in the past to eventually undermine OPEC attempts at production discipline. While lower prompt volumes appear to be placing a floor under prices currently, ironically the emergence of a wider capacity margin, if it begins to unravel production discipline, could dilute this support for prices. A Saudi Arabia-driven increase in OPEC installed capacity of nearly 1.0 mb/d is expected during 2009, potentially exacerbating the gap between early-year market demand and supply potential. That said, the immediate fact is that OPEC's target, if realised, lies below our underlying 'call on OPEC crude and stock change' for 2009 of 29.5-30.0 mb/d, so tighter stocks will accompany any rise in spare capacity.

We have trimmed our November estimate for **Saudi Arabia's** production from 9.05 mb/d to 8.9 mb/d, but struggle to corroborate lower third party November estimates of 8.5-8.8 mb/d with tanker tracking data. However, sharply lower supply does look more likely for December, and this is provisionally estimated at 8.45 mb/d. Term export allocations for January and February to Asian and North American destinations have also been cut sharply, with some suggestions in the market that output may have been curbed to 8.0 mb/d this month, and potentially as low as 7.7 mb/d for February. US buyers have seen the sharpest cuts for February. Already in December the Kingdom was producing within 5% of its *January* target, and concerns over global demand slowdown may already have pushed supply close to the Kingdom's 8.0 mb/d quota.



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

### More Credible Than It First Seemed?

A flurry of cuts to OPEC production targets for 4Q08 matched frequent GDP revisions from economic forecasters. OPEC Ministers on 17 December agreed a new collective production target of 24.8 mb/d, excluding Iraq and Indonesia, and effective from 1 January. Leaving aside for now Indonesia's departure from the OPEC fold, this is equivalent to total OPEC-13 output of around 28.2 mb/d, compared with our own, now markedly lower, 2009 'call on OPEC crude and stock change' of just under 30 mb/d. However, December supply stood 1 mb/d above expected demand for next year, with forward stock cover also above normal, in excess of 56 days' supply, something that OPEC has in its sights to reduce.

The OPEC meeting in Oran, Algeria on 17 December had been widely expected to agree further cuts in supply of up to 2.0 mb/d. In the event cuts totalling 4.2 mb/d were announced, although the reference point was OPEC's *Monthly Oil Market Report* assessment of September supply, specifically 29.05 mb/d for the OPEC-11 (excluding Iraq and Indonesia). Thus, new cuts over and above those supposedly in place from 1 November were closer to 2.2 mb/d. New individual production targets were not itemised. The decision to dress up a 2.2 mb/d cut as a 4.2 mb/d cut, however, appeared to backfire, with marker crude prices falling in the meeting's aftermath (albeit high US stocks also played a role). Continued weak economic indicators and further weekly builds in US inventories have continued to weigh on prices, although some renewed market support did come from the outbreak of conflict in Gaza, colder European weather, curbed Russian gas supplies and signs that OPEC cuts themselves were beginning to bite in late December/early January.

While individual production targets remain hazy, and it is too early to gauge compliance with the latest production accord (which only came into force on 1 January), the agreement to curb by 2.2 mb/d was nonetheless a record in terms of previous announced reductions. Evidence from December suggests that key members of OPEC are beginning to curb supply by significant amounts. Our estimate of December OPEC-11 production of 27.7 mb/d was within 2% of the 1 November target, something emphasised in a mid-January statement from the OPEC Secretary General which suggested that "... there has been an almost 100% compliance with the first two cuts...". Our calculations suggest, moreover, that December output was itself within 11% of the new January target of 24.8 mb/d.

#### OPEC Crude Production<sup>1</sup> (million barrels per day)

	OPEC est for Sep 2008 Supply	Nov 2008 Supply	Dec 2008 Supply	Sustainable Production Capacity <sup>2</sup>	Spare Capacity vs Dec 2008 Supply	November Target	Cut from 1 January 2009 <sup>6</sup>	Implied January Target <sup>6</sup>
Algeria	1.40	1.36	1.34	1.40	0.06	1.29	-0.20	1.20
Angola <sup>1</sup>	1.76	1.83	1.80	2.05	0.26	1.80	-0.26	1.51
Ecuador <sup>1</sup>	0.50	0.50	0.49	0.50	0.01	0.49	-0.07	0.43
Iran	3.90	3.76	3.88	4.00	0.12	3.62	-0.56	3.33
Kuwait <sup>3</sup>	2.60	2.59	2.51	2.65	0.14	2.40	-0.38	2.22
Libya	1.72	1.71	1.72	1.80	0.08	1.62	-0.25	1.47
Nigeria <sup>4</sup>	1.99	1.90	1.90	2.65	0.75	2.05	-0.29	1.70
Qatar	0.85	0.82	0.81	0.90	0.09	0.79	-0.12	0.73
Saudi Arabia <sup>3</sup>	9.37	8.90	8.45	11.00	2.55	8.47	-1.36	8.01
UAE	2.60	2.30	2.43	2.87	0.44	2.44	-0.38	2.23
Venezuela <sup>5</sup>	2.35	2.35	2.35	2.60	0.25	2.34	-0.34	2.01
<b>OPEC-11</b>	<b>29.05</b>	<b>28.01</b>	<b>27.67</b>	<b>32.42</b>	<b>4.75</b>	<b>27.31</b>	<b>-4.20</b>	<b>24.85</b>
Indonesia		0.85	0.84	0.85	0.01			
Iraq		2.37	2.39	2.50	0.11			
<b>Total OPEC</b>		<b>31.23</b>	<b>30.90</b>	<b>35.77</b>	<b>4.87</b>			
<i>(excluding Indonesia, Iraq, Nigeria, Venezuela</i>								
<i>3.75)</i>								

<sup>1</sup> Angola joins OPEC effective 1 January 2007, Ecuador from December 2007.

<sup>2</sup> Capacity levels can be reached within 30 days and sustained for 90 days.

<sup>3</sup> Includes half of Neutral Zone Production.

<sup>4</sup> Nigeria excludes some 0.5 mb/d of shut-in capacity.

<sup>5</sup> Includes Orinoco extra-heavy oil assumed at 530 kb/d in December.

<sup>6</sup> Cuts refer to OPEC's own estimate of September 2008 production

As usual however, there is variation in the degree of compliance among OPEC members, with Saudi Arabia and the UAE facing a requirement to cut by only a further 5-10% to attain target output (which they appear already to have done since December). Others such as Iran, Angola and Libya are facing more substantial cuts of 15-20% if target is to be attained. That said, most producers have announced further cuts in supplies for January and February. OPEC Ministers plan to meet again formally on 15 March in Vienna.

Demand uncertainty and cost issues have reportedly caused the cancellation of bids for the 75 kb/d upstream Dammam project and have forced a review also of the 900 kb/d Manifa field development. However, Saudi sources have been keen to reiterate that short-term plans for 12-12.5 mb/d capacity to be attained during 2009 remain in place. This report estimates current installed Saudi Arabian crude capacity (excluding condensates and Bahrain's 150 kb/d share of output from the Abu Safah field) at 11.0 mb/d.

The hijacking of a 2 mb cargo of Saudi crude aboard Vela's Sirius Star tanker reportedly ended on 9 January, after a near-two month standoff. The vessel was freed off the Somalia coast amid reports that a \$3 million ransom had been paid. A surge in hijacking around the Horn of Africa and the Gulf of Aden has seen the formation of an international task force of vessels from 20 nations to combat piracy in the area.

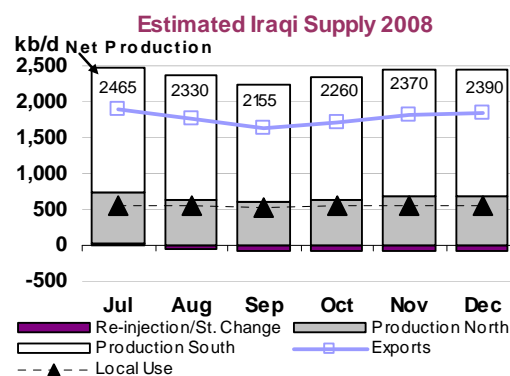
**Kuwait** is thought to have cut supply by some 80 kb/d in December to 2.5 mb/d. The emirate's approach to curbing supplies has initially involved the removal of 5% upside tolerance from term export liftings. Full-term volumes were offered for January in early December, again with tolerance removed, but reportedly liftings from the third week of January onwards will be curbed by a further 5%.

**Angolan** crude production is now estimated at 1.83 mb/d for November and 1.8 mb/d for December. While last month saw production fall into line with the country's November target, it still remained above the new implied January target of 1.51 mb/d. International operators were reportedly instructed by state company Sonangol to curb production from 1 January, although preliminary data showing revised February export schedules around 1.6 mb/d suggest Angola still has some way to go to get down to its January OPEC allocation.

In contrast, December **UAE** crude supply is estimated up by 130 kb/d from November to 2.43 mb/d, amid signs of higher tanker sailings and the expected return of the Umm Shaif and Lower Zakum fields from October/November maintenance. These indicators likely countered lower output of onshore Murban crude to push December output higher. Here too though, January and February availability looks likely to be scaled back, following December's reduction of the Emirates' OPEC quota to around 2.2 mb/d.

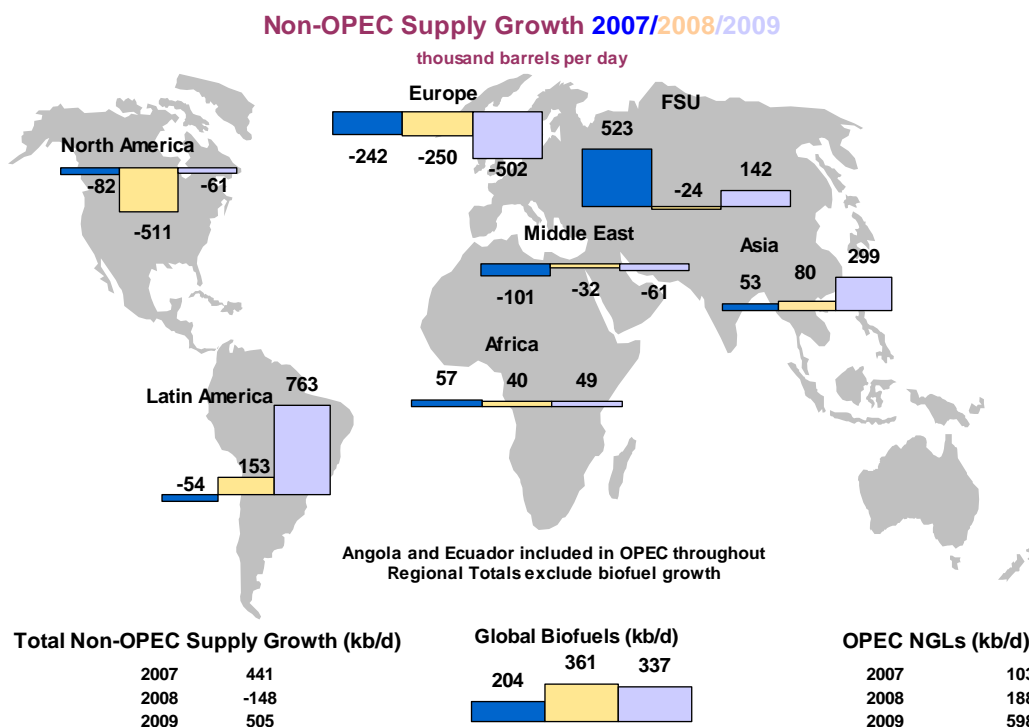
**Iranian** December supply is also assessed up by 120 kb/d from November at 3.88 mb/d based on preliminary indications for both exports and domestic refinery activity. This suggests Iran would need to cut supply by a sizeable 560 kb/d starting in January to match its target output level of 3.33 mb/d. Although no curbs on December export loadings were made public, Iran does appear to have been scaling back liftings on both a spot and term basis for both January and February, and has itself cited cuts in supply of around 550 kb/d that it intends to make from January.

**Iraqi** supply in December is estimated up by 20 kb/d compared with November, at 2.39 mb/d, comprising 1.84 mb/d of exports and 550 kb/d of local use. Our November supply estimate was revised up 40 kb/d to 2.37 mb/d, largely on the basis of higher Ceyhan exports than preliminary data had suggested. In the event, 10.1 mb of Kirkuk crude left Ceyhan by tanker in November plus around 625 kb of pipeline crude destined for Turkey's Kirikkale refinery. Tanker liftings from Ceyhan rose to 10.9 mb in December, although no crude moved to Kirikkale. Crude exports from southern ports averaged 1.48 mb/d in December compared with 1.45 mb/d in November. Around 20 kb/d is estimated to have moved cross-border to Jordan and Syria in both months.



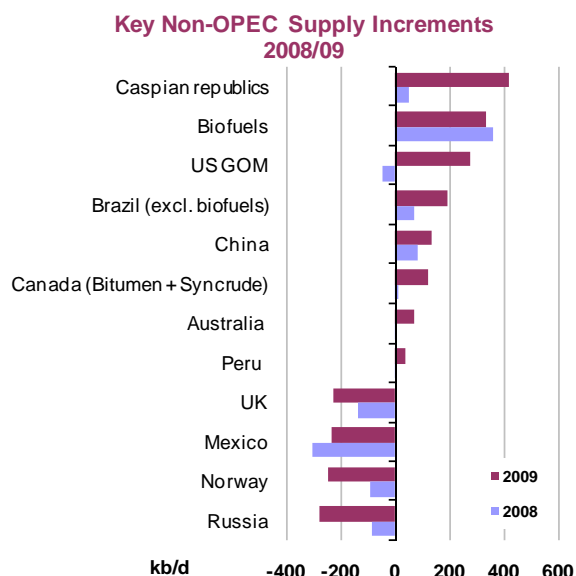
## Non-OPEC Overview

Forecast total non-OPEC production for 4Q08 and 1Q09 has been revised down by 140 kb/d and 90 kb/d respectively, with unscheduled outages and project slippage recorded across most regions, both OECD and non-OECD. An historical downward revision to Sudan is carried through 2008 and into 2009. Some key start-ups in Brazil, China and Russia (Sakhalin-2 year-round export capability) have been delayed, while we have nudged down growth in Russia, New Zealand and Kazakhstan for 2009. Offsetting these changes is a substantially higher 4Q08 figure for Norway, which stems in part from higher actual data, but also from the deduction of our field reliability adjustment factor, now that the end of the year has passed without major incidents.



Total non-OPEC output is now set to come in at 49.5 mb/d and 50.0 mb/d for 2008 and 2009, following downward revisions of 62 kb/d and 34 kb/d respectively. This in turn implies a year-on-year dip of almost 150 kb/d for 2008, the first decline since 2005. Non-OPEC supply in 2009 is currently expected to grow by just over 500 kb/d on the back of large start-ups in the Caspian, US fuel ethanol, the US Gulf of Mexico and Brazil as well as both OECD and non-OECD Asia. 2008 is probably most notable as the first year in which Russian production has declined since 1996 (when it was down 130 kb/d), as economic and fiscal conditions for investment worsened, slowing the pace of new projects. Our current outlook also forecasts a further decline in Russian 2009 production of 280 kb/d.

It is still too early to form a definitive view on the extent of cuts in capital expenditure or strategic project slippage due to the combined impact of the financial crisis, a contraction in oil demand and



significantly lower oil prices. Many companies have only just started to outline their capex plans for this year and beyond.

However, anecdotally the message is fairly stark, even if the impact may be felt more squarely on future, rather than 2009, production. For example, Singapore rig builder Keppel has announced that two orders for new rigs have been cancelled as a result of the credit squeeze. We note elsewhere Saudi Arabia's slipping of two of its next generation of capacity expansion projects, and more generally, analysts at Barclays Capital now expect 2009 upstream capex worldwide to contract by 12% after several years of double-digit growth. Lower oil prices and the credit squeeze are likely to have played a greater role than a somewhat lagged reduction in project costs in driving this decrease. We will continue to track these developments in the months ahead.

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

	Last month's OMR				This month's OMR				Change			
	2008	2009	08 v 07	09 v 08	2008	2009	08 v 07	09 v 08	2008	2009	08 v 07	09 v 08
North America	13.95	14.03	-0.32	0.08	13.94	14.04	-0.33	0.10	-0.01	0.01	-0.01	0.02
Europe	4.69	4.19	-0.26	-0.49	4.72	4.22	-0.24	-0.49	0.03	0.03	0.03	0.00
Pacific	0.66	0.75	0.03	0.10	0.65	0.73	0.02	0.09	-0.01	-0.02	-0.01	-0.01
<b>Total OECD</b>	<b>19.30</b>	<b>18.98</b>	<b>-0.55</b>	<b>-0.32</b>	<b>19.30</b>	<b>19.00</b>	<b>-0.54</b>	<b>-0.31</b>	<b>0.01</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>
Former USSR	12.77	12.97	0.00	0.20	12.74	12.89	-0.02	0.14	-0.02	-0.08	-0.02	-0.06
Europe	0.12	0.11	-0.01	-0.01	0.12	0.11	-0.01	-0.01	0.00	0.00	0.00	0.00
China	3.81	3.92	0.09	0.11	3.81	3.95	0.08	0.14	0.00	0.02	0.00	0.03
Other Asia	2.63	2.70	-0.03	0.07	2.64	2.71	-0.03	0.08	0.01	0.01	0.01	0.01
Latin America	4.02	4.32	0.17	0.30	4.02	4.33	0.16	0.31	-0.01	0.01	-0.01	0.02
Middle East	1.61	1.55	-0.03	-0.06	1.61	1.55	-0.03	-0.06	0.00	0.00	0.00	0.00
Africa*	2.63	2.66	0.08	0.02	2.59	2.64	0.04	0.05	-0.04	-0.01	-0.04	0.03
<b>Total Non-OECD*</b>	<b>27.60</b>	<b>28.23</b>	<b>0.26</b>	<b>0.63</b>	<b>27.53</b>	<b>28.18</b>	<b>0.19</b>	<b>0.65</b>	<b>-0.07</b>	<b>-0.05</b>	<b>-0.07</b>	<b>0.02</b>
Processing Gains	2.24	2.29	0.07	0.04	2.24	2.29	0.07	0.04	0.00	0.00	0.00	0.00
Other Biofuels	0.46	0.58	0.13	0.12	0.46	0.58	0.13	0.12	0.00	0.00	0.00	0.00
<b>Total Non-OPEC*</b>	<b>49.60</b>	<b>50.08</b>	<b>-0.09</b>	<b>0.48</b>	<b>49.54</b>	<b>50.04</b>	<b>-0.15</b>	<b>0.51</b>	<b>-0.06</b>	<b>-0.03</b>	<b>-0.06</b>	<b>0.03</b>

OMR = Oil Market Report

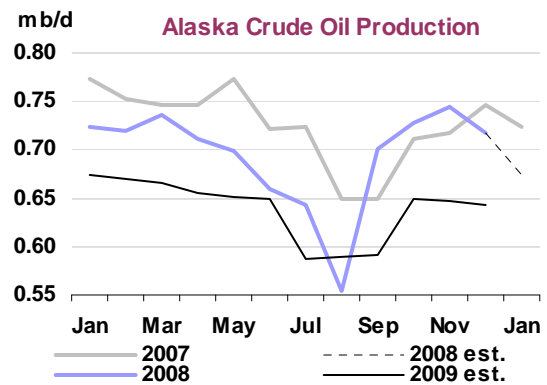
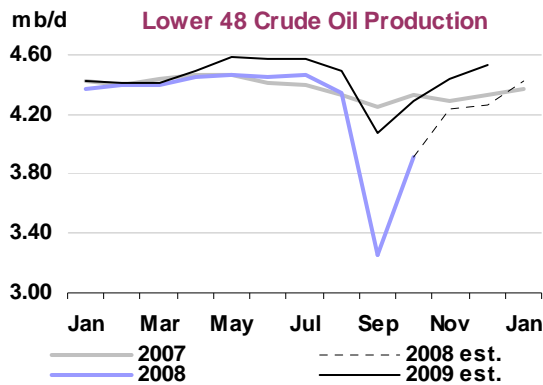
\* adjusted to exclude Angola and Ecuador throughout

## OECD

### North America

**US – December Alaska actual, others estimated:** December supply in the US came in 70 kb/d lower than expected, based on preliminary data. A brief outage shut in the Trans-Alaska Pipeline (TAPS) at the end of December, forcing a slowing of production, but this was rapidly resolved. Despite the outage, final Alaskan December numbers actually came in around 50 kb/d higher than anticipated, but still fell by nearly 30 kb/d on the month. In the US Gulf of Mexico, we have now assumed a slightly earlier start-up of BP's huge Thunder Horse platform, which we assume to be currently running at around 100 kb/d liquids production. We have also assumed the start-up of Eni's Pegasus field in the Green Canyon area, though this is running at only 1 kb/d of its expected eventual 5 kb/d capacity. Adjustments elsewhere however partly offset the impact of these revisions, resulting in 4Q08 and 1Q09 revisions of -30 kb/d and 30 kb/d respectively, but almost no net change for the two years as a whole.

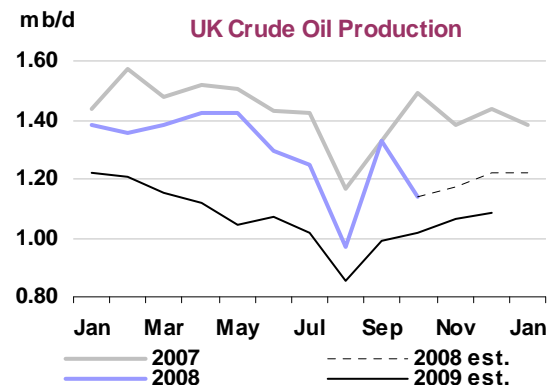
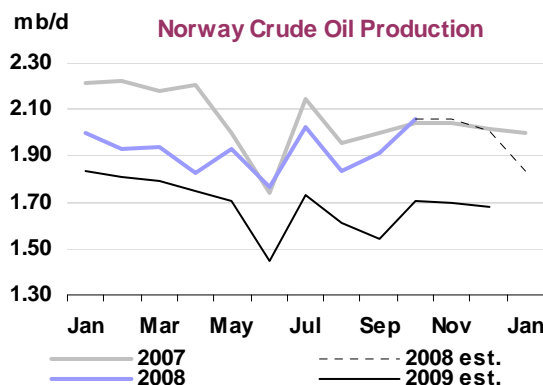
According to the US Minerals Management Service (MMS), nearly 200 kb/d of US Gulf of Mexico production was still shut-in in December due to hurricane damage. Our working assumption is that this daily volume will stay shut in until the end of March, by which time repairs to infrastructure should have been completed.



**Canada – Newfoundland November actual, others October actual:** Newest data for October and November brought slight downward revisions of 34 kb/d and 15 kb/d respectively, though this is marginal for yearly production. Looking forward, producer group the Canadian Association of Petroleum Producers (CAPP) has trimmed its forecast for Albertan oil sands to 1.22 mb/d for 2008 and 1.44 mb/d in 2009 – each revised down by 90 kb/d. Our corresponding numbers currently stand at 1.22 mb/d and 1.34 mb/d respectively.

## North Sea

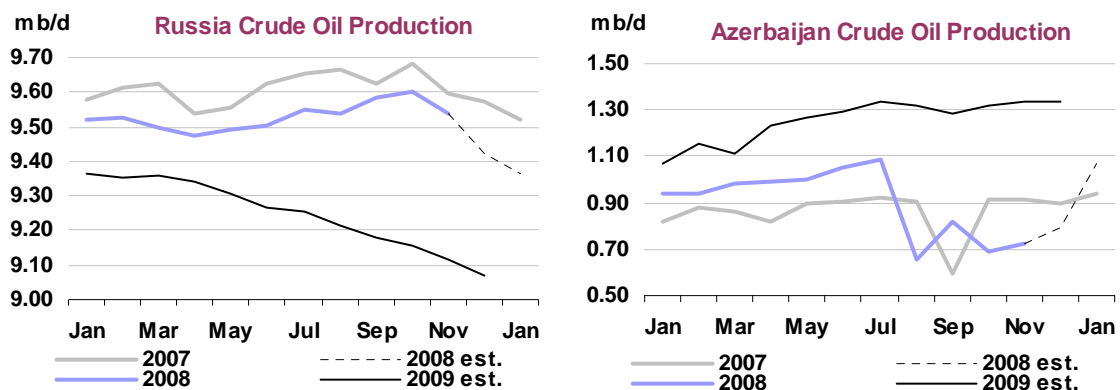
**Norway – November actual:** Total October Norwegian output was trimmed by 20 kb/d, while November production was raised by 170 kb/d, leading to a higher 4Q08 total figure of 2.56 mb/d. The latter adjustment however once again stems from the removal of our assumed field reliability factor, which we currently hold at -160 kb/d. Thus, the upward-revised November figure is not carried forward further than December, which also sees a higher figure (+200 kb/d). Year-on-year, we now see 2008 and 2009 each around 30 kb/d higher than in the last report at 2.47 mb/d and 2.23 mb/d respectively, thus implying a downturn next year of 240 kb/d.



## Former Soviet Union (FSU)

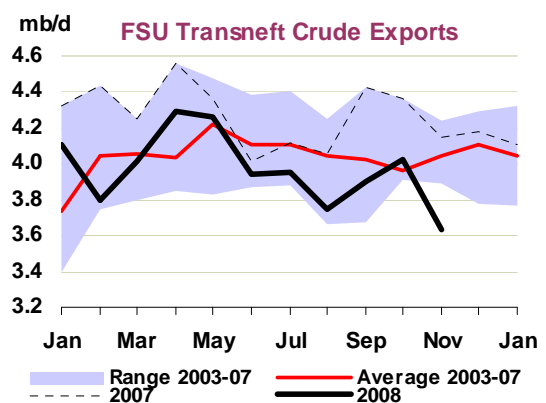
**Russia – November actual, December provisional:** Russian November and December data were revised down sharply, largely on the assumption that Sakhalin-2 year-round exports, due to start in late November, are running at far lower daily volumes than previously assumed. We have carried this forward into early 2009, after which new infrastructure should see production ramp up to a total of 150 kb/d by year end. Preliminary December figures for total Russian oil also indicate a downward revision of around 200 kb/d, some of which may be related to lower exports due to prohibitively high export duties (though this has been reformed subsequently).

Overall, end-year figures, albeit provisional, now clearly indicate a year-on-year decline for Russian oil production, its first since 1996. We now see total Russian supply at 10 mb/d in 2008. Looking ahead, we have also nudged down 2009 production on the basis of less optimistic company forecasts as well as the slower-than-anticipated Sakhalin-2 ramp-up. Thus our 2009 total Russian supply figure now stands at 9.7 mb/d, implying a yearly fall of 280 kb/d. However, declining Russian output would appear to be due more to a punitive fiscal and regulatory regime, which is impeding investment, rather than to voluntary output curbs in support of OPEC.



**Azerbaijan – October actual:** Azeri production numbers for October and the rest of the year are raised due to upward-revised SOCAR output data and an assumed faster restart of the Central Azeri offshore platform. The latter is part of the ACG complex which suffered outages due to a gas leak in the autumn. Thus 4Q08 production is upped by nearly 70 kb/d, followed by an additional 20 kb/d spread over next year. With an assumed 370 kb/d increment expected in 2009, Azerbaijan is one of the key growth areas for non-OPEC production, with total output rising to 1.26 mb/d, from 0.9 mb/d in 2008.

**November FSU net exports** fell to 8.11 mb/d as a 110 kb/d rise in product exports was not enough to offset a 290 kb/d drop in crude oil exports to 5.64 mb/d. Prohibitively high Russian crude export duties, which lagged the fall in oil prices, were the main factor behind the decrease. In order to avoid losses, exporting companies shifted cargoes scheduled to be loaded in the second half of November to the beginning of December, which resulted in the lowest crude oil export levels from Russia in almost five years. Black Sea ports were hit hardest by this decision as exports from Novorossiysk and Pivdenne decreased by 22% and 72%, respectively from October, which is more than the seasonal dip. Shipments to Baltic ports and via the BTC, however, increased compared with October, though part of this was due to resolution of previous production problems at Azeri oilfields and maintenance on the pipeline leading to Primorsk.



Product exports rose to 2.53 mb/d in November led by a 9% increase in deliveries of gasoil, notably deliveries of 10 ppm diesel to Europe. Fuel oil and other product exports rose by 2% and 3%, respectively.

According to preliminary numbers, December FSU crude oil exports increased sharply as the Russian crude export duty was cut to \$26/bbl from 1 December and cargoes originally scheduled for November finally left ports. Transneft reported a 17.8% increase in Russian crude oil exports in December. Exports of Caspian crude via the BTC pipeline also rose sharply in December, close to 800 kb/d levels seen ahead of pipeline and field outages from August onwards. The export duty has been cut further in January to

\$16/bbl, though Transneft's pipeline tariffs increased. Nonetheless, January loading schedules show exports contracting by 8% as compared with December loading schedules.

### FSU Net Exports of Crude & Petroleum Products

(million barrels per day)

	2006	2007	4Q2007	1Q2008	2Q2008	3Q2008	Sep 08	Oct 08	Nov 08	Latest month vs. Oct 08 Nov 07	
<b>Crude</b>											
Black Sea	2.22	2.18	2.10	1.97	2.26	1.99	1.88	2.22	1.99	-0.23	-0.04
Baltic	1.55	1.59	1.61	1.41	1.57	1.40	1.47	1.32	1.42	0.10	-0.07
Arctic/FarEast	0.15	0.32	0.31	0.27	0.28	0.35	0.37	0.44	0.31	-0.13	0.00
BTC	0.00	0.55	0.61	0.71	0.75	0.63	0.71	0.38	0.60	0.22	-0.06
<b>Crude Seaborne</b>	<b>4.07</b>	<b>4.63</b>	<b>4.62</b>	<b>4.35</b>	<b>4.86</b>	<b>4.38</b>	<b>4.43</b>	<b>4.36</b>	<b>4.31</b>	<b>-0.05</b>	<b>-0.18</b>
Druzhba Pipeline	1.20	1.13	1.13	1.14	1.07	1.05	1.07	1.12	1.04	-0.09	-0.12
Other Routes	0.38	0.44	0.43	0.40	0.43	0.44	0.47	0.44	0.30	-0.15	-0.14
<b>Total Crude Exports</b>	<b>5.64</b>	<b>6.20</b>	<b>6.18</b>	<b>5.89</b>	<b>6.36</b>	<b>5.86</b>	<b>5.97</b>	<b>5.93</b>	<b>5.64</b>	<b>-0.29</b>	<b>-0.43</b>
Of Which: Transneft	4.22	4.27	4.23	3.97	4.17	3.87	3.90	4.02	3.63	-0.39	-0.52
<b>Products</b>											
Fuel oil	0.95	1.10	1.08	1.16	1.11	1.04	0.98	1.02	1.04	0.02	-0.08
Gasoil	0.95	0.95	0.96	1.06	1.02	0.79	0.74	0.83	0.90	0.07	0.03
Other Products	0.61	0.60	0.56	0.64	0.60	0.57	0.54	0.57	0.58	0.02	0.01
<b>Total Product</b>	<b>2.51</b>	<b>2.65</b>	<b>2.60</b>	<b>2.86</b>	<b>2.73</b>	<b>2.40</b>	<b>2.26</b>	<b>2.42</b>	<b>2.53</b>	<b>0.11</b>	<b>-0.04</b>
<b>Total Exports</b>	<b>8.16</b>	<b>8.85</b>	<b>8.78</b>	<b>8.75</b>	<b>9.08</b>	<b>8.26</b>	<b>8.23</b>	<b>8.35</b>	<b>8.17</b>	<b>-0.18</b>	<b>-0.47</b>
Imports	0.04	0.04	0.04	0.05	0.03	0.05	0.06	0.04	0.06	0.02	0.02
<b>Net Exports</b>	<b>8.12</b>	<b>8.82</b>	<b>8.74</b>	<b>8.71</b>	<b>9.05</b>	<b>8.21</b>	<b>8.17</b>	<b>8.31</b>	<b>8.11</b>	<b>-0.20</b>	<b>-0.49</b>

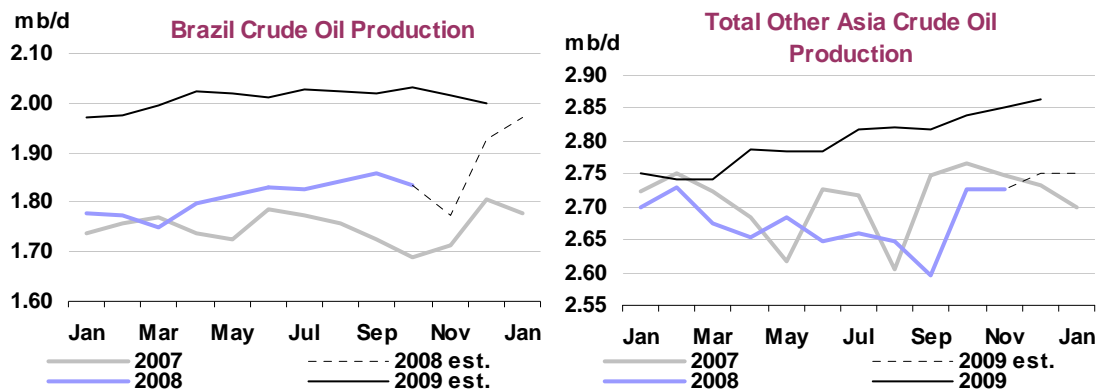
Sources: Petro-Logistics, IEA estimates

Note: Transneft data has been revised to exclude Russian CPC volumes.

For the longer term, the Caspian Pipeline Consortium's shareholders have signed an agreement on the expansion of the CPC pipeline after BP, who was opposing the scheme, agreed to sell its stake. The project should raise the capacity of the pipeline, which runs from the Tengiz oil field in Kazakhstan across Russia to Novorossiysk on the Black Sea, from around 750 kb/d to over 1.30 mb/d by 2013.

## Other Non-OPEC

**Brazil – October actual:** Brazilian production data for October came in some 36 kb/d higher than anticipated, though on a quarterly basis this was more than offset by the later-than-anticipated start-up of Petrobras's new Marlim Leste P-53 platform offshore in the Campos Basin in early December. The platform had delayed first production several times from an original start-up estimate of 2007 and we most recently had included initial volumes from October 2008. Meanwhile, a failed valve at the Jubarte field's P-34 platform briefly halted production in early January, though news reports indicate this was not long lasting and we have not carried through the outage further than January. We now see total Brazilian oil production at 2.27 mb/d in 2008, rising by around 250 kb/d to just over 2.5 mb/d in 2009.



**Non-OECD Asia:** **China** saw the start-up of its first commercial coal-to-liquids (CTL) plant in December, but at a negligible volume and only gradually ramping up by end-2009. Shenhua's plant in Inner Mongolia has a capacity of 20 kb/d. This is one of two CTL projects to go ahead in China, after more ambitious plans for a higher number of plants was scaled down last year. Elsewhere in China, we have noted the delay in the start-up of the offshore Penglai 2 increment, which also commenced ramp-up around end-year rather than the previously assumed September. A new FPSO should add around 50 kb/d by end-2009. **Vietnam** meanwhile saw the start-up of the offshore Song Doc field in December, again delayed several times over the course of 2008. We are assuming a gradual ramp-up to maximum production of 25 kb/d by mid-2009. In the **Philippines**, the recently inaugurated Galoc field was shut-in in late December, when its FPSO was disconnected due to bad weather. It is due to come online again by end-January. Lastly, actual production figures for **India** in November came in around 20 kb/d, slightly higher than expected at 830 kb/d in November. Total non-OECD Asian production (including China) in 2008 is forecast at 6.45 mb/d, set to rise to 6.66 mb/d in 2009.

**Sudan:** A reassessment of Sudanese production on the basis of new statements by the Oil Ministry led us to revise down 2008 numbers by an average of 40 kb/d. Carrying this through to around mid-year implies a downward revision for 2009 of a further 15 kb/d. Ongoing violence, project slippage, a lack of investment and a partial sanctions regime would appear to be curbing previously announced expansion plans. Overall, output is now seen averaging 480 kb/d in 2008 and 500 kb/d in 2009.

## OPEC NGLs

Around 30 kb/d is trimmed from estimated OPEC NGL and condensate production for the second half of 2008, spread across the UAE, Indonesia and Angola. The same countries see a collective 65 kb/d cut from forecast 2009 NGL production. These adjustments follow downward revisions made last month for Nigeria, Qatar and Saudi Arabia and reflect the likelihood of lower associated gas production and some slippage for LNG expansions. That said, OPEC gas liquids still increase from 5.0 mb/d in 2008 to nearly 5.6 mb/d in 2009 as expanding non-associated gas output and burgeoning domestic gas requirements to some extent insulate OPEC gas expansion from the more sluggish market affecting crude in 2009.