

# **Africa's Petroleum Industry**

Presented to the symposium on  
**Africa: Vital to U.S. Security?**

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# Report Documentation Page

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# Key Points

- West Africa is a strategic supplier to the US/Global Market
- Africa's role in the global market expected to increase in the medium term
- China and India represent competitors with additional bargaining tools--downstream investment and abundant capital
- Threats to stability of supply are more internal than external
- Increasing political stability in producer countries key to reducing supply risk

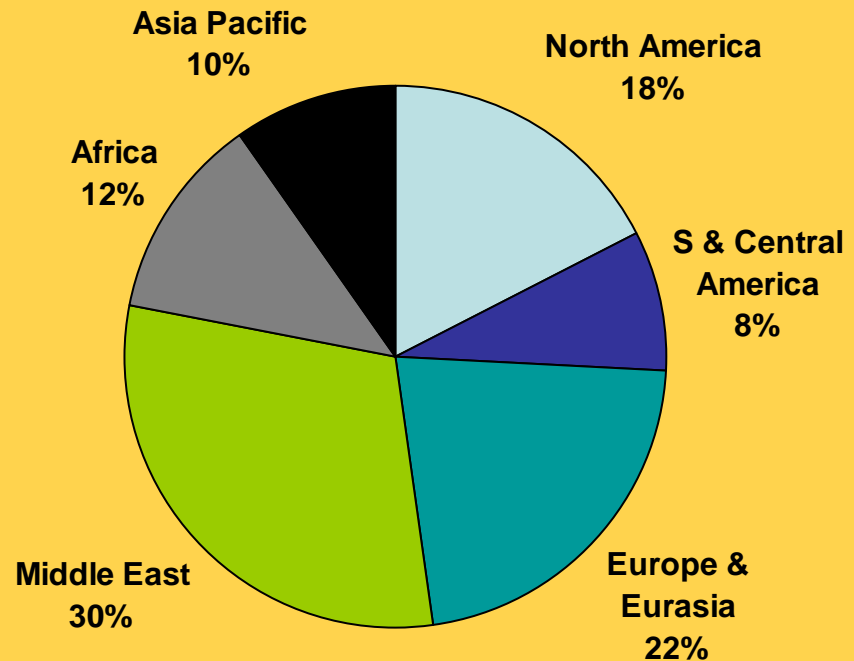
# Who Counts in Global Oil?

<b>PRODUCERS (mbpd)</b>		<b>CONSUMERS (mbpd)</b>		<b>EXPORTERS (mpbd)</b>		<b>IMPORTERS (mbpd)</b>	
<b>Saudi Arabia</b>	<b>10.6</b>	<b>US</b>	<b>20.5</b>	<b>Saudi Arabia</b>	<b>8.7</b>	<b>US</b>	<b>11.8</b>
<b>Russia</b>	<b>9.3</b>	<b>China</b>	<b>6.7</b>	<b>Russia</b>	<b>6.7</b>	<b>Japan</b>	<b>5.3</b>
<b>US</b>	<b>7.2</b>	<b>Japan</b>	<b>5.3</b>	<b>Norway</b>	<b>2.9</b>	<b>China</b>	<b>2.9</b>
<b>Iran</b>	<b>4.1</b>	<b>Germany</b>	<b>2.6</b>	<b>Iran</b>	<b>2.6</b>	<b>Germany</b>	<b>2.5</b>
<b>Mexico</b>	<b>3.8</b>	<b>Russia</b>	<b>2.6</b>	<b>Venezuela</b>	<b>2.4</b>	<b>S. Korea</b>	<b>2.1</b>
<b>China</b>	<b>3.5</b>	<b>India</b>	<b>2.6</b>	<b>UAE</b>	<b>2.3</b>	<b>France</b>	<b>2.0</b>
<b>Norway</b>	<b>3.2</b>	<b>S. Korea</b>	<b>2.3</b>	<b>Kuwait</b>	<b>2.2</b>	<b>Italy</b>	<b>1.7</b>
<b>Canada</b>	<b>3.1</b>	<b>Canada</b>	<b>2.2</b>	<b>Nigeria</b>	<b>2.2</b>	<b>Spain</b>	<b>1.6</b>
<b>Venezuela</b>	<b>3.0</b>	<b>France</b>	<b>2.0</b>	<b>Mexico</b>	<b>1.7</b>	<b>India</b>	<b>1.5</b>

Sources: BP (2004 data); U.S. Energy Information Administration (2004 data)

# Global oil production by region

Region	MBPD
North America	14.2
S & Central America	6.7
Europe & Eurasia	17.6
Middle East	24.6
Africa	9.7
Asia Pacific	7.9



Source: BP Statistical Review of World Energy, June 2005

# Who Counts in Africa?

<b>PRODUCERS</b> <b>(mbpd)</b>		<b>CONSUMERS</b> <b>(mbpd)</b>	
<b>Nigeria</b>	<b>2.5</b>	<b>Egypt</b>	<b>.57</b>
<b>Algeria</b>	<b>1.9</b>	<b>South Africa</b>	<b>.51</b>
<b>Libya</b>	<b>1.6</b>	<b>Nigeria</b>	<b>.31</b>
<b>Angola</b>	<b>1.0</b>	<b>Algeria</b>	<b>.23</b>
<b>Egypt</b>	<b>.71</b>	<b>Libya</b>	<b>.22</b>
<b>Eq. Guinea</b>	<b>.35</b>	<b>Morocco</b>	<b>.16</b>
<b>Sudan</b>	<b>.30</b>	<b>Tunisia</b>	<b>.08</b>
<b>Congo</b> <b>(Brazzaville)</b>	<b>.24</b>	<b>Kenya</b>	<b>.05</b>

*Sources:* International Energy Agency; U.S. Energy Information Administration (2004 Production and Consumption).

# Top 15 US oil suppliers

COUNTRY	THOUSAND BARRELS PER DAY
Canada	1,616
Mexico	1,601
Saudi Arabia	1,498
Venezuela	1,289
Nigeria	1,067
Iraq	653
Angola	306
Kuwait	245
United Kingdom	231
Ecuador	226
Algeria	216
Norway	154
Russia	145
Colombia	140
Gabon	134

Source: Energy Information Administration 2005

# Expected Market Value of West African Crude Oil Production

	2002-2010			2010-2019			2002-2019		
	IOCs	Govt	Govt Take	IOCs	Govt	Govt Take	IOCs	Govt	Govt Take
<b>Nigeria</b>	<b>\$28,026</b>	<b>\$110,065</b>	<b>80%</b>	<b>\$26,180</b>	<b>\$95,011</b>	<b>78%</b>	<b>\$54,206</b>	<b>\$205,076</b>	<b>79%</b>
<b>Angola</b>	<b>\$28,651</b>	<b>\$42,623</b>	<b>60%</b>	<b>\$34,852</b>	<b>\$51,275</b>	<b>60%</b>	<b>\$63,504</b>	<b>\$93,898</b>	<b>60%</b>
<b>Eq. Guinea</b>	<b>\$6,361</b>	<b>\$9,689</b>	<b>60%</b>	<b>\$4,876</b>	<b>\$5,647</b>	<b>54%</b>	<b>\$11,237</b>	<b>\$15,336</b>	<b>58%</b>
<b>Gabon</b>	<b>\$2,989</b>	<b>\$8,988</b>	<b>75%</b>	<b>\$1,701</b>	<b>\$5,095</b>	<b>75%</b>	<b>\$4,690</b>	<b>\$14,083</b>	<b>75%</b>
<b>Congo</b>	<b>\$3,727</b>	<b>\$7,333</b>	<b>66%</b>	<b>\$3,288</b>	<b>\$6,452</b>	<b>66%</b>	<b>\$7,015</b>	<b>\$13,784</b>	<b>66%</b>
<b>Chad</b>	<b>\$5,465</b>	<b>\$2,158</b>	<b>28%</b>	<b>\$2,953</b>	<b>\$1,650</b>	<b>36%</b>	<b>\$8,418</b>	<b>\$3,808</b>	<b>31%</b>
<b>Cameroon</b>	<b>\$784</b>	<b>\$2,362</b>	<b>75%</b>	<b>\$442</b>	<b>\$1,331</b>	<b>75%</b>	<b>\$1,226</b>	<b>\$3,693</b>	<b>75%</b>
<b>TOTAL</b>	<b>\$76,004</b>	<b>\$183,218</b>	<b>71%</b>	<b>\$74,292</b>	<b>\$166,461</b>	<b>69%</b>	<b>\$150,296</b>	<b>\$349,678</b>	<b>70%</b>

Source: "West Africa Petroleum Sector" PFC Energy, December 2003

# Why is African Oil Strategic?

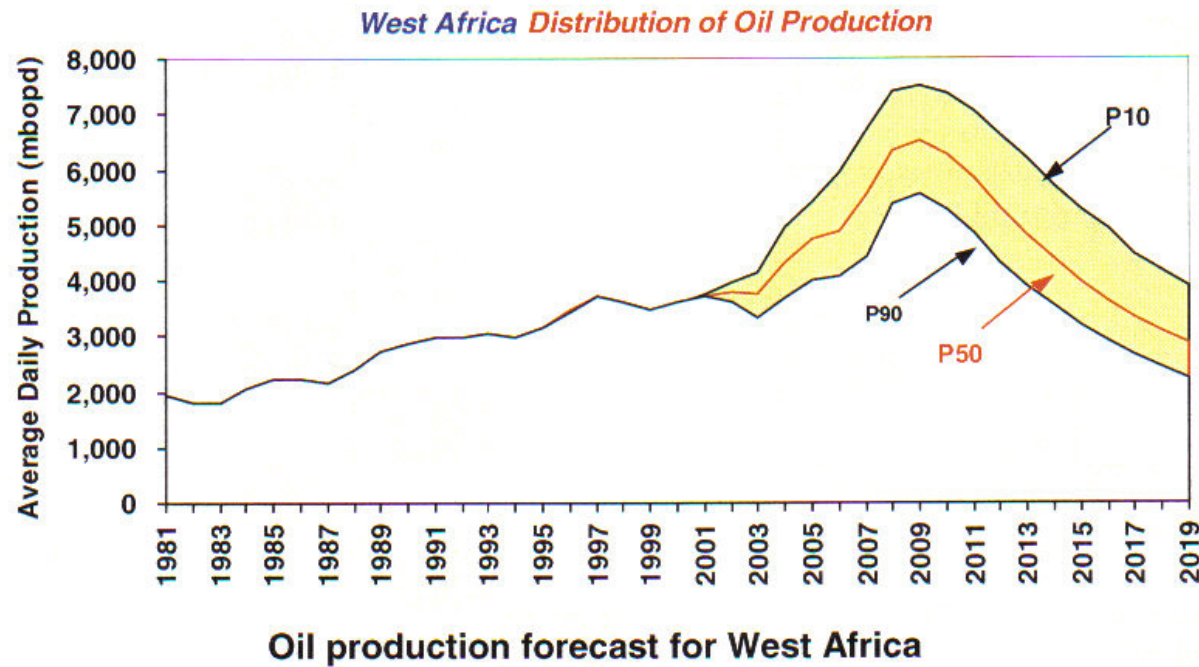
- Diversity of supply (12-14% of US supply; could reach 20%)
- Key marginal supplier in market with no excess capacity
- Access (\$30-40 billion in investment planned for coming decade, 100,000 U.S. jobs supported)
- Increasing production (Between 2004 and 2010, West and Central Africa will comprise 20% of new world oil production)

Sources: PFC Energy 2003, CERA, CSIS

# Africa's Increasing Importance

- Expected Production Growth through 2010
- New production from historical producers: Nigeria, Angola
- New production from new producers: EG, Chad
- Decline from Cameroon, Gabon, Congo
- New frontier areas

# Oil production in Africa Set to Grow as Much as 45-50% this decade



Source: "West Africa Petroleum Sector" PFC Energy, December 2003

# Chinese and Indian influence in Africa

- Increasing demand in Asia fuels competition for oil supply
- Chinese firms willing to invest in African refining, unlike IOCs
  - China extended Angola a \$2b loan in exchange for preferential access E&P acreage
  - China and India won blocks in Nigeria due to investments in downstream

# Vulnerabilities in infrastructure and threat of supply disruption

- External terrorism considered a low-probability threat
- Internal tensions cause shut-ins of production, although infrastructure is largely unaffected
  - 2003: shut-in of 800,000 bpd in Nigeria due to civil unrest in the Delta
  - Coup or change of government in EG
  - Internal unrest in Angola could pose a threat to personnel and facilities

# Enhancing energy security

- U.S. energy security is susceptible to supply disruptions in Africa, BUT
- Africa itself does not have an energy security problem
- U.S. interest to promote political stability in Africa as part of a concentrated effort in the region to tackle corruption, poverty, oil revenue management

# Policy Steps for the U.S.

- Increase Diplomatic attention
- Promoting stability
  - Governance: increased technical assistance for reformers
  - Democracy building: strengthen civil society groups in human rights and transparency

# Policy Steps for the U.S.

- Enhancing security
  - Maritime environment: strengthen bilateral capacity for the protection of infrastructure
  - Crime prevention: pilot enforcement program to combat illicit oil sales, money laundering, arms trafficking
  - Regional initiatives: support nascent regional bodies such as the Gulf of Guinea Commission
  - Dialogue: create a high-level dialogue with China/India on Africa



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