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April 2005

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Nigeria

An *OPEC* member, Nigeria is the largest oil producer in Africa and the eleventh largest in the world. The country is a major oil supplier to both *Western Europe* and the *United States*.

Note: The information contained in this report is the best available as of April 2005.



GENERAL BACKGROUND

Nigerian President Olusegun Obasanjo, most recently reelected in 2003, returned Nigeria to civilian rule with his first presidential win in 1999. Prior to that, the country had not held successful elections under a civilian government since independence from the United Kingdom in 1960. Although Nigeria has substantial oil wealth, it is one of the world's poorest nations, with more than 70 percent of the population living in poverty. Nigeria's economy is heavily dependent on oil sector revenues, which account for nearly 80 percent of government revenues. Real gross domestic product (GDP) grew

approximately 5.5 percent in 2004 and is expected to post similar growth in 2005. The International Monetary Fund (IMF) recently praised the government for adopting tighter fiscal policies. The Obasanjo administration is also working on a number of economic reforms including the privatization of state-owned entities.

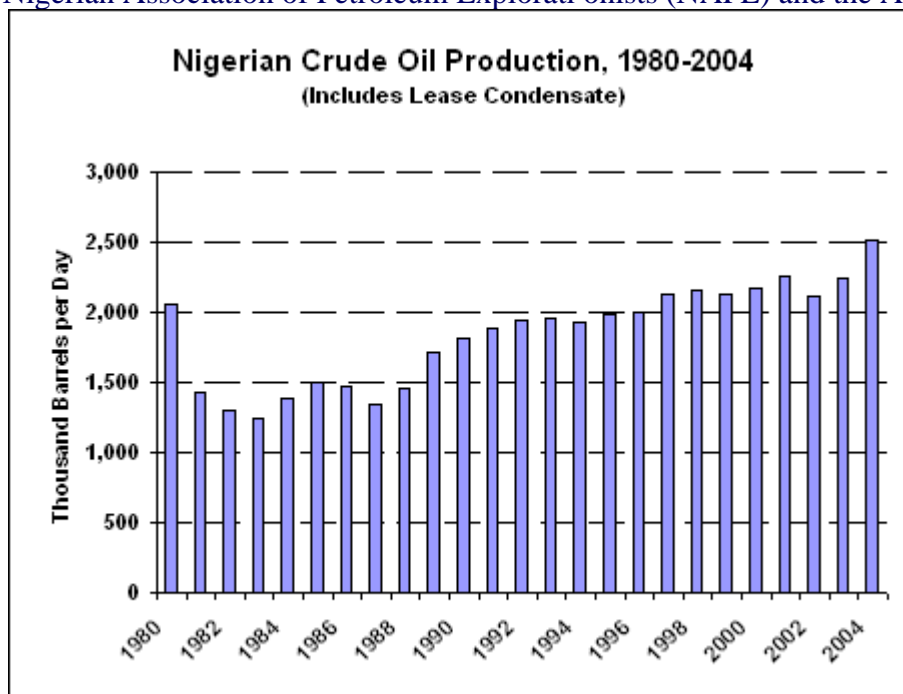
OIL

Oil and Gas Journal (1/1/05) estimates Nigeria's proven oil reserved at 35.2 billion barrels. The Nigerian government plans to expand its proven reserves to 40 billion barrels by 2010. The majority of reserves are found along the country's coastal Niger River Delta, with the majority of oil located in approximately 250 small (i.e., less than 50 million barrels each) fields. At least 200 other fields contain undisclosed reserves. Nigeria's crude oil reserves have gravities ranging from 21 o API (American Petroleum Institute) to 45 o API. Its main export crude blends are Bonny Light (37 o API) and Forcados (31 o API). Approximately 65 percent of Nigerian crude oil production is light (35 o API or higher) and sweet (low sulfur content).

Production

Nigeria is the largest oil producer in Africa and the eleventh largest in the world, averaging 2.5 million barrels per day (bbl/d) in 2004. In August 2004, Nigeria's finance minister announced plans to produce 2.6 million bbl/d of oil in 2005. The Nigerian government plans to increase oil

production to 3 million bbl/d in 2006 and 4 million bbl/d in 2010. Such aspirations have led to disputes with the Organization of Petroleum Exporting Countries (OPEC), as the country frequently exceeds its production quotas. Although OPEC increased Nigeria's production quota three times in 2004, the Nigerian National Petroleum Company (NNPC) has recently announced increased pressure from multinational oil companies for Nigeria to leave the organization. The multinationals see Nigeria's OPEC production quota as the main hindrance to increased production at several deepwater fields. Shell's Bonga field (225,000 bbl/d capacity) is expected online in mid-2005. ExxonMobil's Erha, East Area Oil, Bosi, and Eti/Asasa fields with capacities of 150,000 bbl/d, 110,000 bbl/d, 50,000 bbl/d, and 25,000 bbl/d, respectively, are scheduled to come online between 2006 and 2007. ChevronTexaco's Agbami field (250,000 bbl/d capacity), Total's Usan and Akpo fields (205,000 bbl/d combined capacity), and Shell's Bonga Southwest (145,000 bbl/d capacity) are in various stages of development as well. NNPC reiterated its commitment to remaining a member of OPEC soon after the organization increased its production quota from 2.1 to 2.6 million bbl/d in late August 2004. In October 2004, however, NNPC established a committee consisting of the Nigerian Association of Petroleum Explorators (NAPE) and the American Association of



Petroleum Geologists (AAPG) to formulate ways to sidestep OPEC production quotas.

Although the Nigerian government has two major funding arrangements for oil production in the country-- joint venture (JV) and production sharing contract (PSC) arrangements-- production from JVs accounts for approximately 95 percent of the country's crude oil production. The largest JV, operated by Shell Petroleum Development Company of Nigeria Ltd. (SPDC) and

majority owned by NNPC, produces nearly half of Nigeria's crude oil, with average daily production of approximately 1.1 million bbl/d.

ExxonMobil, currently producing around 570,000 bbl/d in Nigeria, plans to invest \$11 billion in the country's oil sector between 2003 and 2011, increasing production to 1.2 million bbl/d. The majority of the increase will occur at the 150,000-bbl/d Erha development, slated to come online in 2006. In addition, ExxonMobil's 400 million barrel Yoho field began initial production of 90,000 bbl/d in February 2003. The \$1.2 billion field is located in the shallow waters of Block OML-104. Although Yoho's full-field output of 150,000 bbl/d was expected in late 2004, the timetable for completion has been pushed back to mid-2005. At that time, a temporary FPSO will be replaced by a floating storage and offloading (FSO) vessel. Associated natural gas will be re-injected to maintain field pressures and to eliminate flaring.

ChevronTexaco, Total, Agip, and ConocoPhillips are also involved in the Nigerian oil sector. Output at Total's Amenam field, for example, reached 120,000 bbl/d in January 2005. The Amenam field contains reserves of 500 million barrels of oil.

The majority of Nigeria's crude exports are destined for markets in the United States and Western Europe, with Asia and Latin America becoming increasingly important as well. In 2004, Nigerian crude exports to the United States averaged 1.1 bbl/d. In December 2004, President Obasanjo announced intentions to supply up to 15 percent of U.S. oil imports. Nigeria has six export terminals including Forcados and Bonny (operated by Shell), Escravos and Pennington (ChevronTexaco), Qua Iboe (ExxonMobil), Brass (Agip), and Bonny Island LNG (Nigeria LNG). Shell's Bonny terminal is currently undergoing a \$600 million expansion and will export 1.5 million bbl/d after its completion in 2006.

In March 2005, multinational oil companies in Nigeria announced their opposition to government plans to increase the Petroleum Profits Tax (PPT) from 50 percent to 85 percent. The multinationals claim such a move would amount to a breach of contract with the consequence of limiting investment in the region.

Exploration and Field Development

In August 2004, NNPC estimated that \$7 billion per year will be necessary to fund exploration and development in hopes of reaching its production targets. A new licensing round offering 61 deepwater and inland blocks in the Gulf of Guinea began in March 2005. Qualified bidders are to be announced in July 2005, with the signing of contracts scheduled for August 31, 2005. These deepwater projects may represent the future of Nigerian petroleum extraction as they allow multinational operators to avoid security risks inherent to the unstable Niger Delta. In January 2005, the Nigerian government revoked 24 underdeveloped oil blocks from multinational oil companies due to delays in their development. Although the Nigerian government returned four of 13 blocks confiscated from Royal Dutch/Shell in March 2005, several of the remaining blocks are included in the current licensing round.

Shell's \$2.7 billion, deepwater Bonga field, estimated to hold reserves of 1.2 billion barrels, is due to begin production in mid-2005. In August 2004, Shell announced plans to invest \$9 billion in Nigerian oil and natural gas projects over five years, including investments in the NLNG Train Six, the Soku natural gas plant expansion, and the Bonga oil field. In October 2004, NNPC announced that no 2005 quota would be allocated to Shell for oil production in the Bonga field because of uncertainties concerning production.

In October 2004, ChevronTexaco announced that it would invest \$2.5 billion in Nigeria in 2005, developing the Agbami field, which is scheduled to come online in late 2007, and a number of natural gas projects. The Agbami field, which contains 1 billion barrels of recoverable hydrocarbons, is located 70 miles from Nigeria's coast. The majority of the Agbami field lies in Oil Mining Lease (OPL) 216, while one-third of Agbami lies in the adjacent Block OPL 217. In December 2004, NNPC concluded negotiations on a \$4 billion contract for development of the Agbami field. Nigeria's National Petroleum Investment Management Services (NAPIMS) has mandated that a minimum of 25 percent of contracts for the Agbami field's development be awarded to local firms. In February 2005, NNPC awarded ChevronTexaco a \$1.1 billion contract for the construction of a floating production, storage, and offloading vessel (FPSO) in the field, which will be undertaken by Daewoo Shipping and Maritime Engineering (South Korea). The FPSO is expected to export up to 250,000 bbl/d of oil and 450 million cubic feet per day (Mmcf/d) of natural gas.

Development of ExxonMobil's offshore Erha oil field will cost \$2.6 billion. The field, located on OPL 209, is due to come onstream at a rate of 150,000 bbl/d in early 2006. ExxonMobil's \$1.7 billion East Area Additional Oil Recovery (AOR) project, which presently produces 750,000 bbl/d of oil equivalent, will improve production by 110,000 bbl/d, increasing recoverable reserves by 500

million barrels by 2006.



In February 2005, Nigeria announced that the award of five oil blocks in the Joint Development Zone (JDZ), shared by Nigeria and neighboring Sao Tome and Principe (STP), depends on whether ExxonMobil chooses to exercise its preferential rights to several of the blocks. Twenty-six companies submitted bids for the blocks by the conclusion of the 2004 licensing round. In December 2004, Nigeria and Sao Tome opened the second licensing round for blocks in the JDZ.

The JDZ reportedly holds reserves of 11 billion barrels and could potentially yield up to 3 million bbl/d in the next 2-3 years. Development is also occurring in the waters surrounding the JDZ. In March 2005, Spinnaker Exploration (US) purchased a 12.5 percent interest in OPL Block 256 from Ocean Energy, a subsidiary of Devon Energy. Drilling of the Tari 1 exploratory well at OPL Block 256, located 125 miles off the Nigerian coast near the JDZ, has commenced. Three wells are planned for the block.

Nigeria's Marginal Field Development Program (MFDP) provides tax breaks and government incentives to encourage local involvement in the oil sector. In November 2004, 16 indigenous companies acquired possession of marginal oil fields from SPDC under the MFDP. The fields, estimated to hold 150-200 million barrels of oil, are part of the 24 fields offered for sale in 2003. First oil from the fields is expected by November 2005. In September 2004, Nigeria and Angola also signed an MOU committing to increasing local participation in the oil sector. Nigeria plans to increase participation from 15 percent currently to 50 percent by 2007 and 70 percent by 2010.

Chinese firms are also becoming increasingly involved in the Nigerian oil sector. In November 2004, NNPC and Funsho Kupolokum (China) announced an agreement to develop two blocks in the Chad Basin, constructing a refinery and several pipelines. In December 2004, Sinopec (China) and NNPC signed an agreement to develop the Niger Delta's OML 64 and 66, with production expected to commence in late 2005. Of the five exploration wells drilled in OML 64, one encountered hydrocarbons; twelve of 16 wells drilled in OML 66 encountered hydrocarbons.

In October 2004, Total announced the discovery of a major oil deposit in deepwater block OPL 222 followed by a January 2005 discovery at the deepwater Usan field. The fifth successful appraisal well drilled in the field, Usan-6, had an initial flow rate of 5,800 bbl/d. The block is owned by Total (20 percent), ChevronTexaco (30 percent), ExxonMobil (30 percent), and Nexen Petroleum (20 percent).

Refining and Downstream

In August 2004, Nigeria announced that it would will require crude oil producers to refine at least 50 percent of their production in country at existing refineries by 2006. The plan is expected to save NNPC the \$2 billion per year that it currently spends on oil imports and guarantee supply to

Nigeria's four state-owned refineries. Nigeria's refining capacity is currently insufficient to meet domestic demand, and the country is reliant on imported petroleum products. At the end of 2004, because all four refineries were in operation, albeit below capacity, the government enacted a 20 percent reduction in refined imports in 2005.

Nigeria's state-held refineries (Port Harcourt I and II, Warri, and Kaduna) have a combined nameplate capacity of 438,750 bbl/d, but problems including sabotage, fire, poor management and lack of regular maintenance contribute to a low current capacity of around 214,000 bbl/d, according to World Markets Research Center. Plans for several small, independently-owned refineries are also being developed, with the Nigerian government planning for three new refineries to come onstream by 2008. The \$1.5-billion Tonwei refinery in Bayelsa State appears set to be the first private refinery in Nigeria, with a planned initial capacity of 100,000 bbl/d. In October 2004, the government issued 13 licenses for the construction of additional private refineries.

The U.S. Export-Import Bank has agreed to provide a loan guarantee for \$10 million of the \$29.8 million total cost of the 12,000-bbl/d Amake Modular Refinery in Akwa Ibom state, located in Eket. Production at Phase 1 of the refinery is expected to begin by mid-2005. Phase 2 of the Amake refinery will allow for another 6,000-bbl/d distillation unit, expected to be operational in mid-2006.

The NNPC's four oil refineries, its numerous petrochemicals plants, and its Pipelines and Products Marketing Company (PPMC) are due to be sold in Nigeria's continuing effort to privatize state entities. Although the Nigerian government planned to offer 51 percent stakes in each of its four refineries, attempts to privatize the Port Harcourt refinery in 2004 elicited no bids from the oil majors. Because multinational oil companies have shown little interest in investing in refinery privatization, the Nigerian government recently opened negotiations with Libyan, Indian, and Chinese investors. In July 2004, the Group Managing Director of NNPC announced that a two-year program was underway with Accenture and Shell Global Solutions to reengineer PPMC for competition in global markets. Considerable opposition to the proposed measures have been voiced by the National Union of Petroleum and Natural Gas Workers (NUPENG) and the Petroleum and Natural Gas Senior Staff Association of Nigeria (PENGASSAN), who fear that job losses and higher product prices will result from the privatizations. In February 2005, Majestic Oil (Sierra Leone) bought the Nigerian government's 48.44 percent stake in the West Africa Oil Refinery. Majestic also acquired Unipetrol Nig LPC's 24.22 percent share when the company failed to invest in the rehabilitation of the facility.

In January 2005, Nigeria recommissioned the Escravos-Warri oil pipeline after necessary reconstruction to repair damage caused by sabotage during the 2003 Niger Delta Crisis. The pipeline transports oil from ChevronTexaco's Escravos export terminal to the Warri and Kaduna refineries.

Crime, Corruption, and Ethnic Unrest

Security problems in Nigeria increased with the exit of its military dictatorship, which firmly controlled the various tribes within the country. Political and ethnic strife in the Niger Delta region, including violence, kidnapping, sabotage and the seizure of oil facilities, often disrupts Nigerian oil production. In December 2004, SPDC and ChevronTexaco suspended Nigerian oil exports of 134,000 bbl/d due to unrest in the Niger Delta. In January 2005, ChevronTexaco announced that it was losing 140,000 bbl/d of oil due to the closure of facilities in the Niger Delta.

Discontent within oil-producing communities has grown due to a perceived lack of transparency in the government's management of oil revenues. In February 2005, Human Rights Watch released a report on violence in the Niger Delta, calling for increased transparency in "oil producer-community

relations" through increased area police forces and provision of assistance to the displaced. Because of suspected corruption in the NNPC, its budget will be included in the federal budget beginning in 2006. A World Bank report released in October 2004 indicated that up to 80 percent of revenues from Nigeria's oil industry accrue to only one percent of the general population. In January 2005, two Nigerian Navy admirals were convicted of facilitating the theft of an oil tanker in August 2004, confirming long-held suspicions of theft of crude oil for profit, with navy officers often colluding with criminals. In the same month, Nigeria's Economic and Financial Crimes Commission (EFCC) began to investigate allegations of tax evasion by multinational oil companies in collusion with government officials. In February 2005, the Nigerian government began an investigation into the illegal existence of 193 unlicensed airstrips and helipads operated by large multinational oil companies.

NNPC estimates that from January 2004 to September 2004, 581 cases of pipeline vandalism were recorded. In December 2004, an explosion at a petroleum products pipeline in Ilado attributed to pipeline vandals resulted in the death of 26 people. As a result of frequent attacks on oil and electricity infrastructure, the Nigerian Legislative Committee proposed an anti-vandalism law in December 2004, outlining penalties including life imprisonment for the crime.

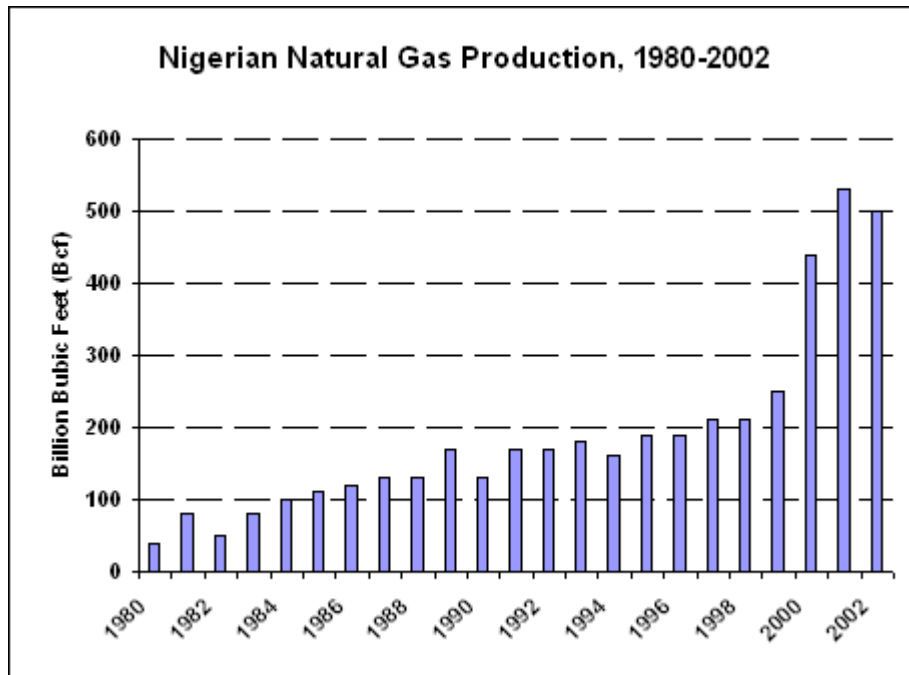
Recent violence between Ijaw groups in Warri is thought to be part of a struggle over which group will receive compensation from an oil spill that occurred in 2003. Youths have also taken violent action when denied employment with multinational oil companies, and kidnappings have been carried out to demand payments from the firms. In September 2004, the People Volunteer Force, led in the Niger Delta by Mujahid Dakubo-Asari, warned oil companies to leave the region, causing the international price of crude to rise dramatically. In October 2004, the Nigerian government began negotiations with Asari over demands concerning the control of resources. In December 2004, militants took 75 oil workers hostage in the Niger Delta region, attacking several oil flow stations and gasoline stations and calling for better infrastructure and welfare for the local population. In February 2005, Nigerian security forces killed up to ten unarmed Ugborodo protestors at the Escravos oil terminal. Members of the Ugborodo community entered the facility following failed negotiations with ChevronTexaco regarding employment issues.

In both January and February 2005, after unsuccessful talks with the government, NUPENG and PENGASSAN renewed a commitment to strike in southern Nigeria due to the refusal of several firms to fire officials accused of insulting behavior during wage negotiations. Nigerian strikes have pushed up international oil prices. Coupled with strikes are layoffs by both NNPC and the oil majors. In December 2004, NNPC laid off 2,355 workers. PENGASSAN alleged that layoffs were also taking place at Shell Petroleum Development Company (SPDC), ChevronTexaco, Halliburton, and Belbop as well.

NATURAL GAS

According to Oil and Gas Journal (1/1/05), Nigeria has an estimated 176 trillion cubic feet (Tcf) of proven natural gas reserves, giving the country one of the top ten natural gas endowments in the world and the largest endowment in Africa. In October 2004, Nigeria announced that its natural gas reserves could be as high as 660 Tcf. The government plans to raise earnings from natural gas exports to 50 percent of oil revenues by 2010. The World Bank estimated in November 2004 that Nigeria flares approximately 75 percent of the natural gas it produces due to a lack of infrastructure. Nigeria is the world's highest natural gas flaring country with 42.6 percent of its total annual natural gas production being flared. NNPC estimates that Nigerian flared natural gas accounts for approximately 20 percent of the world total. Official Nigerian policy is to end natural gas flaring completely by 2008 by collecting associated natural gas and processing it into liquefied natural gas (LNG). In December 2004, Nigeria announced that it had reduced its natural gas flaring by 30

percent. The government also plans to remove subsidies from natural gas by 2007. NNPC estimates that \$15 billion in private sector investments is necessary to meet its natural gas development goals by 2010.



Nigeria's most ambitious natural gas project, the \$3.8 billion LNG facility on Bonny Island, was completed in September 1999. The facility, which processes 397 billion cubic feet (Bcf) of LNG annually, has three trains in operation. Fourth and fifth trains are under construction and expected to start up by mid-2005. Plans have been approved for a sixth train, which is expected to add 194.8 Bcf to the plant's capacity, bringing the total to 1.1 Tcf per year. Nigeria Liquefied Natural Gas Corporation

(NLNG) officials hope to have the sixth train operational by 2007. The facility is currently supplied from dedicated natural gas fields, but within a few years it is anticipated that half of the input natural gas will consist of associated (currently flared) natural gas from Akri/Oguta, Otumara, Utapate and offshore blocks. In November 2004, SPDC began the \$48 million expansion of the Bonny Non-Associated Gas (BNAG) plant from 300 million cubic feet per day (Mmcf/d) to 450 Mmcf/d to increase supplies to the NLNG plant's fourth train. In January 2005, ExxonMobil signed a memorandum of understanding (MOU) with NNPC to study the possibility of constructing a second LNG plant on Bonny Island to come online in 2010, producing 4.8 million tons per year of LNG. Plans for additional LNG facilities are also being developed. ConocoPhillips, ChevronTexaco and Agip signed an agreement with the NNPC for the establishment of the \$3 billion Brass River LNG plant. The project expects its two LNG trains to be operational by late 2008. Front-end engineering and design (FEED) contracts for the project were awarded in November 2004. In January 2005, ChevronTexaco announced the possibility of constructing a \$6 billion LNG plant, OK-LNG, at Olokola in western Nigeria. A final investment decision (FID) is expected in 2006. The plant, to be located in Olokola, will have an initial capacity of 11 million tons per year and a planned capacity of 33 million tons per year. Construction is expected to begin in 2006 for completion in 2009.

ChevronTexaco's \$1.9 billion Escravos gas-to-liquids (GTL) project is scheduled to come online in 2006. In January 2005, what the Nigerian government perceived as an unusually high cost halted the implementation of the Escravos GTL project. Plans include linking the Escravos pipeline system with the West African Gas Pipeline (WAGP) for natural gas export to Benin, Togo, [Ghana](#) and beginning in 2006.

In February 2005, NNPC and Addax Petroleum Development Nigeria agreed to participate in Owel Holding's \$58 million liquefied petroleum gas (LPG) project in Imo state. The plant is expected to produce 200 metric tons of LPG per day from 40 Mmcf/d of feed gas per day.

Several distribution schemes are planned to help promote domestic consumption of natural gas. The proposed \$580 million Ajaokuta-Abuja-Kaduna pipeline will supply natural gas to central and northern Nigeria, while the proposed Aba-Enugu-Gboko pipeline will deliver natural gas to portions of eastern Nigeria. The Soku Gas Transmission pipeline, scheduled for completion in late 2005, will transport natural gas from Shell's Soku plant to the Bonny Island NLNG plant.

In November 2004, the World Bank approved a \$125 million in investment guarantee for construction of the West African Gas Pipeline (WAGP), which will deliver 140 MMcf/d of natural gas to power stations in Ghana beginning in December 2006. The Multilateral Investment Guarantee Agency (MIGA) will provide \$75 million of the total, while the International Development Association (IDA) will provide the additional \$50 million. The \$590 million, 420-mile pipeline will carry natural gas from Nigeria to Ghana, Togo, and Benin. Its initial capacity, expected to come online in June 2005, will be 200 Mmcf/d. The pipeline is expected to function at a full capacity of 470 Mmcf/d within 15 years. In December 2004, NNPC and its WAGP partners made a final investment decision (FID) for implementation of the the project. In March 2005, the West African Pipeline Company (WAPCo) contracted Zurich Financial Services (Switzerland) to provide political risk insurance for the WAGP.

Nigeria and Algeria continue to discuss the possibility of constructing a Trans-Saharan Gas Pipeline (TSGP). The 2,500-mile pipeline would carry natural gas from oil fields in Nigeria's Delta region via Niger to Algeria's Beni Saf export terminal on the Mediterranean. It is estimated that construction of the \$7 billion project would take six years. Bids for a feasibility study on construction of the pipeline was commissioned in September 2004. Although completion is scheduled for 2009, development of the pipeline may be hindered, as its planned course runs through politically unstable Niger.

ELECTRICITY

Nigeria has approximately 5,900 megawatts (MW) of installed electric generating capacity. Power outages are frequent and the power sector operates well below its estimated capacity. In November 2004, electricity generation fell to 2,566 MW from 3,500 MW earlier in the year, resulting in increased power outages NEPA blamed the shortage on low water levels, which reduced output at the Kanjo, Jebba, and Shiroro hydropower stations from 800 MW to less than 500 MW. The Lagos Egbin, Delta, and Port Harcourt Afam plants are also operating at below capacity due to poor maintenance.

The Nigerian power sector is dominated by state-owned National Electric Power Authority (NEPA). In March 2005, President Obsanjo signed the Power Sector Reform Bill into law, enabling private companies to participate in electricity generation, transmission, and distribution. The government has separated NEPA into eleven distribution firms, six generating companies, and a transmission company, all of which will be privatized. Several problems, including union opposition, have delayed the privatization, which is now scheduled for 2005. In February 2005, the World Bank agreed to provide NEPA with \$100 million to assist in its privatization efforts.

Only 40 percent of the population has electricity, the majority of whom are concentrated in urban areas. Nigeria's rural electrification program, initiated in January 2004, aims to connect 1,500 communities to the national grid by 2007. NEPA has announced plans to boost this share to 85 percent by 2010, estimating that an additional 10,000 MW in capacity is required to meet current demand. Despite endemic blackouts, customers are billed for services rendered, partially explaining Nigeria's widespread vandalism and power theft and NEPA's problems with payment collection.

The Nigerian government has made an effort to increase foreign participation in the electric power

sector by commissioning independent power producers (IPPs) to generate electricity and sell it to NEPA, soliciting investors for the construction of new independent power plants (IPPs) in January 2005. IPPs currently under construction include the 276-MW Siemens station in Afam, Agip's 450-MW plant in Kwale, ExxonMobil's 388-MW plant in Bonny, ABB's 450-MW plant in Abuja, and Eskom's 388-MW plant in Enugu. Several state governments have also commissioned oil majors to increase generation including Rivers State, which contracted Shell to expand the 700-MW Afam station. The Nigerian government has approved the construction of four thermal power plants with a combined capacity of 1,234 MW to meet its generating goal of 6,500 MW by 2006: Geregu, Alaoji, Papalanto, and Omotosho. Fourteen hydroelectric and natural gas plants are planned for completion by 2010.

In July 2004, Nigeria signed an MOU to secure funding for supplying power to Benin, Burkina Faso, and Niger with electricity through a new transmission line based on the New Partnership for Africa's Development (NEPAD).

ENVIRONMENT

Nigeria's main environmental challenges result from oil spills, natural gas flaring and deforestation. Oil extraction in the Niger Delta region has caused severe environmental degradation, owing to the legacy of oil spills, lax environmental regulations, and government complicity during military regimes that once governed the country. Although the situation is improving with more stringent environmental regulations for the oil industry, marine pollution is still a serious problem. Air pollution from natural gas flaring, exhaust emissions from the explosion in car ownership, and electricity generators continue to leave Lagos shrouded in smog.

The use of solid biomass, such as fuel wood, is prevalent and constitutes a major energy source for rural Nigerians. The production and consumption of commercial renewable energy in Nigeria remains quite limited. With Nigeria's population continuing to increase, the pressure on the country's environment appears likely to increase as well, even with the added focus on cleaning up the Niger Delta and tightening environmental laws and regulations.

Sources for this report include: Africa Energy and Mining, Africa News, Africa Oil and Gas, Agence France Presse, Alexander's Gas and Oil Connections, AP Worldstream, BBC Summary of World Broadcasts, CIA World Factbook 2003 and 2004, Dow Jones, Economist Intelligence Unit (EIU) Viewswire, Financial Times African Energy, Global Insight, Hart's Africa Oil and Gas, International Monetary Fund, Oil and Gas Journal, OPEC Statistical Bulletin, Panafrican News Agency, Petroleum Intelligence Weekly, U.S. Energy Information Administration, Global Insight Middle East and Africa Economic Outlook, World Bank, World Markets Research Centre.

COUNTRY OVERVIEW

President: Olusegun Obasanjo (since May 29, 1999)

Vice President: Atiku Abubakar

Independence: October 1, 1960 (from United Kingdom)

Population (July 2004E): 137.3 million

Location/Size: West Africa, bordering the Atlantic Ocean (on the south and west), Cameroon (on the south), Chad (on the east), Benin (on the west) and Niger (on the north)/923,770 square kilometers (356,700 square miles), slightly more than twice the size of California

Major Cities: Abuja (capital), Lagos, Ibadan, Kano, Kaduna, Port Harcourt

Languages: English (official), Hausa, Yoruba, Ibo (Igbo), Fulani

Ethnic Groups: Hausa and Fulani (29%), Yoruba (21%), Ibo (18%), Ijaw (10%), Kanuri (4%), Ibibio (3.5%), Tiv (2.5%), and over 250 others

Religion (2004E): Islam (50%), Christianity (40%), traditional beliefs (10%)

ECONOMIC OVERVIEW**Finance Minister:** Ngozi Okonjo-Iweala**Currency:** Naira (NGN)**Market Exchange Rate (3/15/05):** US\$1 = 132.8 Naira**Gross Domestic Product (2004E):** \$57.4 billion **(2005F):** \$67.9 billion**Real GDP Growth Rate (2003E):** 10.2% **(2004E):** 5.5% **(2005F):** 5.6%**Inflation Rate (2003E):** 14% **(2004E):** 15.6% **(2005F):** 13.1%**Current Account Balance: (2004E):** \$2.0 billion **(2005F):** \$2.4 billion**Major Trading Partners:** United States, France, India, United Kingdom, Spain, Germany, Brazil**Merchandise Trade Balance (2003E):** \$8.6 billion **(2004E):** \$4.1 billion**Merchandise Exports (2003E):** \$22.3 billion **(2004E):** \$20.5 billion**Merchandise Imports (2003E):** \$13.7 billion **(2004E):** \$16.5 billion**Major Export Products:** Crude oil, natural gas, cocoa, rubber, timber, manufactured goods**Major Import Products:** Petroleum products, food, machinery and equipment, manufactured goods**Oil Export Revenues (2003E):** \$20.9 billion **(2004F):** \$27.0 billion**Oil Export Revenues/Total Export Revenues (2003E):** 96%**Total External Debt (2003E):** \$30.1 billion**ENERGY OVERVIEW****Petroleum Advisor:** Edmund Daukoru**Minister of Power and Steel:** Liyel Imoke**Minister of Solid Minerals:** Mangu Odion Ugbesa**Proven Oil Reserves (1/1/05E):** 35.3 billion barrels (Oil and Gas Journal)**Oil Production (2004E):** 2.5 million barrels per day (bbl/d), of which 2.3 million bbl/d is crude oil**OPEC Crude Production Quota (beginning August 2004):** 2.6 million bbl/d**Oil Consumption (2004E):** 321,000 bbl/d**Net Oil Exports (2004E):** 2.2 million bbl/d**Crude Refining Capacity (1/1/05E):** 438,750 bbl/d (Oil and Gas Journal)**Major Crude Oil Customers:** United States, Brazil Spain, Indonesia, India**Natural Gas Reserves (1/1/05E) :** 176 trillion cubic feet (Tcf) (Oil and Gas Journal)**Natural Gas Production (2002E):** 501 billion cubic feet (Bcf)**Natural Gas Consumption (2002E):** 225 Bcf

Net Natural Gas Exports (2002E): 276 Bcf

Recoverable Coal Reserves (2002E): 209 million short tons (Mmst)**Coal Production (2002E):** 0.07 Mmst**Coal Consumption (2002E):** 0.07 Mmst**Electric Generation Capacity (1/1/02E):** 5.9 gigawatts**Electricity Generation (2002E):** 19.9 billion kilowatt hours**ENVIRONMENTAL OVERVIEW****Minister of Environment:** Col. Bala Mande**Total Energy Consumption (2002E):** 0.94 quadrillion Btu* (0.2% of world total energy consumption)**Energy-Related Carbon Dioxide Emissions (2002E):** 91.94 million metric tons (0.4% of world carbon dioxide emissions)**Per Capita Energy Consumption (2002E):** 7.8 million Btu (vs U.S. value of 339.1 million Btu)**Per Capita Carbon Dioxide Emissions (2002E):** 0.76 metric tons (vs U.S. value of 19.97 metric tons)**Energy Intensity (2002E):** 9,255 Btu/ \$ nominal-PPP (vs. U.S. value of 9,344 Btu/\$ nominal-PPP)

**

Carbon Dioxide Intensity (2002E): 0.91 metric tons/ \$ nominal-PPP (vs. U.S. value of 0.55 metric tons /\$ nominal-PPP)**

Fuel Share of Energy Consumption (2002E): Oil (67.3%), Natural Gas (25.1%), Hydroelectric (7.5%), Coal (0.2%)

Fuel Share of Carbon Dioxide Emissions (2002E): Natural Gas (50.9%), Oil (48.9%), Coal (0.2%)

Status in Climate Change Negotiations: Non-Annex I country under the United Nations Framework Convention on Climate Change (ratified August 29th, 1994). Not a signatory to the Kyoto Protocol

Major Environmental Issues: Soil degradation; rapid deforestation; urban air and water pollution; desertification; oil pollution - water, air, and soil; loss of arable land; rapid urbanization; recent droughts in north severely affecting marginal agricultural activities

Major International Environmental Agreements: A party to Conventions on Biodiversity, Climate Change, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Marine Dumping, Marine Life Conservation, Ozone Layer Protection, and Wetlands

* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar and wind electric power. The renewable energy consumption statistic is based on International Energy Agency (IEA) data and includes hydropower, solar, wind, tide, geothermal, solid biomass and animal products, biomass gas and liquids, industrial and municipal wastes. Sectoral shares of energy consumption and carbon emissions are also based on IEA data.

**GDP based on CIA World Factbook estimates based on purchasing power parity (PPP) exchange rates.

OIL AND GAS INDUSTRIES

Organizations: The Nigerian National Petroleum Corporation (NNPC) manages the state-owned oil industry. The NNPC holds 49% in the Nigeria Liquefied Natural Gas (NLNG) Company.

Major Foreign Oil Company Involvement: British Gas, BP, ChevronTexaco, Conoco, Deminex, ENI/Agip, ExxonMobil, Petrobras, Shell, Statoil, Sun Oil, Tenneco, Total S.A.

Major Oil Fields: Cawthorn Channel, Edop, Ekulama, Escravos Beach, Forcados Yorke, Jones Creek, Meren, Nembe, Okan, Oso, Ubit

Refineries (nameplate capacity bbl/d) (1/1/05; Oil and Gas Journal): Port Harcourt-Rivers State (150,000), Warri (118,750), Kaduna (110,000), Port Harcourt-Alesa Eleme (60,000)

Major Terminals: Bonny Island, Brass River, Escravos, Forcados, Odudu, Pennington, Qua (Kwa) Iboe

LINKS

For more information on Nigeria, see these other sources on the EIA web site:

[EIA - Country Information on Nigeria](#)

[EIA - Independent Power Projects in Nigeria](#)

[EIA - West African Gas Pipeline](#) Links to other U.S. government sites:

[CIA World Factbook - Nigeria](#)

[U.S. Agency for International Development - Nigeria](#)

[U.S. Census Bureau - Trade with Nigeria](#)

[U.S. Library of Congress Country Study - Nigeria](#)

[U.S. State Department's Background Notes - Nigeria](#)

[U.S. State Department's Consular Information Sheet - Nigeria](#)

[U.S. State Department's Travel Warning - Nigeria](#)

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[African Development Bank: Nigeria](#)

[African Union \(formerly Organization of African Unity\)](#)

[All Africa News Service: Nigeria](#)

[BBC News Country Profile - Nigeria](#)

[International Energy Agency \(IEA\): Key Energy Indicators for Nigeria](#)

[International Monetary Fund \(IMF\): Nigeria](#)

[Nigeria.com](#)

[Nigeria Today](#)

[Nigeria Web](#)

[Nigeria World](#)

[Nigerian Embassy in the U.S.](#)

[Online Nigeria Portal](#)

[Stanford University African Studies: Nigeria](#)

[University of Pennsylvania African Studies Center - Nigeria](#)

[U.S. Embassy in Nigeria](#)

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