



# **Global Oil Market Challenges: New Thinking For New Geography And New Markets**

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**IEA/IEEJ Forum**

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**Energy Intelligence Group**

# Outline

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- **The Global Fundamentals Context**
  - ◆ Attention shifted to the demand side
  - ◆ Strong regional drift to the East
  - ◆ Call slowly builds on Opec/Saudi supply
- **New Market Realities**
  - ◆ Financial factors are here to stay
  - ◆ Volatility: fundamental and financial faces
- **Conclusions: What Does Market Stabilization Mean? Report From Workshop**

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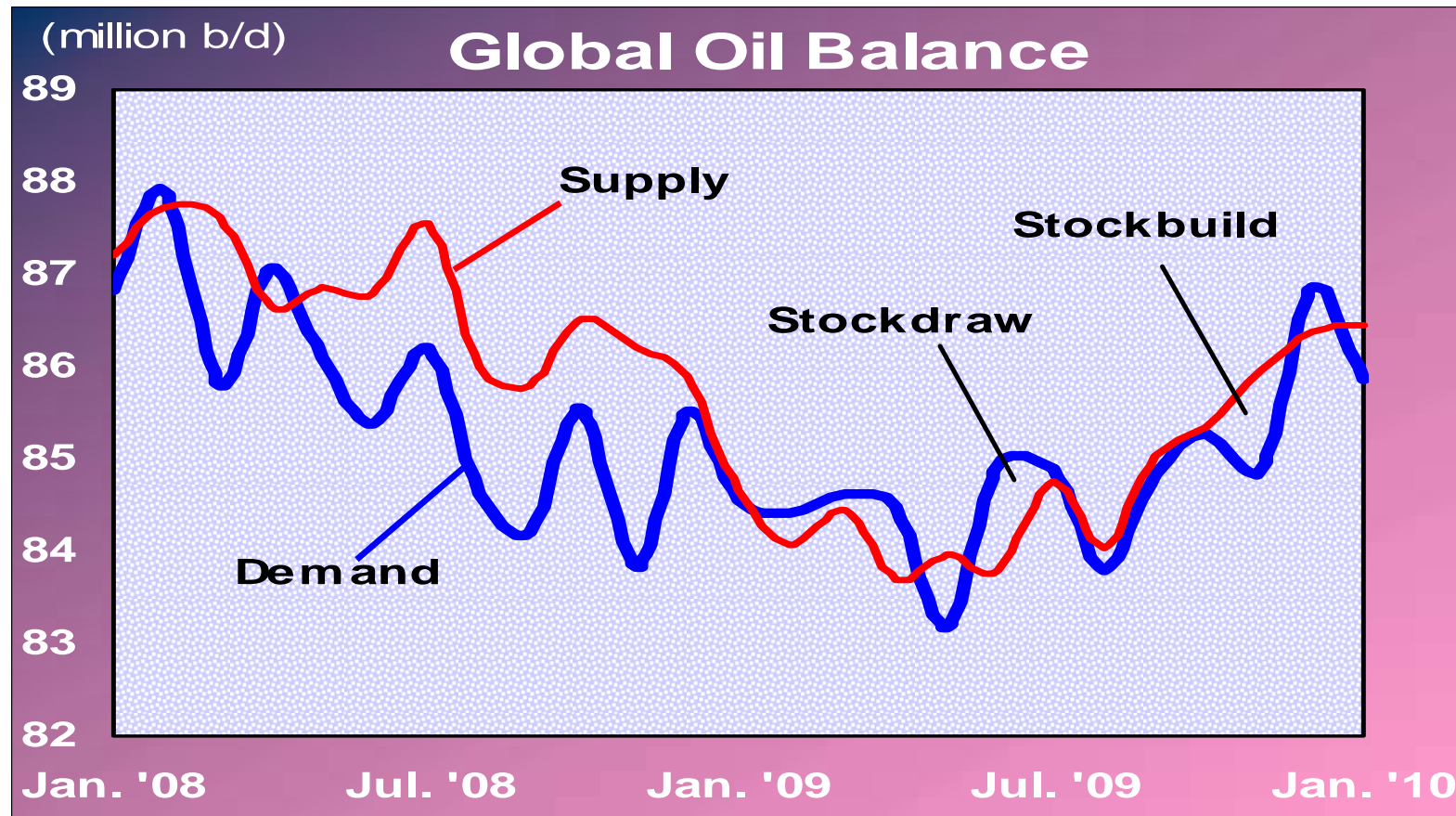
# Near Term Oil Market: Oil Demand Recovery Supply Management and Financial Factors

# Short Term Global Balances

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- ◆ **Too little demand**
  - especially in the OECD
- ◆ **Too much supply**
  - Opec crude and NGLs, temporary non-Opec recovery
- ◆ **Too much onland inventory**
- ◆ **Too many barrels of floating storage**
  - mostly product, but declining
- ◆ **Too many dollars chasing paper oil**

# Opec Chases Demand Down, Then Up



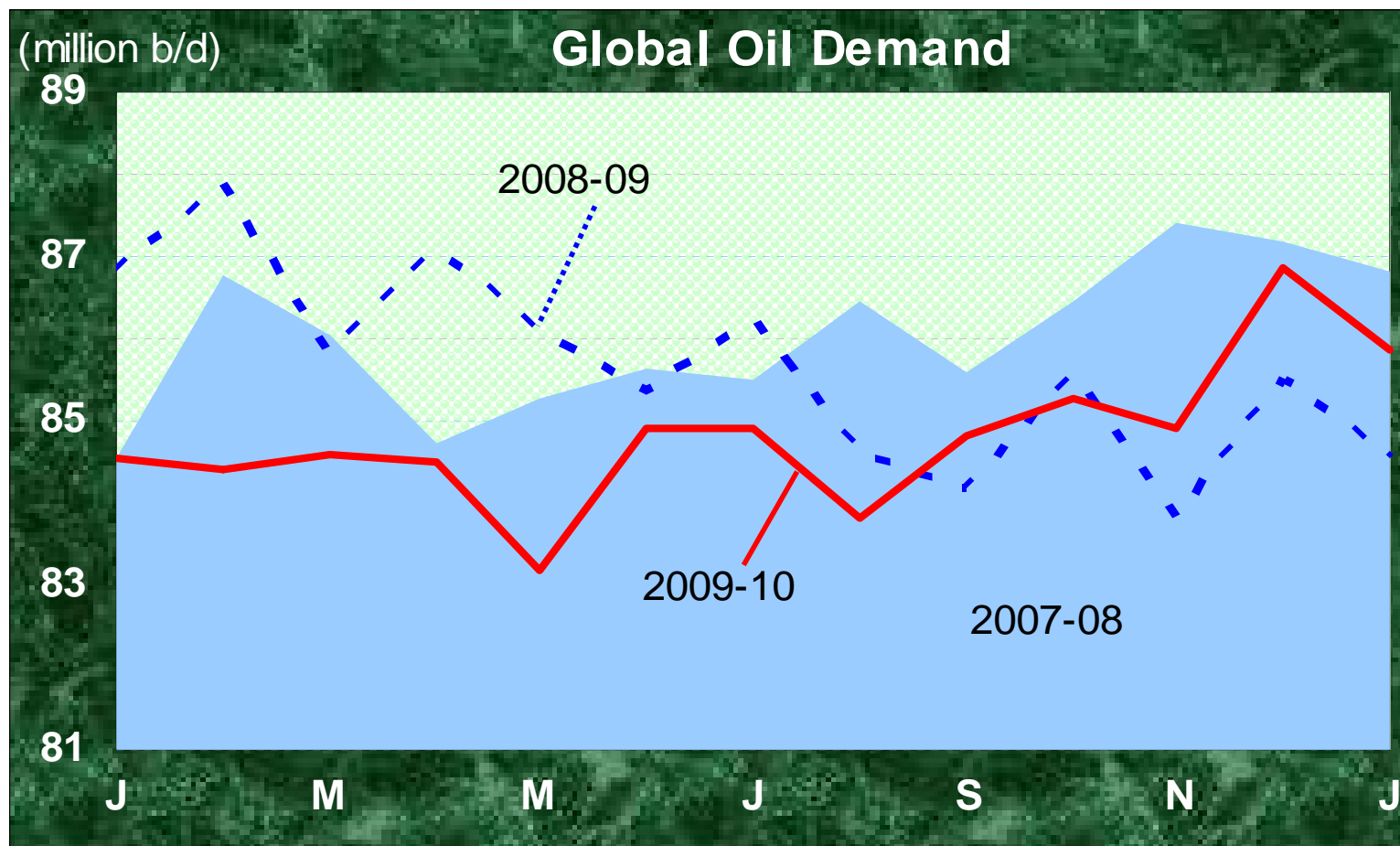
Source: EIG, Oil Market Intelligence, February 2010.

# Current Supply Demand

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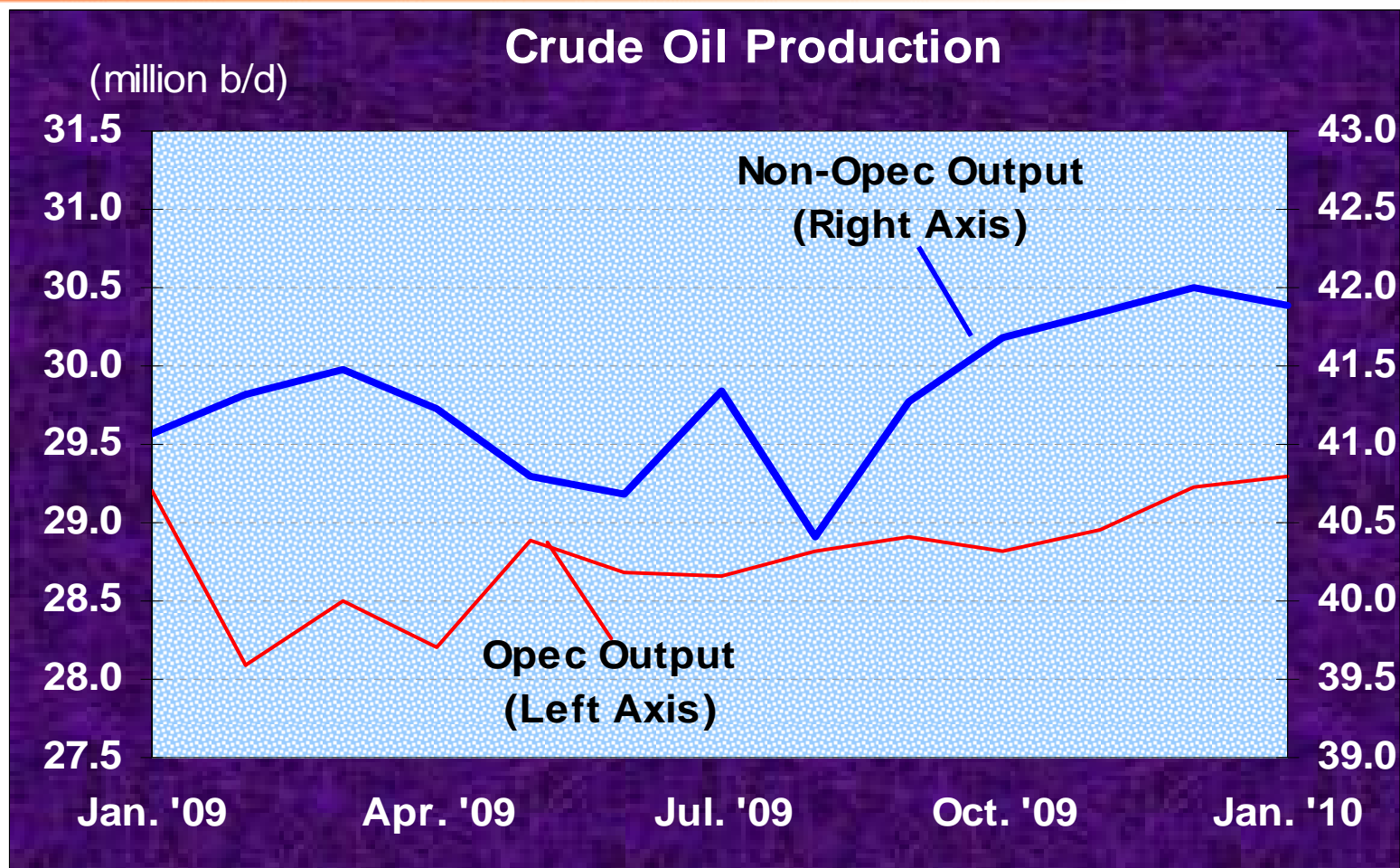
- **It's all about demand, demand mostly about the economy, but**
- **Obama energy policy takes on (takes out?) oil**
- **Opec keeps leaking in oil as long as prices hold**
- **Compliance: Opec's dirty, not so little not so secret**
- **Volatility continues in Nigeria, is Iraq now stable?**
- **Non-Opec supply geology/politics sets direction**
- **Contango breeds floating storage -- until it doesn't**

# Oil Demand Roller Coaster



**Source: EIG, Oil Market Intelligence, February 2010.**

# Opec/Non-Opec Counter Patterns



**Source: EIG, Oil Market Intelligence, February 2010.**



# 2010 Balancing Problems

Global Oil Balances 2007-2010							
	2007	2008	2009	2010	Changes ('000 b/d)		
					2008	2009	2010
<b>Demand (mil. b/d)</b>	<b>86.0</b>	<b>85.7</b>	<b>84.7</b>	<b>85.9</b>	<b>-209</b>	<b>-1,017</b>	<b>+1,205</b>
US	20.7	19.5	18.7	18.8	-1,182	-753	+88
Other OECD	28.5	28.1	26.8	26.5	-409	-1,321	-283
China	7.5	7.9	8.3	8.8	+321	+462	+477
Other Non-OECD	29.2	30.3	30.9	31.8	+1,060	+595	+923
<b>Supply (mil. b/d)</b>	<b>85.3</b>	<b>86.6</b>	<b>84.6</b>	<b>86.1</b>	<b>+1,317</b>	<b>-2,049</b>	<b>+1,475</b>
Non-Opec Conv.	40.7	40.1	40.3	40.3	-566	+183	-0
Other Non-Opec	9.7	10.0	10.3	10.7	+291	+297	+423
Opec NGLs & Oth.	4.5	4.9	5.3	5.8	+407	+314	+568
Opec Crude	30.4	31.6	28.8	29.2	+1185	-2843	+484
<b>Inventories (Bil bbl)</b>	<b>4,964</b>	<b>5,006</b>	<b>5,357</b>	<b>n/a</b>	<b>+115</b>	<b>+1,657</b>	<b>n/a</b>
OECD	2,566	2,701	2,682		+370	-87	
Other Onland	1,474	1,461	1,529		-36	+322	
Floating Storage	0	21	138		+58	+552	
Other At Sea	924	823	1,007		-277	+870	

**Source: EIG, Oil Market Intelligence, February 2010.**

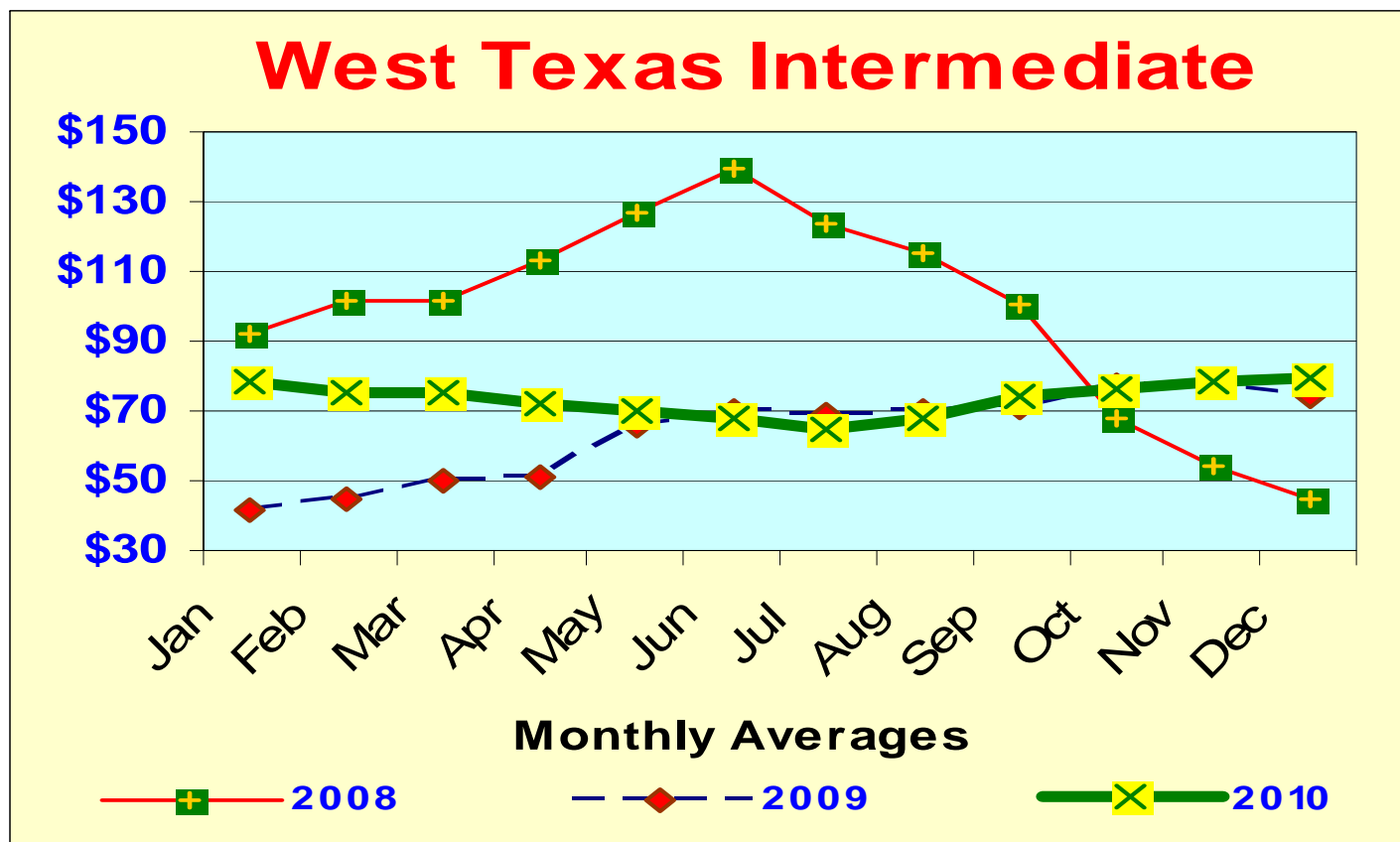
# Near-Term Balances Still Sloppy

## 2010 Quarterly Oil Market Balances

(million b/d)						Changes	
	Q1	Q2	Q3	Q4	2010	2010	2009
<b>Demand</b>	<b>85.85</b>	<b>85.30</b>	<b>85.74</b>	<b>86.84</b>	<b>85.93</b>	<b>+1.21</b>	<b>-1.02</b>
OECD	46.12	44.27	44.92	45.89	45.30	-0.19	-2.07
Non-OECD	39.72	41.03	40.82	40.94	40.63	+1.40	+1.06
<b>Supply</b>	<b>87.05</b>	<b>85.43</b>	<b>85.46</b>	<b>86.64</b>	<b>86.14</b>	<b>+1.46</b>	<b>-2.06</b>
Non-Opec	52.06	50.85	50.30	51.17	51.09	+0.42	+0.47
Opec NGLs & Other	5.53	5.65	6.00	6.08	5.82	+0.57	+0.31
<b>Call on Opec Crude</b>	<b>28.25</b>	<b>28.80</b>	<b>29.44</b>	<b>29.58</b>	<b>29.02</b>	<b>+0.22</b>	<b>-1.80</b>
Opec Crude	29.46	28.93	29.15	29.39	29.23	+0.43	-2.84
<b>Implied Stock Chg.</b>	<b>+1.21</b>	<b>+0.13</b>	<b>-0.28</b>	<b>-0.19</b>	<b>+0.21</b>		

Source: Oil Market Intelligence, February 2010.

# 2008-10 Oil Futures Prices



*Source: Energy Intelligence Research estimates, February 2010.*

# Near-Term Oil Price Outlook

Quarterly WTI Prices* (US\$ per barrel)							
	2010	2009	2008	2007	2006	2005	2004
Q1	\$76.08	\$45.38	\$98.31	\$61.94	\$65.45	\$51.78	\$34.96
Q2	\$70.00	\$62.48	\$126.94	\$66.77	\$72.35	\$52.79	\$38.12
Q3	\$68.95	\$70.00	\$113.53	\$77.93	\$69.26	\$65.24	\$45.14
Q4	\$78.17	\$76.28	\$55.63	\$93.12	\$60.95	\$59.40	\$48.10
Year	\$73.29	\$63.64	\$98.53	\$75.03	\$67.00	\$57.34	\$41.61

*\*weighted by calendar days.*

Source: Energy Intelligence Research estimates, September 2009.

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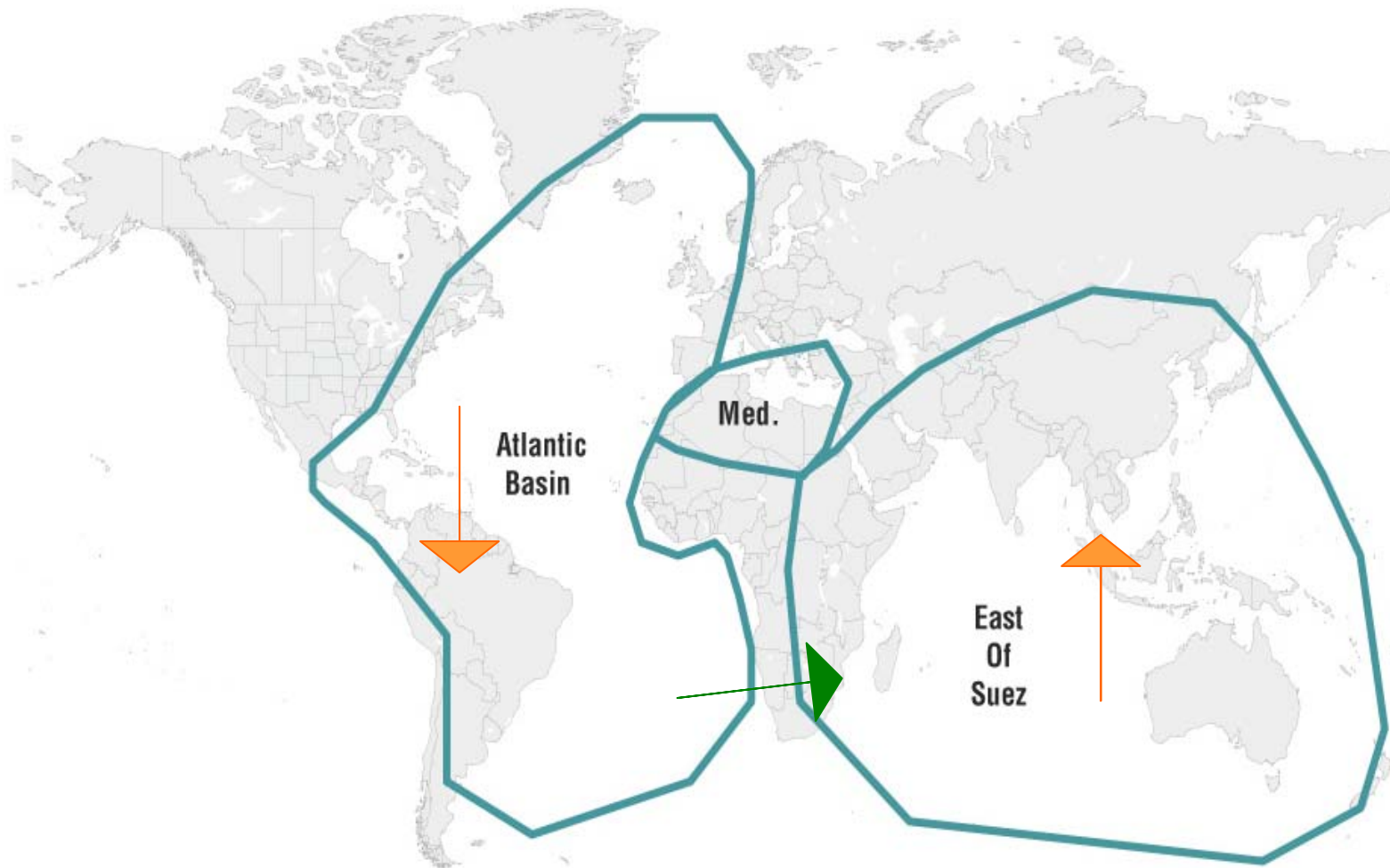
# Oil Market Center of Gravity Shifts East

# Shifting Geography

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- **Atlantic Basin was traditional center for supply, demand, and companies.**
- **Conventional North Sea, North America crude supply is petering out.**
- **OECD product demand is flattening.**
- **International Oil Companies are losing share to NOCs, but won't disappear.**
- **East of Suez demand, supply, trade all on the way up.**

# Major Crude Oil Markets



# Non-Opec Supply Transition

- **Declining areas beginning to dominate**
  - ◆ North Sea, NorAm conventional, Asia vs. So. America and FSU
- **Financial crunch retarded investment**
  - ◆ Now beginning to improve
  - ◆ NorAm gas became a financial drag
- **Government policy is an increasing threat**
  - ◆ Restricted access, environmental constraints
- **Nonconventional becoming conventional**
  - ◆ Oil sands replace WCSB
  - ◆ Deepwater GOM replacing L48, ANS

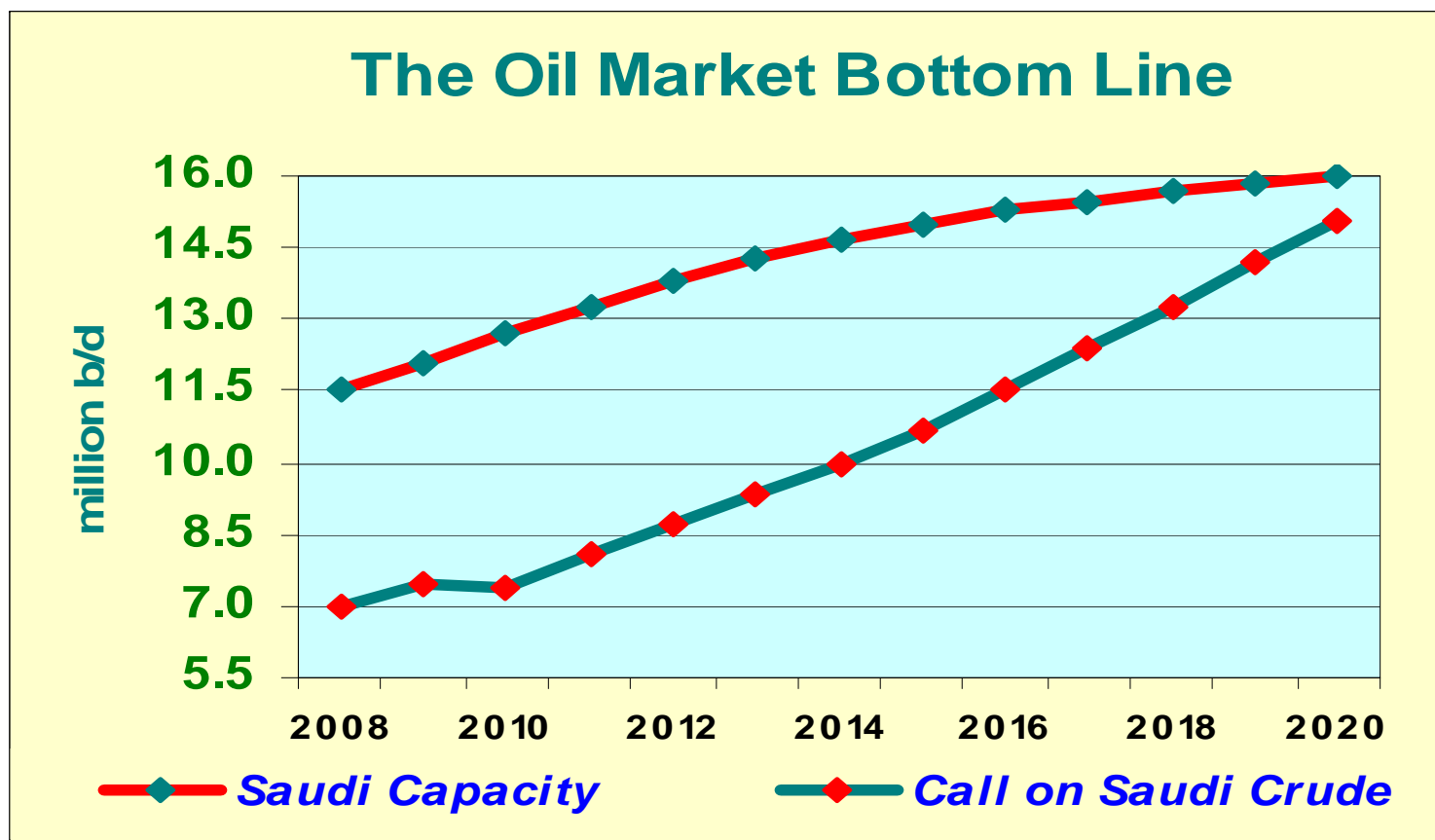


# Non-Opec Supply Plateau

	Levels						Changes				
	2005	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
<b>Long-Term Growers</b>											
FSU	11,508	11,974	12,446	12,520	12,963	13,292	+466	+472	+74	+442	+329
So. & C. America	3,581	3,797	3,867	4,064	4,358	4,678	+216	+70	+197	+294	+320
Africa (exc. Angola)	2,257	2,440	2,601	2,635	2,503	2,507	+183	+161	+34	-132	+4
<b>Long-Term Decliners</b>											
North Sea	5,329	4,933	4,628	4,376	4,160	3,986	-397	-304	-253	-215	-174
Asia	7,885	8,015	8,078	8,070	7,963	7,853	+130	+62	-7	-108	-110
Other Middle East	1,675	1,625	1,483	1,454	1,449	1,500	-50	-141	-29	-5	+51
North America	14,284	14,367	14,467	14,023	14,215	14,112	+83	+100	-445	+192	-103
Other Europe	487	462	450	426	396	386	-24	-13	-24	-29	-10
<b>Total Non-Opec*</b>	<b>47,007</b>	<b>47,614</b>	<b>48,020</b>	<b>47,568</b>	<b>48,007</b>	<b>48,313</b>	<b>+607</b>	<b>+407</b>	<b>-452</b>	<b>+439</b>	<b>+305</b>
Processing Gains & Biofuels	2,061	2,228	2,352	2,531	2,578	2,686	+166	+124	+178	+48	+108
<b>Total Non-Opec</b>	<b>49,068</b>	<b>49,842</b>	<b>50,373</b>	<b>50,099</b>	<b>50,586</b>	<b>50,998</b>	<b>+773</b>	<b>+531</b>	<b>-274</b>	<b>+487</b>	<b>+413</b>

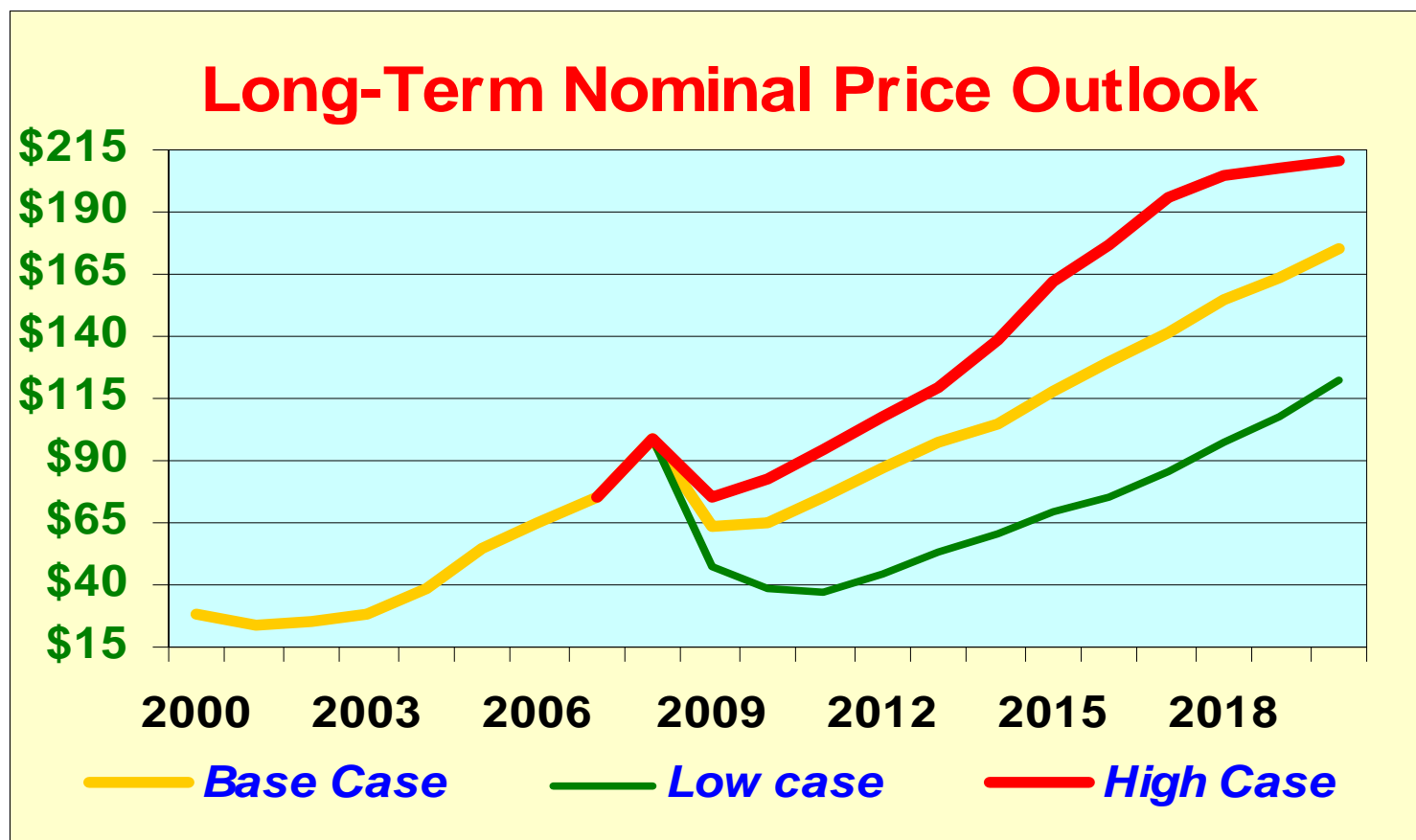
*\*Excludes biofuels except for Brazil and US. Source: Oil Market Intelligence, February 2010.*

# What Drives Long-Term Prices?



Source: Energy Intelligence Research estimates, February 2010.

# \$200 Oil? Not For Awhile



Source: Energy Intelligence Research estimates, February 2010.

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**My Main Take Away  
from the  
IEA-IEEJ  
Tokyo Workshop  
on  
Oil Price Volatility**

# Oil Price Volatility

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## ◆ Causes?

- Physical market anomalies
- Financial market “failures”

## ◆ Impacts?

- On the global economy
- On consumers and producers
- On corporate and government policies

## ◆ Remedies?

- Is greater stability attainable?
- Is \$75 a fair and reasonable price, for how long?
- What policies are needed/feasible/plausible?
- What is the appropriate role of regulators and policy makers?



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# **SUPPLEMENTAL DETAIL ON 2010 NON-OPEC OIL SUPPLY**

# 2010 Oil Supply By Region

2010 Quarterly Oil Supplies						
	Q1 '10	Q2 '10	Q3 '10	Q4 '10	2010	Change
<b>Long-Term Growers</b>						
FSU	13,267	13,238	13,251	13,417	13,292	+329
Non-Opec So. & C. America	4,588	4,637	4,683	4,808	4,678	+320
Non-Opec Africa	2,468	2,535	2,515	2,507	2,507	+4
<b>Long-Term Decliners</b>						
North America	14,688	14,039	13,727	14,006	14,112	-103
Asia	8,100	7,881	7,710	7,716	7,853	-110
Other Middle East	1,488	1,500	1,512	1,499	1,500	+51
North Sea	4,324	3,898	3,723	4,012	3,986	-174
Other Europe	395	389	384	378	386	-10
<b>Total Non-Opec Production*</b>	<b>49,318</b>	<b>48,118</b>	<b>47,504</b>	<b>48,343</b>	<b>48,313</b>	<b>+305</b>
Processing Gains & Biofuels	2,629	2,649	2,721	2,743	2,686	+108
<b>Total Non-Opec</b>	<b>51,946</b>	<b>50,767</b>	<b>50,225</b>	<b>51,086</b>	<b>50,998</b>	<b>+413</b>
<i>Year-on-Year Changes</i>	<i>+1,325</i>	<i>+757</i>	<i>-121</i>	<i>-330</i>	<i>+413</i>	
<i>* Excludes biofuels exc. for Brazil and US. Source: Oil Market Intelligence, February 2010.</i>						
<b>Opec</b>						
Total Opec Other Liquids	5,434	5,557	5,854	5,935	5,697	+547
Opec Crude	27,388	27,039	27,069	27,290	27,196	+472
<b>Total Opec</b>	<b>32,822</b>	<b>32,596</b>	<b>32,923</b>	<b>33,225</b>	<b>32,893</b>	<b>+1,019</b>
<i>Year-on-Year Changes</i>	<i>+1,264</i>	<i>+964</i>	<i>+888</i>	<i>+964</i>	<i>+1,019</i>	
<b>Global Supply</b>	<b>84,768</b>	<b>83,363</b>	<b>83,149</b>	<b>84,311</b>	<b>83,891</b>	<b>+1,432</b>
<i>Source: Oil Market Intelligence, February 2010.</i>						



# 2010 FSU Oil Supply

2010 Quarterly FSU Oil Supply						
	Q1 '10	Q2 '10	Q3 '10	Q4 '10	2010	Chg.
Russia	10,070	10,059	10,044	10,091	10,066	+144
Azerbaijan	1,204	1,215	1,191	1,256	1,217	+97
Kazakhstan	1,605	1,588	1,632	1,683	1,625	+90
Other Republics	389	376	384	387	384	-1
<b>Total FSU</b>	<b>13,267</b>	<b>13,238</b>	<b>13,251</b>	<b>13,417</b>	<b>13,292</b>	<b>+329</b>

*Source: Oil Market Intelligence, February 2010.*

# 2010 So. & C. America Oil Supply

2010 Quarterly Non-Opec So. & Cent. America Supply						
	Q1 '10	Q2 '10	Q3 '10	Q4 '10	2010	Chg.
Brazil	2,737	2,777	2,847	2,941	2,826	+267
Colombia	730	746	741	780	749	+78
Peru	159	160	162	164	159	+14
Trinidad & Tobago	181	185	175	182	180	+4
Argentina	650	643	638	628	640	-25
Other	130	126	120	113	123	-17
<b>Total So. &amp; C. America</b>	<b>4,588</b>	<b>4,637</b>	<b>4,683</b>	<b>4,808</b>	<b>4,678</b>	<b>+321</b>

Source: Oil Market Intelligence, February 2010.

# 2010 Non-Opec Africa Oil Supply

2010 Quarterly Non-Opec Africa Oil Supply						
	Q1 '10	Q2 '10	Q3 '10	Q4 '10	2010	Change
Sudan	471	500	520	527	505	+19
Egypt	683	693	720	679	694	-8
Congo (Brazzaville)	261	269	272	261	266	-13
Chad	117	130	104	105	114	-14
Gabon	189	178	166	169	176	-17
Equatorial Guinea	307	327	301	290	306	-5
Other	440	438	431	476	446	+40
<b>Total Non-Opec Africa</b>	<b>2,468</b>	<b>2,535</b>	<b>2,515</b>	<b>2,507</b>	<b>2,507</b>	<b>+4</b>

Source: Oil Market Intelligence, February 2010.

# 2010 Non-Opec Asia Oil Supply

2010 Quarterly Asia Oil Supply						
	Q1 '10	Q2 '10	Q3 '10	Q4 '10	2010	Change
India	858	867	883	901	877	+58
Australia	650	695	701	714	693	+56
Thailand	290	290	281	298	290	+52
Brunei	178	168	160	154	165	+11
Malaysia	634	635	637	621	632	-17
Vietnam	295	296	302	308	301	-25
Indonesia	1,047	943	929	945	966	-25
China	3,763	3,601	3,444	3,402	3,551	-238
Other	385	384	374	371	378	+18
<b>Total Non-Opec Asia</b>	<b>8,100</b>	<b>7,881</b>	<b>7,710</b>	<b>7,716</b>	<b>7,853</b>	<b>-110</b>

Source: Oil Market Intelligence, February 2010.

# 2010 North Sea Oil Supply

2010 Quarterly North Sea Oil Supply						
	Q1 '10	Q2 '10	Q3 '10	Q4 '10	2010	Change
<b>Norway</b>	<b>2,403</b>	<b>2,120</b>	<b>2,160</b>	<b>2,284</b>	<b>2,241</b>	<b>-101</b>
Norwegian Sea	431	376	377	382	391	+6
Central North Sea	906	850	844	894	874	-49
Barents Sea	0	0	0	0	0	0
Southern North Sea	324	259	330	348	315	-7
Tampen Area	413	334	298	331	344	-51
NGLs & Condensates	329	301	311	329	318	-
<b>UK</b>	<b>1,607</b>	<b>1,491</b>	<b>1,307</b>	<b>1,459</b>	<b>1,457</b>	<b>-29</b>
Brent-Flotta-Beryl	223	215	218	199	214	-24
West of Shetlands	154	116	97	134	125	+6
Forties Area (inc. Buzzard)	450	390	347	325	418	-25
Other Crude	808	814	738	827	749	+
NGLs	196	173	124	170	166	-10
<b>Denmark</b>	<b>248</b>	<b>223</b>	<b>196</b>	<b>204</b>	<b>218</b>	<b>-43</b>
<b>Other</b>	<b>66</b>	<b>65</b>	<b>59</b>	<b>65</b>	<b>69</b>	<b>-1</b>
<b>Total North Sea</b>	<b>4,324</b>	<b>3,898</b>	<b>3,723</b>	<b>4,012</b>	<b>3,986</b>	<b>-174</b>

Source: Oil Market Intelligence, February 2010.

# 2010 North American Supply

2010 Quarterly North America Oil Supply						
	Q1 '10	Q2 '10	Q3 '10	Q4 '10	2010	Change
<b>US</b>	<b>8,372</b>	<b>8,042</b>	<b>7,763</b>	<b>7,999</b>	<b>8,043</b>	<b>-2</b>
Gulf of Mexico	1,596	1,593	1,509	1,585	1,571	+150
Texas	1,127	1,089	1,081	1,099	1,099	-55
Alaska	683	613	531	614	610	-68
Other Crude	2,059	1,958	1,909	1,946	1,968	-85
NGLs & Other	2,906	2,788	2,733	2,755	2,795	+55
<b>Canada</b>	<b>3,405</b>	<b>3,247</b>	<b>3,338</b>	<b>3,405</b>	<b>3,349</b>	<b>+149</b>
Mined Synthetics	813	959	1,000	997	943	+166
<i>In Situ</i> Bitumen	633	615	621	614	621	+16
Eastern Offshore	362	302	260	284	302	+26
Other Crude	970	912	888	894	915	-34
NGLs	628	460	569	617	568	-25
<b>Mexico</b>	<b>2,911</b>	<b>2,750</b>	<b>2,625</b>	<b>2,601</b>	<b>2,721</b>	<b>-250</b>
Crude	2,530	2,394	2,303	2,288	2,378	-224
NGLs	381	356	322	313	343	-27
<b>Total North America</b>	<b>14,688</b>	<b>14,039</b>	<b>13,727</b>	<b>14,006</b>	<b>14,112</b>	<b>-103</b>

*Source: Oil Market Intelligence, February 2010.*

# 2010 Non-Opec Mideast Supply

2010 Quarterly Non-Opec Mideast Oil Supply						
	Q1 '10	Q2 '10	Q3 '10	Q4 '10	2010	Change
Oman	851	864	859	858	858	+43
Syria	298	296	294	292	295	-27
Yemen	323	323	338	328	328	+33
Other	16	18	21	21	19	+2
<b>Total Non-Opec Mideast</b>	<b>1,488</b>	<b>1,500</b>	<b>1,512</b>	<b>1,499</b>	<b>1,500</b>	<b>+51</b>

Source: Oil Market Intelligence, February 2010.

# 2010 Other Europe Oil Supply

2010 Quarterly Other Europe Oil Supply						
	Q1 '10	Q2 '10	Q3 '10	Q4 '10	2010	Change
Italy	86	86	85	85	85	+3
Romania	94	92	90	88	91	-5
Turkey	48	48	48	48	48	+2
Other	166	163	161	157	162	-10
<b>Total Other Europe</b>	<b>395</b>	<b>389</b>	<b>384</b>	<b>378</b>	<b>386</b>	<b>-10</b>

Source: Oil Market Intelligence, February 2010.