Global oil outlook: challenges and opportunities for OPEC

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Acting Secretary General

Organization of the Petroleum Exporting Countries
Vienna, Austria
Natural extension of warm relations
EU is OPEC’s main trading partner
Other dialogue involving EU and OPEC Members:

* Euro-Mediterranean dialogue
* EuroGulf Dialogue for Energy Stability and Sustainability
* EU–Gulf Cooperation Council

Also through: *International Energy Forum, etc*
OPEC welcomes success of first meeting

Market order and stability important to both sides, now and in the future

Linkages with other human welfare issues

Important addition to global producer-consumer dialogue
Main reasons behind the rise in prices in 1H 2005:
- Continued strength in oil demand led by respectable performance of the world economy
- Increasing market anxiety over capacity tightness: focusing more on downstream with growth in refining capacity lagging behind demand
- Seasonal market characteristics: attention is now beyond gasoline spread into distillate market, should strong distillate demand growth in US & China prevail
- Persistent volatility enhanced by geopolitical tensions, and activities in Futures market
China has become the second largest oil consumer.
Overloading of Refining Industry

Shrinking Refining Spare Capacity in key refinery regions

Increasing Refinery Utilization Rate in key markets

*Asia = Japan, South Korea, China, India and Singapore. For some Asian countries May is estimated.
Concern about possible shortages of middle distillates, in the face of the strong demand.
The OPEC Spare Capacity could explain part of the price forecast, but not totally the increase in price.

Speculation variable (proxied by Non Commercial Long Positions) provides a good explanation about the evolution of the oil price during 2004 and 2005.

Source: Antonio Merino, Chief Economist, Repsol YPF ‘The oil price premium: can non-commercial long positions help to explain the premium?”, June 2005.
The price of oil: distinguishing between nominal and real

Although reaching historical highs in nominal terms, the real value is far below historical highs.

Also, the depreciation of the dollar has had an important impact.

Producers are getting much less than the benchmark crudes would indicate.
OPEC R. Basket price in real terms
(Base: May 2005=100, US$ / b)
World oil demand growth vs. capacity growth (tb/d)

- World Refinery capacity
- OPEC production capacity
- World oil demand

Values:
- 2000: 316
- 1200: 696
- 400: 257
- 0: 710
- 6: 712
Largest contributors to growth in world oil demand year-on-year change (mb/d)
Source of non-OPEC supply
year-on-year change (mb/d)

Russia

* Projected
Slowing pace of Russian oil supply growth (mb/d)

- Yukos impact is now visible!
- Export tariffs create disincentive
- Fiscal regime uncertainties
OPEC crude oil production, 2002-2005
(based on secondary sources, mb/d)

- 2002: 25.4 mb/d
- 2003: 27.0 mb/d
- 2004: 29.1 mb/d
- 2005*: 29.8 mb/d

* / 1st half year.

Iraq and OPEC-10 cumulative change.

OPEC-11 cumulative change.
OECD commercial oil stocks
closing levels, mb

Min-Max range: 1994-2004

Avg. 00-04

2005

2004

2005

2004

2000-2004 Max/Min
OPEC production capacity & additions (mb/d)

Note: OPEC production as of 2005 reflects estimated required OPEC volumes.

* End 05 production is based on estimated required OPEC volumes.

Note: Net capacity increase for Iraq is expected to be 0.5 - 1.0 mb/d by 2010.
OPEC crude oil production capacity expansion (mb/d)

<table>
<thead>
<tr>
<th></th>
<th>2004/03</th>
<th>2005/04</th>
<th>2006/05</th>
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</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>0.10</td>
<td>0.13</td>
<td>0.00</td>
</tr>
<tr>
<td>Indonesia</td>
<td>-0.12</td>
<td>0.00</td>
<td>0.00</td>
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<tr>
<td>Iran, I.R.</td>
<td>0.14</td>
<td>0.07</td>
<td>0.00</td>
</tr>
<tr>
<td>Iraq</td>
<td>0.00</td>
<td>0.00</td>
<td>0.20</td>
</tr>
<tr>
<td>Kuwait</td>
<td>0.15</td>
<td>0.26</td>
<td>0.04</td>
</tr>
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<td>Libya</td>
<td>0.09</td>
<td>0.21</td>
<td>-0.05</td>
</tr>
<tr>
<td>Nigeria</td>
<td>0.06</td>
<td>0.12</td>
<td>0.07</td>
</tr>
<tr>
<td>Qatar</td>
<td>0.02</td>
<td>0.07</td>
<td>-0.06</td>
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<tr>
<td>Saudi Arabia</td>
<td>0.12</td>
<td>0.48</td>
<td>0.28</td>
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<tr>
<td>UAE</td>
<td>0.02</td>
<td>0.06</td>
<td>0.14</td>
</tr>
<tr>
<td>Venezuela</td>
<td>0.11</td>
<td>0.13</td>
<td>0.11</td>
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## Oil Demand Outlook, mb/d

<table>
<thead>
<tr>
<th>Reference</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
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<tbody>
<tr>
<td>OECD</td>
<td>50.7</td>
<td>52.0</td>
<td>53.0</td>
<td>53.9</td>
</tr>
<tr>
<td>DCs</td>
<td>33.8</td>
<td>39.2</td>
<td>45.1</td>
<td>51.3</td>
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<tr>
<td>Transition economies</td>
<td>5.3</td>
<td>5.6</td>
<td>5.9</td>
<td>6.1</td>
</tr>
<tr>
<td>Total World</td>
<td>89.9</td>
<td>96.8</td>
<td>104.0</td>
<td>111.3</td>
</tr>
</tbody>
</table>

### High scenario
- 2010: 90.8
- 2015: 99.1
- 2020: 108.0

### Low scenario
- 2010: 88.7
- 2015: 93.4
- 2020: 97.6

**“Dynamics-as-usual”: observed patterns, no new strong policy drives**

- **Oil demand increases** by an average of **1.5 mb/d annually**
- Four-fifths of the increase in demand of **28 mb/d over the period 2005–2025** comes from developing countries
- Transportation continues to be the dominant source of growth (~60 %)
- Many uncertainties: GDP, technology, policy – **substantial downside risks**
- **Issue of security of demand**
Annual growth in oil demand, 2004-2025, Reference, mb/d pa

<table>
<thead>
<tr>
<th>Region</th>
<th>GDP Growth (%)</th>
<th>Oil Demand Growth (%)</th>
<th>Oil Demand Growth (mb/d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>3.5</td>
<td>1.6</td>
<td>1.5</td>
</tr>
<tr>
<td>Asia</td>
<td>4.7</td>
<td>2.7</td>
<td>0.76</td>
</tr>
<tr>
<td>China</td>
<td>6.2</td>
<td>4.1</td>
<td>0.35</td>
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</table>

Asia: 66% of DCs increase, especially China & India

- huge potential (e.g. low vehicle ownership)
- But possible constraints: infrastructure, policies

OECD Pac.
W. Europe
N. America

OPEC & other exp.
Latin America.
Africa & M.E.
other FSU

Transition economies
World oil supply: cumulative production & reserve growth

## Oil Production Outlook, mb/d

<table>
<thead>
<tr>
<th>Reference (DAU)</th>
<th>2005</th>
<th>2010</th>
<th>2020</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD</td>
<td>21.5</td>
<td>21.7</td>
<td>20.6</td>
<td>19.9</td>
</tr>
<tr>
<td>DCs excl. OPEC</td>
<td>15.9</td>
<td>17.6</td>
<td>18.8</td>
<td>18.3</td>
</tr>
<tr>
<td>Russia &amp; Caspian</td>
<td>11.8</td>
<td>13.3</td>
<td>15.2</td>
<td>15.6</td>
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<tr>
<td>Non-OPEC</td>
<td>51.2</td>
<td>54.8</td>
<td>57.2</td>
<td>56.7</td>
</tr>
<tr>
<td>OPEC (incl. NGLs)</td>
<td>32.1</td>
<td>35.0</td>
<td>46.8</td>
<td>54.5</td>
</tr>
<tr>
<td>World</td>
<td>83.2</td>
<td>89.9</td>
<td>104.0</td>
<td>111.3</td>
</tr>
</tbody>
</table>

**High scenario**
- 83.4 (32.5)  90.8 (38.1)  108.0 (51.0)

**Low scenario**
- 83.0 (31.6)  88.7 (31.9)  97.6 (40.4)

(Note: The scenario numbers in brackets indicate OPEC share.)

- Short-term to medium term, non-OPEC production continues to rise, plateaus at **55-57** mb/d
- Key sources of increase: Latin America, Africa, Russia and Caspian
- Russian exceptional growth not sustainable (infrastructure constraints): eventually plateaus at **11** mb/d
- OECD production expected to decline
- Rate of increase in non-OPEC supply subject to considerable uncertainty.
- OPEC increasingly supplies incremental barrel
- Low economic growth scenario would lead to significant drop in OPEC production required.
- Also: significant medium term uncertainties.
Regional oil demand & net import requirements (mb/d)

<table>
<thead>
<tr>
<th>Region</th>
<th>2005 Oil Demand</th>
<th>2015 Oil Demand</th>
<th>2025 Oil Demand</th>
<th>Oil Demand</th>
<th>2005 Oil Import Req.</th>
<th>2015 Oil Import Req.</th>
<th>2025 Oil Import Req.</th>
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</thead>
<tbody>
<tr>
<td>North America</td>
<td>25</td>
<td>27</td>
<td>29</td>
<td>10</td>
<td>12</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Latin America</td>
<td>5</td>
<td>6</td>
<td>7</td>
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<td>0</td>
<td>1</td>
<td></td>
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<tr>
<td>Europe</td>
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<td>17</td>
<td>10</td>
<td>12</td>
<td>14</td>
<td></td>
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<tr>
<td>FSU</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>-8</td>
<td>-10</td>
<td>-10</td>
<td></td>
</tr>
<tr>
<td>Asia</td>
<td>23</td>
<td>30</td>
<td>38</td>
<td>16</td>
<td>23</td>
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<tr>
<td>China</td>
<td>7</td>
<td>10</td>
<td>13</td>
<td>3</td>
<td>6</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>M.East &amp; Africa</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>-3</td>
<td>-3</td>
<td>-2</td>
<td></td>
</tr>
<tr>
<td>OPEC</td>
<td>7</td>
<td>9</td>
<td>10</td>
<td>-25</td>
<td>-32</td>
<td>-44</td>
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</tr>
</tbody>
</table>
Investment in OPEC Member Countries

Numerous possibilities
Extent of IOC involvement varies, from large to little or none
Combination/partnership — IOCs + NOCs

Agreements
Fair and workable
Open and transparent
Incentives for investor
Assurances for owner
Commitment to long-term

Many uncertainties, which can be costly
Increasing attention on downstream

International oil companies (IOCs) National oil companies (NOCs)
Drivers of uncertainties over future supply and demand growth and future scale of investment that will be required

- The world economy
- Energy policies impacting supply/demand
- Technology developments
- Oil price path
**Cumulative OPEC investment requirements:**

Huge uncertainties in future oil demand translate into huge uncertainties and risks for future OPEC investment.

- If OPEC balances the market, the uncertain volume requirements translate into huge ranges of anticipated capital outlay needs.
- Already by 2010 an estimated uncertainty of $25 billion exists between the reference case and the low economic growth case.
- A unit of investment in OPEC country on average produces it 4X the additional capacity.

![Graph showing cumulative OPEC investment requirements](chart.png)

- **2010:** $70-95bn
- **2015:** $122-173bn
- **2020:** $185-269bn
- **2025:** $258-382bn

Impact of lower economic growth
Downstream challenges

- Increasing demand for lighter products
- Limited flexibility

**Average Global Crude Slate**

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>API</strong></td>
<td>33.36</td>
<td>33.12</td>
</tr>
<tr>
<td><strong>% Sulphur</strong></td>
<td>1.17</td>
<td>1.27</td>
</tr>
</tbody>
</table>

- Significant investment requirements (> $130 billion over the next decade)

**Light Products * Oil Demand Growth**

* Gasoline, Jet Kerosene and Distillate
Refinery expansion / upgrading plans in Mideast Gulf

- Attending to rising product demand both domestic & Asia-Pacific region, as well as to meet higher product specifications.
- Pursue global downstream investments, particularly in Asia-Pacific region (Kuwait & Saudi Arabia)
  - **Kuwait**: A plan of new refinery (450 tb/d capacity); upgrade two existing plants (Mina al-Ahmadi & Mina Abdullah);
  - **Saudi Arabia**: initial plans of a joint venture export refinery (400 tb/d) in Yanbu; expansion of Rabigh, Ras Tanura complex and Yanbu refinery
  - **U.A.E**: expansion in Jebel Ali condensate refinery
  - **Iraq**: contacts to build a 300 tb/f refinery at Al-Mussayab.
OPEC committed to steady, secure, timely supplies, at reasonable prices

Support from all parties required

EU-OPEC Energy Dialogue **valuable** in furthering global producer-consumer dialogue

**PLUS**

Opens up exciting new possibilities in many fields