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Before the
Subcommittee on International Economic Policy, Export and Trade
Promotion
Committee on Foreign Relations
United States Senate
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Mr. Chairman, and Members of the Subcommittee. I am pleased to be here today to discuss the important role of West Africa in U.S. and global energy security. The DOE fully supports the Subcommittee's undertaking of this series of hearings on energy security, begun last year, and we stand prepared to cooperate fully with you in efforts aimed at improving the security of our energy supplies.

I testified before this Subcommittee on the importance of Latin America and Africa to U.S. and global energy security in October 2003, and the points I raised in that earlier testimony still stand. My remarks today can be viewed as a follow-up and an update to that earlier testimony, with a specific focus on Africa and, in particular, West Africa.

For our purposes today, I have defined West Africa as the regional grouping of countries from Mauritania to Angola, and inwards to include Chad and the two Congos. This group includes six significant, current oil producing countries (Nigeria, Angola, Gabon, Congo Brazzaville, Equatorial Guinea, Chad), other countries with smaller amounts of current production (Cameroon, Ghana, Cote d'Ivoire, Congo Kinshasa), a number of

frontier oil provinces that may become “hot” exploration areas during the coming decade (Mauritania, Senegal, Sierra Leone, and Sao Tome and Principe), and others that are currently, or soon hope to be, exploring for oil and gas (The Gambia, Liberia, Togo, Benin, and Niger).

U.S. Energy Policy and Energy Security

From an energy security point of view, U.S. Government energy policy has a role to play in assuring that our energy supplies represent a diverse set of energy resources from a diverse set of energy suppliers. President Bush’s National Energy Plan, issued in May 2001, embodies these fundamental principles and recommends actions that will help achieve these objectives. The Plan also recognizes that the United States cannot address its energy concerns alone, that our energy security is intricately linked to international markets as a result of our increasing dependence on external sources of supply.

In recognizing these challenges, the National Energy Plan calls for strengthening global alliances through such important mechanisms as our existing bilateral relationships with key countries and regions around the world, and through our participation in multilateral international energy organizations. The National Energy Plan specifically noted the importance of Africa to U.S. energy security and to global energy production, and it provided specific recommendations for strengthening our engagement, promoting favorable investment climates, and encouraging transparency, good governance and the responsible use of natural resource revenues to support sustainable social and economic development in Africa.

In my earlier testimony, I noted that our policy of diversifying supplies relies on commercial investment in energy projects. As I stated before this subcommittee last year, we don't tell our companies where to invest or where to buy oil and gas. It is up to them to weigh all the factors involved and to make their own decisions. I also noted that there are a considerable number of obstacles to realizing successful development of commercial trade and investment flows, directly related to economic, political, and security risks. I noted that many new sources of supply are more dispersed geographically, are often located in undeveloped and conflicted regions, and they often carry very high recovery, transportation and infrastructure costs.

I also outlined new risks from non-traditional, and often internal sources of conflict such as corruption, the lack of "rule of law", political instability, ethnic and religious conflicts and other so-called governance issues. I stated that the capabilities of energy companies and financial institutions to handle these risks, in order to allow energy development projects to become economically viable, is itself a potential source of worry for our energy security.

I noted that I was less concerned about the technical capabilities of the companies, but more concerned about the impact that an unfavorable business climate can have on the resource development process. Continued investment will depend on political and economic stability, on the existence of transparent regulatory regimes, and on a continuation of competitive fiscal terms capable of attracting international capital, and nowhere is this truer than in Africa. An unfavorable business climate may keep needed

resources locked away from development for a long time. I concluded my earlier testimony by indicating a need to remain engaged on sustainable development issues with Africa producers in order to minimize many of these new internal threats to stability, and to promote, protect and defend our security of supply, and our own security in commercial energy trade and development relationships.

While these points are still valid, my testimony today will focus more on the role of West Africa in global energy markets, and on the prospects for continued development of oil and gas in the region. My colleague from the Department of State will talk about many of the policies and programs we have underway in West Africa to promote transparency, stability, and good governance.

The Importance of Africa

Africa as a whole is currently producing nearly nine million barrels of oil per day, with approximately 4.7 million barrels per day coming from West Africa. African oil production currently accounts for approximately 11 percent of the world's oil supply. Africa currently supplies approximately 18 percent of U.S. net oil imports, and both Nigeria and Angola are currently among the top 10 suppliers of oil to the United States. U.S. dependence on oil from Africa is expected to rise in the future as new fields are brought on line.

Estimates of Africa's proven oil reserves vary considerably from source to source, but most sources indicate that Africa proven oil reserves are in the range of approximately 7

to 9 percent of the world's total, or 80 to 100 billion barrels. Estimates of Africa's undiscovered oil resources, and of its undiscovered, producible reserves vary even more widely, but most estimates support the expectation that Africa as a whole, and West Africa in particular, have a reserve base that is capable of supporting increased oil production for years to come.

Several recent studies undertaken by the USDOE and others conclude that sizable but untested resource potential exists in many African and West African countries. With continuation of deep water and ultra deep water discoveries, with optimization of overall resource development and production, and with sufficient levels of investment in exploration and development and in maintaining production from mature fields, African oil production could rise by 4-6 mmbd in the next 10 to 15 years.

In these scenarios, West Africa's 5 key producing countries (Nigeria, Angola, Gabon, Republic of Congo-B, and Equatorial Guinea) could see their combined production rise by 2 to 3 million barrels per day in the next 5 to 10 years, and by 3 to 5 million barrels per day in the next 10 to 15 years. West Africa's frontier oil countries, such as Senegal, Sierra Leone, and Sao Tome and Principe in the Joint Development Zone, and other countries, could also become "hot" exploration areas in the next decade. While their potential is very promising, it is too early to determine with any certainty what the timing and magnitude of future production from these countries is likely to be.

While under almost any scenario, Africa will become an increasingly important supplier to the world's energy markets in the next decade, continued success will greatly depend on the continued favorableness of deep water geology and continued investment. Continued investment will depend on political and economic stability, on the existence of transparent regulatory regimes, and on a continuation of competitive fiscal terms capable of attracting international capital.

As natural gas becomes monetized in Africa and in West Africa, it can also play a larger role in economic development. Africa currently holds approximately 8 percent of the world's proven reserves of natural gas, and is responsible for a little over 5 percent of world gas production (note: this figure does not include gas flared or reinjected). Many countries in Africa and in West Africa have significant untapped production and export potential, and with world gas demand rising, many international companies are rapidly expanding their investments in African gas development projects.

The US Department of Energy (USDOE) is working with various African countries and international organizations in Africa to promote the development and utilization of natural gas resources, which, in turn, will directly contribute to the reduction of gas flaring and venting, increase revenues to the state, and help provide efficient, reliable energy for sustainable development.

Development of natural gas is well underway in several countries, but many countries are still struggling with the basic principles of gas commercialization and its economic and regulatory links to the power and other sectors for domestic consumption.

West Africa is also a part of the Atlantic Basin, and relatively close to the main markets in the U.S. West Africa is also the source of light, sweet crude oil critical for U.S. refining needs, and a key replacement for declining North Sea oil production.

The US consumes more than 24 trillion cubic feet of natural gas per year. Our dependence on natural gas and imported LNG is expected to rise, and much of that could come from West Africa.

Given its reserve base, it is unlikely that Africa or West Africa will ever take the place of the Middle East in its importance to the world's oil and gas markets, but it will nevertheless continue to be an important source of additional supplies to the U.S. and world market. We have learned from experience that the additional or marginal barrels can have a significant impact on developments in the marketplace, and West Africa has the potential to be an important source of the marginal barrels for years to come.

West Africa is one of the world's fastest growing sources of oil and gas and is now the location of significant new investments by many of the U.S. and international major oil

companies. The following brief synopsis of recent developments by country is indicative of the activity underway.

Chad began producing oil for the first time in July 2003, and is currently producing 110,000 barrels per day (bpd). The U.S. is now receiving approximately 34,000 bpd of oil from Chad that did not exist a little over a year ago. The realization of oil production in Chad was made possible by the construction of the \$3.7 billion, 650-mile Chad-Cameroon oil pipeline project, led by ExxonMobil.

Nigeria, an OPEC member, has proven oil reserves of nearly 40 billion barrels, and currently produces approximately 2.5 million barrels per day. Nigeria's goal is to raise its production capacity to 4 million barrels of oil per day by 2010. Nigeria has also emerged as a major exporter of liquefied natural gas (LNG) in recent years (it is now the second largest LNG exporter on the African continent and the fifth largest in the world), and it has the world's 9th largest reserves of natural gas and the largest reserves in sub-Saharan Africa.

Angola, a non-OPEC member, is the second largest Sub-Saharan oil exporter to the U.S., currently producing 1.07 million barrels per day. Angola's total proven oil resources are estimated to be between 5 and 9 billion barrels, and rising with new discoveries.

Angola's stated goal is to increase oil production to 2 million barrels per day by 2008.

Angola is also planning the development of an LNG project for export.

On May 13th, at the Angolan Embassy in Washington, Sonangol (Angolan national oil company), ChevronTexaco (lead), Total and ENI signed an extension agreement to further the development of one of Angola's most prolific offshore oil production areas, Block 0. This agreement has been negotiated in an open and transparent manner and includes disclosure terms for the signing bonus. The disclosure terms for the signing bonus represent significant progress for transparency and meaningful reform in revenue oversight and will engender greater goodwill in the international community.

Equatorial Guinea's oil production is currently about 360,000 barrels per day. It is a non-OPEC producer and has total proven oil reserves conservatively estimated at 1.2 billion barrels. Major oil companies operating in Equatorial Guinea are Marathon Oil, ExxonMobil, AmeradaHess, and ChevronTexaco. The U.S. reopened its Embassy in Equatorial Guinea in October 2003. President Obiang recently visited the U.S. and met with Secretary Abraham at the Department to discuss bilateral energy issues. Equatorial Guinea also has considerable natural gas potential and is planning the development of a LNG project for export.

Gabon is West Africa's fourth largest oil producer, currently producing about 250,000 barrels per day. While Gabon's oil production has decreased somewhat in recent years, it has recently taken steps to improve the investment climate and attract more interest. It also recently settled a territorial dispute with Equatorial Guinea that will allow exploration and development to proceed in previously disputed offshore area.

Republic of Congo (Brazzaville) is currently producing about 243,000 barrels per day. The majority of its crude oil production is located offshore, and is considered to have significant potential.

Sao Tome and Principe - Since the attempted coup of one year ago in Sao Tome and Principe, there has been a reconciliation process underway which thus far has remained peaceful. As part of this process, there has been a series of public town hall style meetings to allow a wide range of Sao Tomean society to debate national direction and the priorities for future oil revenues. Commitments have been made by the Governments of Sao Tome and Principe and Nigeria to ensure openness and transparency in the bidding process on oil blocks in the offshore Joint Development Zone (JDZ) shared by the two countries. On June 26, 2004, President de Menezes of Sao Tome and President Obasanjo of Nigeria signed the Abuja Declaration which states that oil payments made by companies to the Joint Development Authority (JDA) will be made public quarterly and annually by the JDA and that use of JDZ funds received by the two governments will be monitored and audited, with the audits made public.

Closing

Mr. Chairman, that completes my overview of West African oil and gas developments, and I believe that my statement covers all the topics you have proposed for today's hearing. Thank you for the opportunity to testify before you today. I welcome any questions that the committee might have.

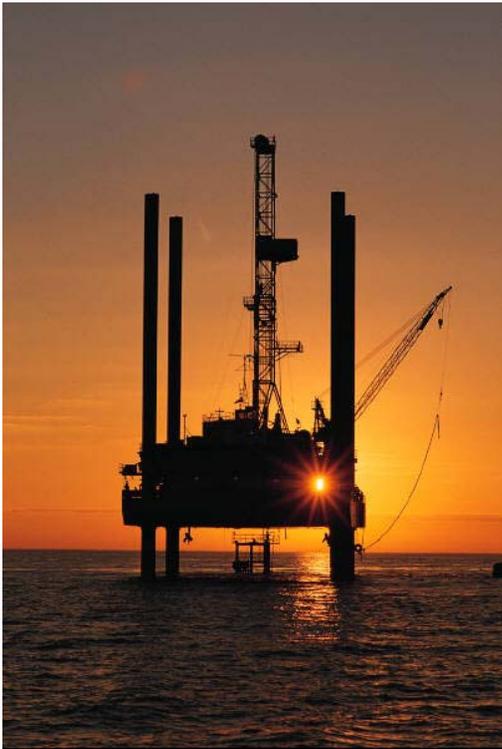
Attachments: Chart on African Oil and Gas Production; Table on U.S. Petroleum imports from Africa.

Net Imports of Oil (Crude & Products) into the U.S. By African Country
 (January through April 2004)

Country	Daily Average (Thousand Barrels)
OPEC	
Algeria	400
Nigeria	1130
Non-OPEC	
Angola	309
Cameroon	30
Congo (B)	13
Congo (K)	6
Egypt	5
Gabon	134
Ivory Coast	2
Tunisia	1
 Total African Imports	 2030
 Total U.S. Imports	 11405
 Percentage of Total Net Imports	 17.8

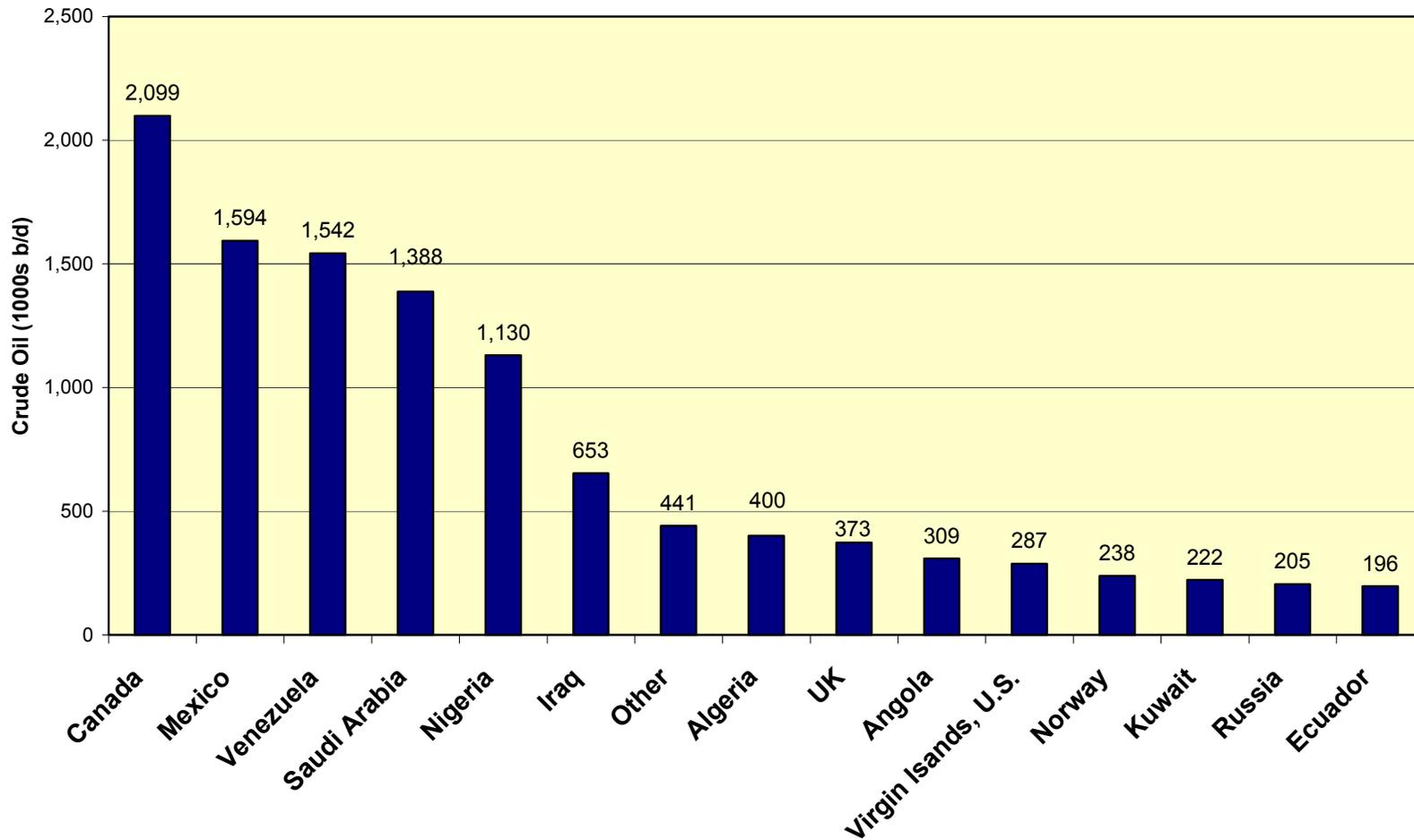
Source: EIA Petroleum Supply Monthly, June 2004

Africa



- **Proven Oil Reserves** as of 1/1/04: **87.0 billion barrels** and **7% of the world's total**
- **Proven Natural Gas Reserves** as of 1/1/04: **453 trillion cubic feet** and **7% of the world's total**
- **Total Oil Production (2003): 8.7 million barrels per day** and **11% of the world's total**
- **U.S. Oil Imports from the Africa (April 2004): 2.03 MBD** and **18% of total net oil imports**

Imports of Crude Oil and Petroleum Products into the US by Country of Origin, January to April 2004



Source: EIA Petroleum Supply Monthly, June 2004

