



Fun With Funds and Fundamentals
The Outlook for Oil Markets in 2006:
Undoing the 2005 Damage

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Energy Intelligence Group

Key Oil Market Developments

- **Short Term Factors**

- ◆ **Geopolitics**
- ◆ **Weather, demand elasticities**
- ◆ **Non-Opec's Recovery**
- ◆ **Opec holding action**

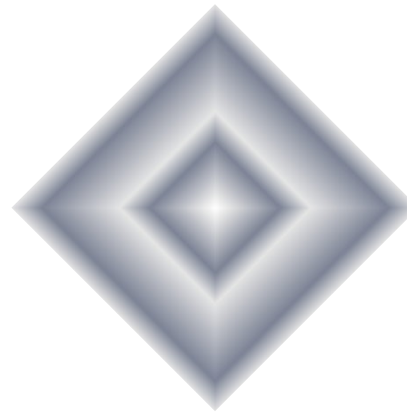
- **Medium Term Influences**

- ◆ **Non-OECD demand growth and mix**
- ◆ **Opec upstream capacity additions**
- ◆ **New and better refineries**

Oil Market Force Diamond

Geopolitics, Weather
Past, Present and Future

“Demand Destruction”
vs. Price Elasticity



“Peak Oil”
vs. Non-Opec Plateau

“China Thesis”

Q: What's This Diamond Worth?

A: \$55-\$65 per barrel

Geopolitics Stay in the Forefront

- **Nigeria**
 - ◆ history is for sporadic not major outages
 - ◆ this disruption better organized, conditions ripe for generalized strife
 - ◆ Shell's Bonga helps
- **Iran**
 - ◆ leadership less pragmatic, threat could last
 - ◆ impact on oil market probably slow to come
- **Others**
 - ◆ Russia, Venezuela, West Africa

Weather: Past, Present & Future

- **Past**

- ◆ Recovering from Katrina and Rita
- ◆ Mild autumn, late winter

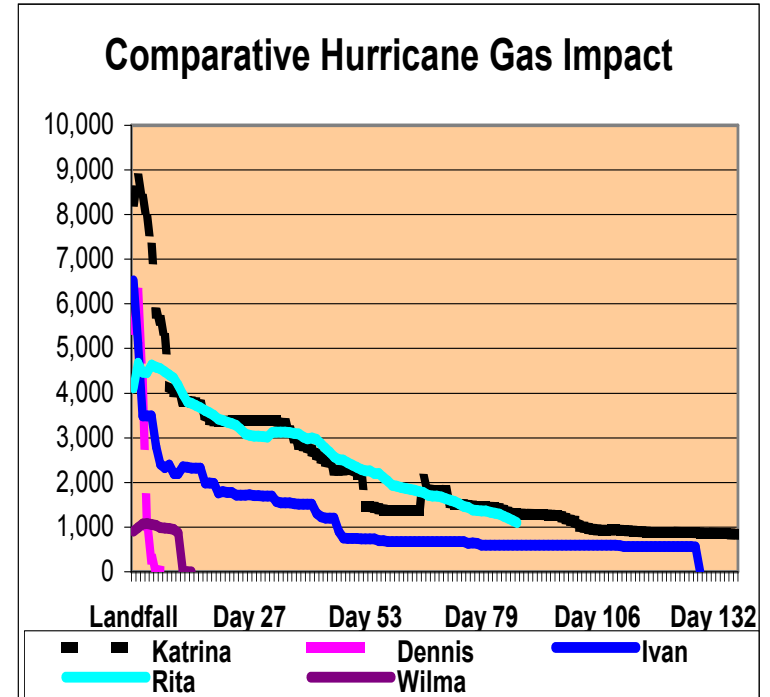
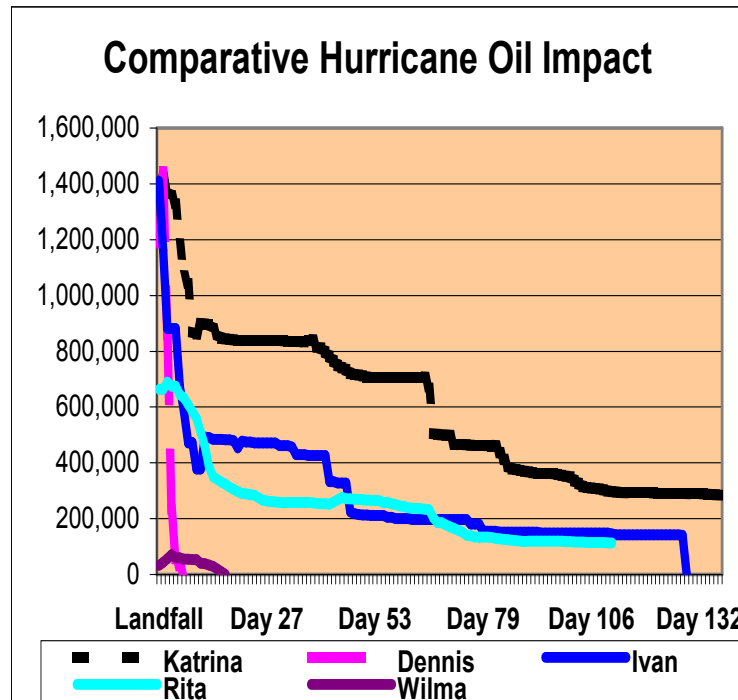
- **Present**

- ◆ Late harsh winter? (beyond Russia, Japan)
- ◆ North Sea storms

- **Future**

- ◆ Severe storms again this year?
- ◆ Global warming responses

Hurricane Impacts



- Easy part of recovery may be over
 - destroyed platforms, processing plants not coming back
 - delayed new field start-ups
 - rig retrofits

Short-Term Demand

- **“Demand destruction” argument about over**
- **US rebound part downstream restocking**
 - ◆ hurricane impacts on pipes, plant = downstream stockdraws
- **Reconstruction boom likely in 2006, strong economy**
 - ◆ $GDP = C + I + G$; this year US big help from “G”
- **Price-related demand erosion softens non-OECD rise**
 - ◆ removal of price caps/subsidies in developing countries in Asia
 - ◆ less help from weak dollar
- **A few demand wild cards**
 - ◆ unexpectedly late cold Northern Hemisphere weather
 - ◆ bird flu effects in Asia and elsewhere

OECD a Bit Better, Still Sluggish

2006 OECD Demand							Changes	
million b/d	Q1'06	Q2'06	Q3'06	Q4'06	2006	2006	2005	
North America	25.85	25.57	26.03	26.26	25.93	+0.45	+0.15	
US	21.09	20.87	21.37	21.52	21.21	+0.40	+0.08	
Canada	2.05	2.11	2.06	2.08	2.07	+0.03	+0.08	
Mexico	2.37	2.25	2.26	2.32	2.30	+0.02	-0.02	
US Terr.	0.35	0.34	0.34	0.34	0.35	-0.01	+0.01	
Europe	15.64	15.35	15.75	15.86	15.65	+0.08	-0.05	
Big Four	8.16	8.04	8.31	8.18	8.18	-0.01	-0.15	
Other Europe	7.48	7.31	7.44	7.68	7.48	+0.09	+0.10	
Asia-Pacific	9.56	8.15	8.16	8.88	8.68	+0.07	+0.08	
Japan	6.08	5.04	5.10	5.57	5.45	+0.05	+0.05	
Korea	2.42	2.04	2.02	2.20	2.17	+0.01	+0.01	
ANZ	1.06	1.07	1.04	1.11	1.07	+0.02	+0.02	
Total OECD	51.06	49.08	49.94	51.00	50.27	+0.60	+0.17	

Source: Oil Market Intelligence

Non-OECD Back on the High Road

2006 Non-OECD Demand

<i>Non-OECD</i>							Changes	
million b/d	Q1'06	Q2'06	Q3'06	Q4'06	2006	2006	2005	
Non-OECD Asia	14.33	14.28	14.22	14.73	14.39	+0.56	+0.52	
China	6.80	6.70	6.85	7.11	6.87	+0.37	+0.26	
India	2.70	2.60	2.47	2.59	2.59	+0.08	+0.10	
Other Asia*	4.83	4.98	4.91	5.04	4.94	+0.11	+0.15	
Opec	7.80	7.76	7.96	7.89	7.85	+0.20	+0.37	
Other Non-OECD	12.13	12.58	12.37	12.26	12.33	+0.19	+0.16	
Total Non-OECD	34.26	34.62	34.56	34.87	34.58	+0.95	+1.05	
Global Demand	85.32	83.70	84.50	85.87	84.85	+1.56	+1.22	

* excluding Indonesia.

Source: Oil Market Intelligence

Short-Term Supply

- **2005 special factors inhibited supply**
 - ◆ Hurricanes Katrina & Rita plus 5 smaller others
 - ◆ leaks at offshore fields in No. Sea, Canada, Mars
 - ◆ fire at Suncor oil sands plant
- **2006 non-Opec supply spurt, last hurrah**
- **Opec capacity additions under way**
 - ◆ Saudi Arabia, Nigeria, Kuwait, Libya, Algeria

The 2006 Non-Opec Surge

- **What it is not:**

- ◆ not a price responses
- ◆ not policy driven – by governments or companies
- ◆ not the beginning of a trend

- **What it is:**

- ◆ primarily undoing 2004-05 impacts
 - hurricanes, North Sea problems & field delays
- ◆ bunching up of new field start-ups
 - US Gulf, Brazil, West Africa, Caspian (BTC line)
- ◆ limiting the Yukos damage in Russia

2006 Bounce, A Last Hurrah?

2006 Non-Opec Oil Production Outlook

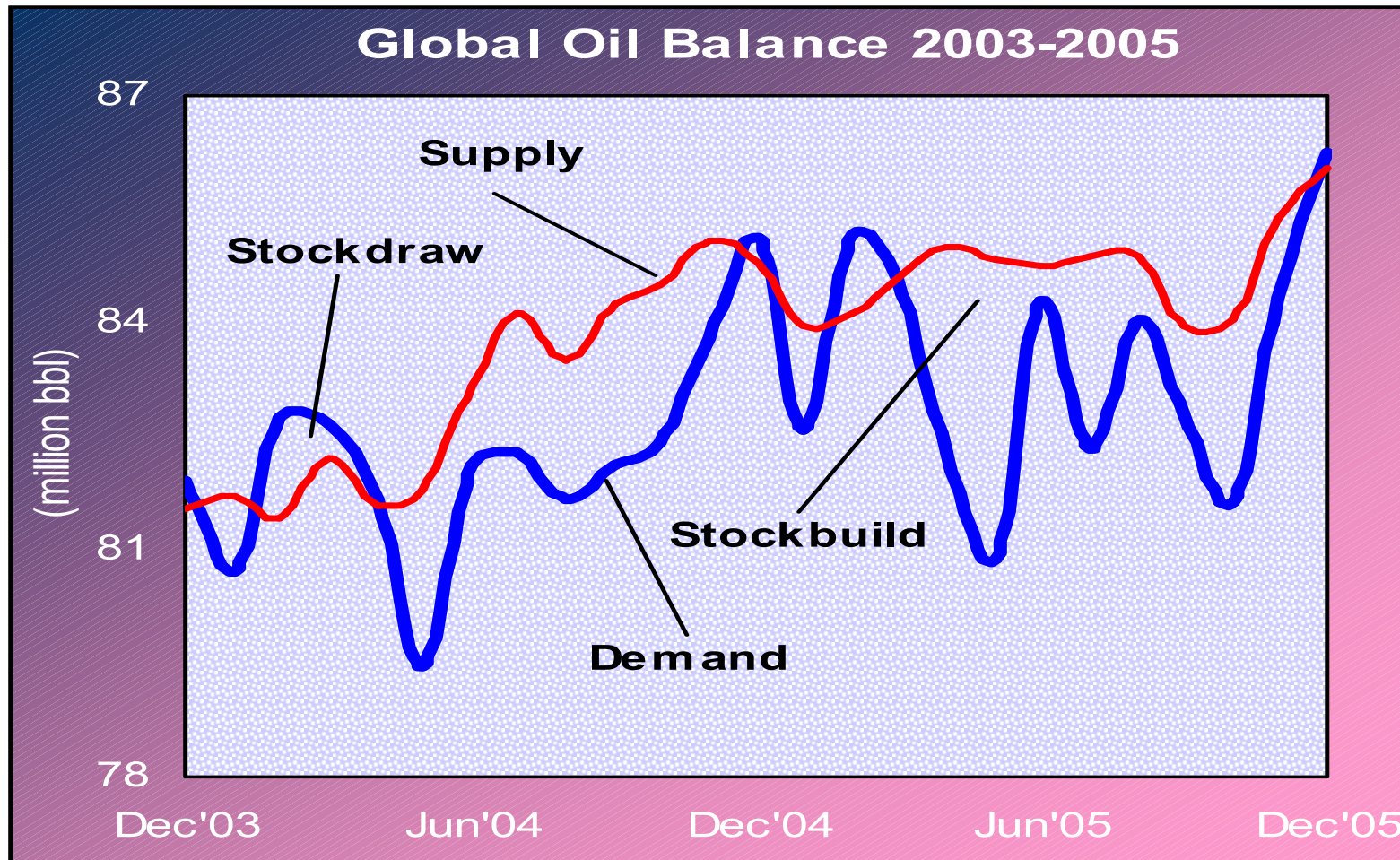
1,000 b/d						Changes	
	Q1'06	Q2'06	Q3'06	Q4'06	2006	2006	2005
FSU	12,134	12,248	12,484	12,842	12,429	+867	+417
Africa	4,001	4,068	4,110	4,168	4,087	+380	+296
So. & C. Amer.	4,415	4,582	4,612	4,640	4,563	+318	+223
North America	14,430	14,268	14,198	14,622	14,380	+261	-496
North Sea	5,651	5,222	4,785	5,400	5,262	+17	-453
Asia	6,964	6,781	6,833	6,937	6,879	-22	+174
Other Europe	573	568	563	559	566	-31	-7
Non-Opec ME	1,618	1,577	1,554	1,533	1,570	-81	-44
Processing Gains	1,920	1,890	1,875	1,920	1,901	+64	+3
Total Non-Opec	51,705	51,204	51,014	52,620	51,637	+1,774	+116

Source: Oil Market Intelligence

Short Term Balances

- **Short-term, Q4 looks “oversupplied”**
 - ◆ **Oct., Nov. global supply > demand by 1.8 mil. b/d, 0.8 mil. b/d, respectively**
 - ◆ **Dec. demand still only 0.6 mil. b/d higher**
- **Still some concerns about Q1 cold snaps**
- **US market most susceptible, refinery storm outages, diesel standards, need for imports**
- **Europe structurally long gasoline but not diesel capacity**

2005 Supply-Demand Balances

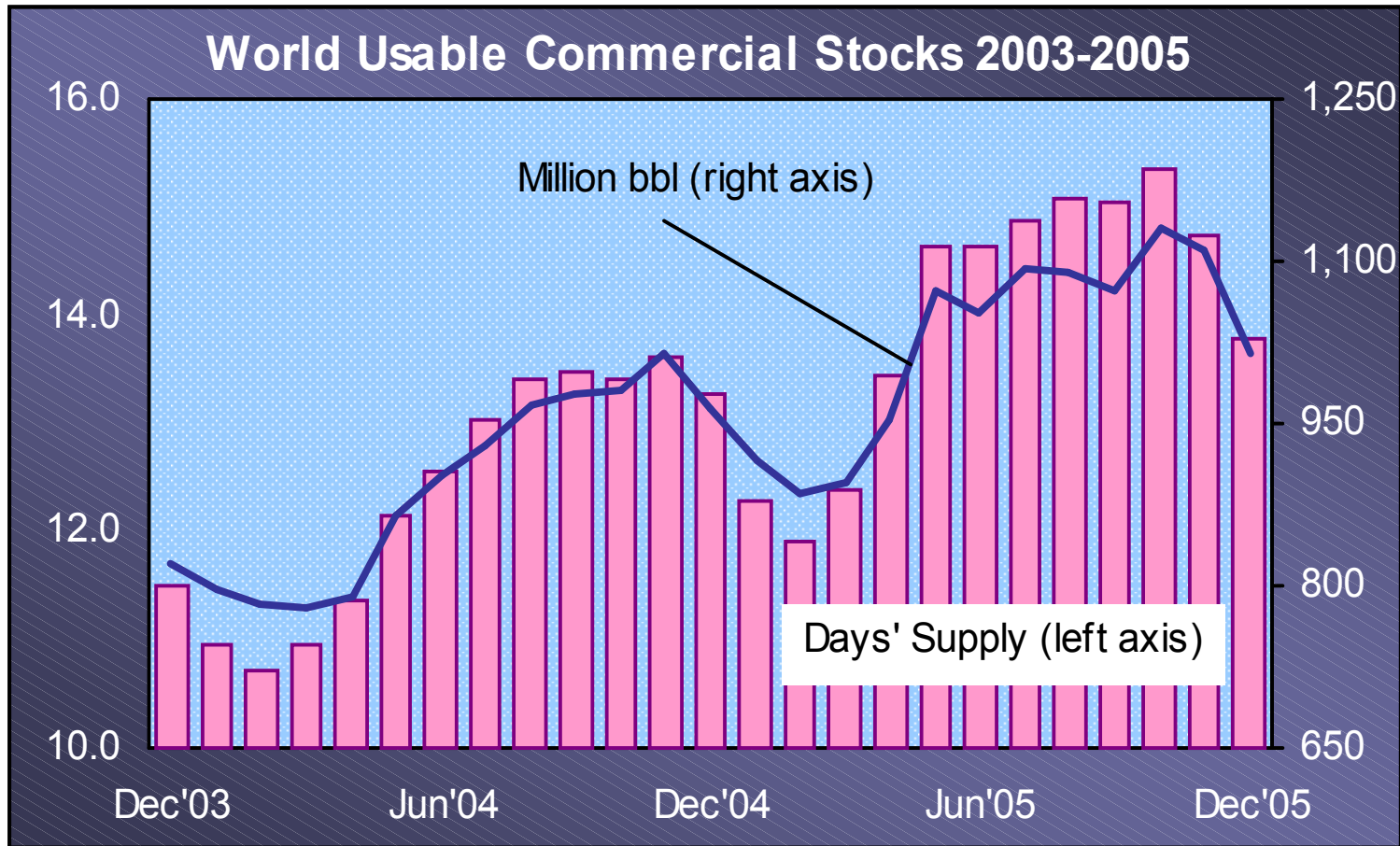


Source, Oil Market Intelligence, January 2006.

“Observed” Stock Changes

- **Out of whack with S-D balances**
 - ◆ Q4 '04 S>D by 0.9 mb/d; no draw
 - ◆ Q1 '05 S=D with -0.6 mb/d observed
 - ◆ Q2 '05 close; +2.3 mb/d & +2.1 mb/d
 - ◆ Q3 '05 S>D by 1.1 mb/d, but only 0.3 mb/d build
- **Worse last quarter**
 - ◆ S>D by 0.6 mb/d against 0.8 mb/d draw
 - ◆ large upward revision in October OECD
 - ◆ could reverse Nov. build, soften big Dec. draw

2005 Global Stock Changes



Source, Oil Market Intelligence, January 2006.

2006 Supply-Demand Balances

2006 Call on Opec Crude

<i>Non-OECD</i>						Changes	
million b/d	Q1'06	Q2'06	Q3'06	Q4'06	2006	2006	2005
OECD Demand	51.06	49.08	49.94	51.00	50.27	+0.60	+0.17
Non-OECD Demand	34.26	34.62	34.56	34.87	34.58	+0.95	+1.05
Total Demand	85.32	83.70	84.50	85.87	84.85	+1.56	+1.22
Non-Opec supply	51.70	51.20	51.01	52.62	51.64	+1.77	+0.12
Opec NGLs & Other	4.50	4.50	4.50	4.50	4.67	+0.27	+0.24
Call on Opec Crude*	29.11	27.99	28.98	28.75	28.54	-0.49	+0.86

* plus stock change. Source: Oil Market Intelligence.

Opec's Dilemma

- **Maintaining long term markets**
- **Adding sufficient capacity to handle chronic geopolitical risks**
- **Making reserve estimates credible**
- **Dealing with global quality issues**
- **Counting the money**

Impacts on Oil Markets

- **Fickle market, high volatility**
- **Higher prices with bigger swings**
- **Likely overreactions both up & down**
- **Unusual demand-driven sellers' market**
- **Changing players, shifting geography**
- **Resetting priorities for countries and companies**

The New Sellers' Markets

- **Past dominated by buyers' markets**
- **Previous sellers' markets: '20s, '40s, '70s**
- **Tended to be brief, unstable**
- **Current demand-led, emerged gradually**
- **Looks more durable**
- **Supply surge not apt to come to the rescue**
 - ◆ **Non-Opec unable**
 - ◆ **Opec unwilling**

Conclusions

- **“Peak oil” and “demand destruction” are more myth than reality**
- **Demand erosion and non-Opec plateau are real**
- **China thesis has legs**
- **Seller’s market looks durable**
- **Opec is likely to opt for slower capacity growth at higher prices**

SUPPLEMENT DETAILS

on

2006 Non-Opec Oil Supply

2006 North American Oil Supply

North America								
1,000 b/d	Q1 '06	Q2 '06	Q3 '06	Q4 '06	2006	Annual Changes		
						2006	2005	2004
US Gulf Crude	1,461	1,617	1,532	1,792	1,601	+320	-177	-45
Alaska Crude	894	850	766	797	825	-83	-48	-62
Other Lower 48*	4,977	5,001	5,029	5,089	5,025	-105	-150	-45
US	7,332	7,468	7,327	7,678	7,452	+131	-375	-152
Synthetics	697	635	687	669	672	+146	-100	+125
<i>In Situ</i> Bitumen	474	475	500	522	493	+37	+90	+5
Eastern Offshore Crude	435	381	401	414	408	+90	-4	-24
Other Canada*	1,730	1,635	1,640	1,689	1,673	-63	-45	-4
Canada	3,336	3,126	3,228	3,294	3,246	+210	-59	+101
Offshore Crude	2,758	2,691	2,702	2,702	2,713	-45	-71	+15
Other*	1,004	983	941	949	969	-36	+9	+21
Mexico	3,762	3,674	3,643	3,650	3,682	-81	-62	+36
Total	14,430	14,268	14,198	14,622	14,380	+261	-496	-15

**including NGLs and Other*

- recovery in US Gulf, return, delayed start-ups new fields
- Canada synthetics, East Coast and in site bitumen growth
- Mexico's Cantarell struggling

2006 North Sea Oil Supply

North Sea 1,000 b/d						Annual Changes		
	Q1 '06	Q2 '06	Q3 '06	Q4 '06	2006	2006	2005	2004
Brent-Ninian	226	212	186	205	203	-43	-29	-32
Forties	595	539	430	549	528	-64	-53	-70
Flotta	95	70	72	84	80	-9	-12	-8
West of Shetlands	182	182	176	185	181	+33	-26	-27
Other UK*	898	798	733	874	830	+46	-75	-90
UK	1,995	1,801	1,597	1,897	1,822	-37	-195	-227
Statfjord	362	653	577	532	261	-22	-26	-35
Troll	265	219	214	311	275	+5	+5	-5
Oseberg	316	567	446	420	181	-29	-36	-15
Ekofisk	358	195	236	241	337	-5	-7	+1
Gullfaks	407	487	483	438	244	-36	-31	-32
Other Norway	1,510	871	831	1,130	1,719	+153	-145	+17
Norway	3,217	2,992	2,788	3,073	3,016	+66	-240	-69
Denmark	384	378	379	375	383	+2	+1	+5
Netherlands	147	151	150	158	152	+7	+6	+7
Germany	20	20	20	20	20	+1	+0	-0
Total	5,763	5,343	4,933	5,522	5,393	+38	-427	-284

- accelerating decline rates in older fields
- few generally small satellite fields

2006 Other OECD Oil Supply

Other OECD 1,000 b/d	Annual Changes							
	Q1 '06	Q2 '06	Q3 '06	Q4 '06	2006	2006	2005	2004
Australia	542	516	596	623	570	-32	+19	-61
Italy	121	121	121	121	121	-4	+14	+20
Other OECD Europe	299	295	290	286	292	-21	-10	+18
Other OECD Asia	43	40	41	43	42	+	-1	-3
Total	1,005	971	1,049	1,073	1,025	-57	+22	-27

- a few new Northwest Shelf fields not enough to stem Aussie decline

2006 FSU Oil Supply

FSU 1,000 b/d					Annual Changes			
	Q1 '06	Q2 '06	Q3 '06	Q4 '06	2006	2006	2005	2004
Russia	9,799	9,861	10,041	10,292	10,000	+560	+249	+703
Azerbaijan	663	691	697	733	696	+168	+129	-14
Kazakhstan	1,305	1,322	1,363	1,420	1,353	+122	+52	+149
Other Republics	1,672	1,696	1,746	1,817	1,733	+139	+39	+147
Total	12,134	12,248	12,484	12,842	12,429	+867	+417	+835

- increased Russian upstream spending; growth of Rosneft & Russneft
- filling the Azerbaijan's BTC pipeline
- better performance at Kazakh's Karachaganak
- end of gas flaring restriction in Kazakhstan, growing China presence
- undoing Yukos damage in Russia; Sakhalin 1 start; full-year Sakhalin 2

2006 Non-Opec Africa Oil Supply

Non-Opec Africa 1,000 b/d					Annual Changes			
	Q1 '06	Q2 '06	Q3 '06	Q4 '06	2006	2006	2005	2004
Angola	1,425	1,410	1,426	1,475	1,434	+166	+231	+106
Sudan	416	488	500	500	476	+146	+32	+37
Equatorial Guinea	366	368	379	388	375	+15	+23	+77
Chad	236	232	233	240	235	+6	+73	+132
Egypt	698	701	702	698	700	+4	-12	-32
Gabon	243	240	241	235	240	+2	+3	-38
Congo (Brazzaville)	201	200	192	188	195	-2	-18	-25
Other Africa	415	429	436	443	431	+43	-36	+4
Total	4,001	4,068	4,110	4,168	4,087	+380	+296	+260

- Angola adds BBLT to growth at Kizomba
- Sudan's delayed pipeline expansion to 500,000 b/d H2 2006
- start of Mauritania's Chinguetti, expanding Baobab in Cote d'Ivoire
- small gains in Chad and Equatorial Guinea

2006 S. & C. America* Oil Supply

Non-Opec S.&C. America						Annual Changes		
1,000 b/d	Q1 '06	Q2 '06	Q3 '06	Q4 '06	2006	2006	2005	2004
Brazil	2,117	2,211	2,237	2,282	2,212	+264	+189	+9
Ecuador	550	606	624	629	603	+62	+16	+111
Trinidad	215	215	215	215	215	+29	+30	+1
Colombia	520	507	496	494	504	-34	+1	-11
Argentina	675	685	683	654	674	-37	-35	-43
Other	338	358	357	367	355	+35	+23	+21
Total	4,415	4,582	4,612	4,640	4,563	+318	+223	+88

* Excluding Venezuela

- Brazil belatedly growing Campos Basin
- Ecuador steel dealing with protest to using new pipeline capacity
- Trinidad's Angostura consolidating initial plateau
- Colombia, Argentina past their peaks

2006 Asian* Oil Supply

Non-Opec, Non-OECD Asia						Annual Changes		
1,000 b/d	Q1 '06	Q2 '06	Q3 '06	Q4 '06	2006	2006	2005	2004
China	3,635	3,491	3,444	3,487	3,513	-106	+134	+78
Thailand	229	223	225	242	230	+36	+34	-7
Vietnam	389	391	404	417	400	+35	-36	+35
Brunei	223	227	232	237	230	+31	+7	-3
Malaysia	893	891	898	894	894	+27	-9	+34
India	735	735	724	729	731	-30	-22	+8
Other	274	267	268	264	268	+17	+48	+35
Total	6,379	6,225	6,195	6,270	6,267	+9	+157	+181

* excluding Indonesia and OECD Asia (Australia, Japan, New Zealand)

- small increases in Thailand, Vietnam, Brunei and Malaysia
- mostly offset by China drop after surprise offshore boost in 2005
- India declines continue

2006 Non-Opec Mideast Oil Supply

Non-Opec Mideast 1,000 b/d	Annual Changes							
	Q1 '06	Q2 '06	Q3 '06	Q4 '06	2006	2006	2005	2004
Oman	749	720	702	681	713	-63	-13	-55
Syria	392	386	380	374	383	-32	-31	-25
Yemen	453	448	448	455	451	+18	+7	-15
Other	23	23	23	23	23	-4	-6	-3
Toal	1,618	1,577	1,554	1,533	1,570	-81	-44	-98

- Oman and Syria seeing accelerating declines
- some help from new fields in Yemen