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Oman

In addition to its relatively modest oil reserves, Oman is important to world oil markets because of its strategic location overlooking the Strait of Hormuz. It is also actively seeking to develop its capacity to export liquefied natural gas.

Note: Information contained in this report is the best available as of January 2005 and can change.



GENERAL BACKGROUND

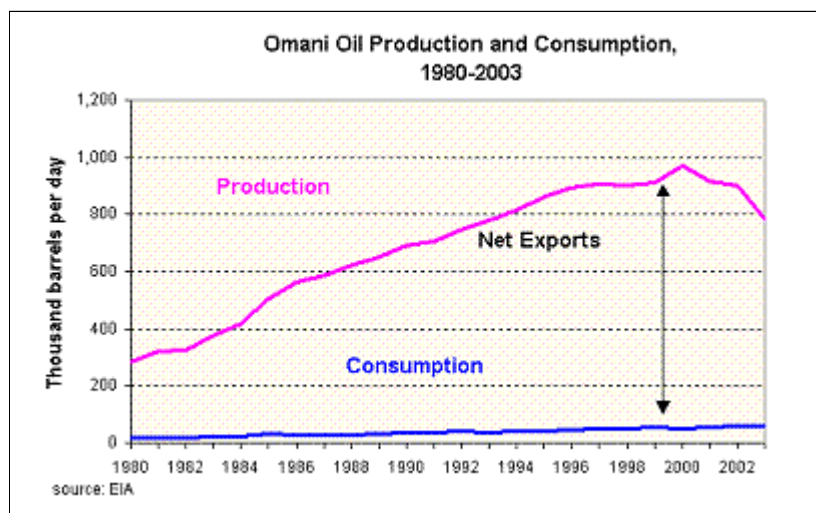
Oman has been ruled by Sultan Qaboos bin Said al Said since 1970, when he deposed his father in a bloodless coup. All power is concentrated in the hands of the Sultan, who also holds the top positions in the finance, defense, and foreign affairs ministries. Rules governing the succession to the throne were formalized in the 1996 Basic Law. There is no Omani legislative assembly, though there are two consultative bodies called the Majlis al-Dawla and the Majlis al-Shura. Together, the two chambers form the Council of Oman. The Majlis al-Dawla is appointed, while the Majlis al-Shura is elected. The last election was held in October 2003.

Oman's macroeconomic environment currently is strong, despite recent declines in oil production. Real GDP growth was 3.3% in 2004 and is projected to rise to 3.5% in 2005. Inflation was only 0.8% for 2004.

Oman continues to be heavily dependent on oil revenues, which account for around 75% of the country's export earnings and almost 40% of its gross domestic product (GDP). Prompted by the maturation of its oil fields and the volatility of oil prices, the Omani government has made diversifying the country's economy a top policy priority. In the 1980s, this effort hinged on developing a domestic manufacturing base, but more recent initiatives have focused on the exploitation of Oman's other natural resources, particularly its natural gas reserves. Oman has large mineral and metal deposits, including silica, dolomite, copper, and gold. In September 2003, the government announced that it was reviving a five-year-old plan to build a \$2.5 billion aluminum smelter, which is to begin operation in 2007.

Oman's efforts to diversify the economy also include "Omanization", a program designed to increase the percentage of Omani citizens working in the private sector. At present, Omani nationals constitute only 10% of private sector employment. The government also has continued to attempt to attract foreign investment, particularly in light industry, tourism, and electric power generation. Foreign investment incentives include a 5-year tax holiday for companies in certain industries, an income tax reduction for publicly held companies with at least 51% Omani ownership, and soft loans to finance new and existing projects. The process of privatizing some state-owned industries is to be accelerated under a decree issued in July 2004, which will allow foreign ownership up to 100% in power generation and water.

Oman became a member of the World Trade Organization (WTO) in October 2000, and the reforms associated with membership have helped to further reduce the barriers to entry faced by foreign firms. Movement continues towards an eventual customs union amongst the Gulf Co-operation Council (GCC) states.



OIL

In many ways, Oman is atypical of Persian Gulf oil producers. Oman's petroleum deposits were discovered in 1962, decades after most of those of its neighbors. Moreover, Oman's oil fields are generally smaller, more widely scattered, less productive, and more costly per barrel than in other Persian Gulf countries. The average well in Oman produces only around 400 barrels per day (bbl/d), about one-tenth the volume per well of those in

neighboring countries. To compensate, Oman uses a variety of enhanced oil recovery (EOR) techniques. While these raise production levels, they increase the cost. Per barrel lifting costs rose from \$4.79 in 2002 to \$6.35 in 2003. While these figures are low by world standards, they remain substantially higher than in most other Persian Gulf oil fields.

Oman has proven recoverable oil reserves of 5.5 billion barrels, the bulk of which are located in the country's northern and central regions. The largest and traditionally most reliable fields are in the north. These fields, which include Yibal (the biggest), Fahud, al-Huwaisah, and several others, are now mature and face future declines in production. Oman's total (i.e. including condensate and other liquids) production figure fell sharply from its height of 972,000 bbl/d in 2000 to 784,000 bbl/d in 2003. In the first ten months of 2004, output has averaged 756,000 bbl/d. If output continues at the present pace and no major new reserves are discovered, Oman has less than 20 years left as a significant oil-exporting nation. Given that estimates suggest that the amount of oil originally in place in Oman is around 50 billion barrels, finding ways to increase recoverability is a top priority. As part of its attempts to expand its reserves, in 2003, Oman signed a six-year contract with Spectrum Energy and Information Technology (UK) to have old seismic studies reprocessed.

Petroleum Development Oman (PDO) is the country's second-largest employer after the government. The company is a consortium comprised of the Omani government (60%), Shell (34%), Total (4%), and Partex (2%). It holds over 90% of the country's oil reserves, and accounts for about 94% of production. PDO's main hopes of stemming its decrease in production involve

increasing recovery rates, and discovering and exploiting new fields, particularly in the south. Among its southern prospects, PDO has the most hope for a cluster of fields that includes Ghafeer, Sarmad, and Harweel. In this "carbonate stringer play," PDO estimates there may be reserves of 250 million barrels, with a potential maximum production level of 100,000 bbl/d. One small new find was reported in July 2004, in the Shuaiba area in northwestern Oman , which tested at 2,600 bbl/d.

One of the difficulties that PDO will face in the south is the very large water cut in the fields, while water is needed for injection at some northern fields. A proposed solution is the construction of a 300-kilometer (186-mile) pipeline that will carry water from the south for use in reinjection in the north where "water flooding" already has been used successfully on wells in the Yibal and Bahaja fields.

Despite PDO's dominance, several foreign companies are involved in Oman 's oil sector, particularly in offshore exploration. In March 2002, Total signed an oil and gas exploration and production-sharing agreement with the government, covering a block of around 4,250 square miles off the southeastern coast of Oman . As part of the agreement, Total agreed to spend at least \$17 million on exploration over the initial two-year period. Maersk Oil Oman (a subsidiary of Danish energy group AP Moeller), Mitsui & Co. (Japan), Occidental (US) and Hunt Oil (US) have also recently committed to various offshore exploration projects. China 's CNPC acquired a foothold in Oman in 2002, taking a 50% stake in Block 5 which it acquired after it was relinquished by the Japanese firm Japex. The other major Chinese oil company, Sinopec, acquired two onshore exploration blocks in southern Oman in August 2004.

Most of Oman 's crude oil exports go to Asia , with China , Japan , South Korea , and India the largest importers. China 's share of Oman 's oil exports has risen rapidly over the last two years, running at over 300,000 bbl/d during the first half of 2004.

Refining and Petrochemicals

In 1982, Oman constructed its first refinery, at Mina al-Fahal. The plant's capacity is now 85,000 bbl/d. Output from the facility, which is operated by the state-owned Oman Refinery Company (ORC), is used to meet local product demand. In June 2002, SK Engineering of South Korea was awarded a contract for the construction of a new desulfurization unit at Mina al-Fahal.

A second refinery is under construction near the northern city of Sohar . Bids for construction of the project were solicited in March 2002, and JGC Corporation (Japan) was awarded the contract in May 2003. To facilitate this, Oman announced plans in April 2003 to build a \$1 billion pipeline that will run the 162 miles between the Oman Refinery Company and the new refinery in Sohar. When both the pipeline and the refinery begin operation in 2006, the line is to transport a mixed feedstock of crude from PDO and long residue from the Oman Refinery to Sohar for processing. The refinery's capacity is expected to be 51,000 bbl/d of gasoline and 30,000 bbl/d each of diesel and fuel gas. The plant will also have a facility for extracting sulfur from gasoline and a catalytic cracker that will produce gas and gasoline from the leftover elements of the normal refining process.

Oman is pursuing petrochemical projects as a way of diversifying its economy and developing value-added industries. In January 2001, Ferrostaal (Germany) signed a contract with the Omani government to build a methanol plant in Sohar. The deal is estimated to be worth over \$420 million and is a joint venture between Ferrostaal, the state-owned Omani Oil Company, and a private Omani group, Omzest. The project will utilize some of the 5 trillion cubic feet (Tcf) of gas that the Omani government has made available to new industries in Sohar. The plant is expected to begin operation in 2005 and has a projected production capacity of 5,000 tons of methanol per day.

NATURAL GAS

Natural gas has become the chief focus of Oman 's economic diversification strategy. Intense exploration has raised proven natural gas reserves from only 12.3 Tcf in 1992 to 29 Tcf in 2004, according to the *Oil and Gas Journal*. The government is also continuing its aggressive exploration campaign. Most of Oman 's reserves are in PDO-owned areas, and the company is Oman 's biggest natural gas producer. Most gas in Oman is associated with oil, but even that which is non-associated is often located close to the country's oil fields. More than 10 Tcf of Oman 's non-associated natural gas is located in deep geological structures, many of which are beneath active oil fields. In 2002, Oman is estimated to have produced 530 billion cubic feet (Bcf) of natural gas.

In addition to the PDO, a number of foreign firms are involved in Oman 's natural gas sector. In September 2003, Atlantis, a subsidiary of the Chinese firm Sinochem, began to drill a gas find containing up to 300 Bcf. Gulfstream (now Anadarko) was the first private company to be awarded an onshore gas concession. In August 2001, it received a fixed price gas sales agreement with the government and a 100% concession to develop three gas fields it discovered in Haffar Block 30. Anadarko has already drilled an exploratory well, and hopes to reach an eventual output level of over 80 million cubic feet per day. The field has proven reserves of 300 Bcf.

Novus Petroleum Ltd. (Australia) signed an exploration and production agreement with the Omani government for Blocks 15 and 47 in northern Oman in May 2001. The deal committed Novus to a three-year exploration period, which could be extended depending on the results of the exploration. The blocks form part of the same geological structure as Novus' offshore gas producing field in Block 8, in the Straits of Hormuz. In April 2002, Novus signed another agreement for Block 31. The company is also likely to be involved in developing the Omani portion of the Iranian-Omani jointly held West Bukha/Hengam gas field once an agreement is worked out between Iran and Oman . The field holds an estimated 3 Tcf of gas.

Oman 's gas network has been placed under the authority of Oman Gas Company (OGC), set up by the government to oversee the sultanate's gas development program. In April 2001, Oman awarded a contract to operate the country's natural gas transportation and distribution infrastructure for the next five years to Canada 's Enbridge and BC Gas (now Terasen). The contract includes a provision for technology transfer and training, so operation can be shifted to Omani staff after five years.

In addition to increasing reserves and production, Oman would like to enlarge its existing pipeline network and is using foreign construction companies to do so. In 2002, the contractors completed two lines to connect the reserves in the middle of the country to the coast. One cost \$124 million and connects with Sohar. The other cost \$180 million and connects with Salalah. There is also an older 500-mile gas trunk line connecting the central fields with power plants and the processing facility of the Oman Liquefied Natural Gas Company (OLNGC), a consortium whose shareholders are the government (51%), Shell (30%), Total (5.54%), and Korea LNG (5%), Mitsubishi (2.77%), Mitsui & Co. (2.77%), Partex (2%), and Itochu (0.92%).

Oman is one of the participants in the \$3.5 billion Dolphin project being led by Dolphin Energy Limited (DEL , a joint-venture between the UAE government, Total, and Occidental Petroleum). The goal is to link the gas networks of Qatar , the UAE, and Oman . Under a deal reached in March 2003, OGC began supplying gas to DEL in the fourth quarter of 2003. Deliveries will continue for a period of up to five years. Plans call for the pipeline to eventually reverse direction, supplying natural gas from Qatar to petrochemical and fertilizer plants in Oman .

Liquefied Natural Gas (LNG) Exports

LNG constitutes a large part of Oman 's plan to develop its natural gas sector, and the country is

investing heavily in it. Oman 's LNG program is being coordinated by OLNCG. In 2003, Oman 's total LNG production was 324 Bcf.

Since 2000, production has been evenly split between between two liquefaction plants (commonly referred to as ' trains') located at Qalhat, each with a capacity of around 170 Bcf per year. A third train is expected to increase production capacity by 50% when it comes on line in late 2005. It will be a joint-venture between the Omani government (56%), OLNCG (37%), and Union Fenosa (Spain , 7%). There have been preliminary discussions with India over the possibility of that country taking an equity stake in a possible fourth train. The viability of the project depends on the number of future customers for the country's gas. At present, the two Qalhat trains are operating almost at the limits of their capacity, and Union Fenosa has already signed a 20-year contract for half of the third train's output once it comes on line. Other major LNG purchasers are Kogas (South Korea), Daghhol Power (India), and Osaka Gas (Japan). Occasional spot cargoes also are delivered to Europe and the United States .

COAL

Over 22 million tons of coal deposits have been discovered in the Wadi Muswa and Wadi Fisaw areas near the city of Sur. The coal could be used to provide 40 years of power for a 300 megawatt (MW) generator, but it has not yet been commercially developed.

ELECTRIC POWER

In 2002, Oman 's installed capacity was estimated at 2.4 gigawatts (GW). With the exception of some very remote villages, the entire country is electrified.

Like other Gulf states , Oman faces growing demand for electricity due to population growth, industrialization, and rising incomes. Consumption is now increasing by 4-5% a year, and the government forecasts that electricity demand will be 75% higher in 2015 than it is today. To meet this challenge, Oman has allowed the private sector to take on a growing role. The Ministry of Electricity and Water (MEW) continues to play a role as a regulator. The MEW also remains responsible for distribution. In July 2003, the MEW announced that it was setting up a new company, the Transmission and Distribution Company (TRANSCO), that would oversee the generation and supply of electricity in the country. It also announced that it would be selling 65% of the new firm to private investors.

There have been several notable privatizations. The 1996 sale of a 90-MW power station in Al-Manah to Trachtebel (Belgium) produced the region's first independent power project (IPP). In 2001, a deal to sell a 200-MW plant in Salalah to Dhofar Power Consortium (DPC) went through. It was the first deal in the region to cover generation, transmission, distribution, billing and collection. As part of the contract, DPC is to improve the generation and distribution facilities.

Oman has also agreed to the establishment of a number of new IPPs. In 2000, it agreed to plans to build the 280-MW al-Kamil power plant at al-Sharqiya. The 430-MW Barka power and desalination plant is expected to begin operating by the end of 2003. Both the Barka and al-Kamil plants are to run on natural gas. All three of the DPC, Barka, and al-Kamil were commissioned in 2003.

In addition, the U.S. firm Public Services Enterprise Group (PSEG) completed work on a 200-MW integrated power facility in May 2004, which supplies the Dhofar region. A 140-MW plant in Qarn Alam was completed in mid-2004, owned by Bharat Heavy Electrical (BHEL) of India .

Sources for this report include: APS Review of Gas Market Trends; APS Review of Oil Market Trends; CIA World Factbook; Economist Intelligence Unit ViewsWire; Factiva News Service; Global Insight; Middle East Economic Digest (MMED); Oil and Gas Journal; Petroleum Economist; Petroleum Intelligence Weekly; Power Engineering; Stratfor News Service; U.S. Energy Information Administration; World Gas Intelligence; World Markets Online.

COUNTRY OVERVIEW

Head of State: Sultan Qaboos bin Said al Said

Independence: 1650 (end of Portuguese rule)

Population (2004E): 2.9 million (includes 577,293 non-nationals)

Location/Size: Southeast Arabian Peninsula / 82,031 sq. mi. (about the size of Kansas)

Major Cities: Muscat (capital), Salalah, Sur, al-Khasab

Languages: Arabic (official), English, Baluchi, Urdu, Indian dialects

Ethnic Groups: Arab, Baluchi, South Asian (Indian, Pakistani, Sri Lankan, Bangladeshi), African

Religion: Muslim (Ibadi -- 75%, Sunni, Shi'a), Hindu

ECONOMIC OVERVIEW

Minister of Finance: Sultan Qaboos bin Said al Said

Currency: Omani rial (OMR)

Exchange Rate (11/23/03): \$1 = 0.385 Omani Rial (fixed within narrow band: \$1=0.384-0.385 Omani rial)

Nominal Gross Domestic Product (GDP) (2003E): \$22.7 billion **(2004E):** \$23.1 billion **(2005F):** \$24.4 billion

Real GDP Growth Rate (2003E): 3.3% **(2004E):** 3.3% **(2005F):** 3.5%

Nominal Per Capita GDP (2003E): \$8,331 **(2004E):** \$8,696 **(2005F):** \$8,972

Inflation Rate (consumer prices) (2003E): -0.4% **(2004E):** 0.8% **(2005F):** 1.7%

Major Trading Partners: Japan, United Arab Emirates, South Korea, United Kingdom, United States, Thailand, Germany, Italy

Merchandise Trade Balance (2003E): \$4.9 billion **(2004E):** \$5.8 billion **(2005F):** \$5.6 billion

Major Export Products: petroleum, reexports, fish, metals, textiles

Major Import Products: machinery and transport equipment, manufactured goods, food, livestock, lubricants

Current Account Balance (2003E): \$1.4 billion **(2004E):** \$2.3 billion **(2005F):** \$2.1 billion

ENERGY OVERVIEW

Minister of Oil and Gas: Mohammed al-Rumhi

Proven Oil Reserves (1/1/05E): 5.5 billion barrels

Oil Production (2003E): 784,000 barrels per day (bbl/d), of which 781,000 bbl/d is crude oil

Oil Consumption (2003E): 59,000 bbl/d

Net Oil Exports (2003E): 725,000 bbl/d

Crude Oil Refining Capacity (1/1/05E): 85,000 bbl/d

Oil Export Customers (2003): China, Japan, South Korea, India, Thailand, Singapore

Natural Gas Reserves (1/1/05E): 29.3 trillion cubic feet

Natural Gas Production (2002E): 530 billion cubic feet (Bcf)

Natural Gas Consumption (2002E): 231 Bcf

Electric Generation Capacity (1/1/02E): 2.4 gigawatts

Electricity Production (2002E): 9.8 billion kilowatt-hours

ENVIRONMENTAL OVERVIEW

Minister of Regional Municipalities, Environment, and Water Resources: Dr. Khamis bin Mubarak bin Isa al-Alawi

Special Advisor to His Majesty for Environmental Affairs: Shabib bin Taymur Al Said
Total Energy Consumption (2002E): 0.36 quadrillion Btu* (<0.1% of world total energy consumption)

Energy-Related Carbon Dioxide Emissions (2002E): 22.8 million metric tons of carbon dioxide (<0.1% of world total carbon emissions)

Per Capita Energy Consumption (2002E): 130.1 million Btu (vs. US value of 339.1 million Btu)

Per Capita Carbon Dioxide Emissions (2002E): 8.2 metric tons of carbon dioxide (vs. US value of 20.0 metric tons of carbon dioxide)

Energy Intensity (2002E-PPP): 12,000 Btu/\$1995 (vs US value of 10,613 Btu/\$1995)**

Carbon Dioxide Intensity (2002E-PPP): 0.8 metric tons of carbon dioxide/thousand \$1995 (vs US value of 0.6 metric tons/thousand \$1995)**

Fuel Share of Energy Consumption (2002E): Natural Gas (66.6%), Oil (33.3%), Coal (0.0%)

Fuel Share of Carbon Emissions (2002E): Natural Gas (63.0%), Oil (37.0%), Coal (0.0%)

Status in Climate Change Negotiations: Non-Annex I country under the United Nations Framework Convention on Climate Change (ratified February 8th, 1995). Not a signatory to the Kyoto Protocol.

Major Environmental Issues: rising soil salinity; beach pollution from oil spills; very limited natural fresh water resources

Major International Environmental Agreements: A party to Conventions on Biodiversity, Climate Change, Desertification, Hazardous Wastes, Law of the Sea, Marine Dumping, Ozone Layer Protection, Ship Pollution, Whaling.

* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar, wind, wood and waste electric power.

**GDP figures are based on OECD figures using purchasing power parity (PPP) exchange rates.

OIL AND GAS INDUSTRIES

Organizations: Petroleum Development Oman Ltd. (PDO) controls all oil resources. PDO is a partnership between the Omani government (60%), Royal Dutch/Shell (34%), Total (4%), and Partex (2%). Oman Oil Company (OOC) is the investment arm of the Ministry of Petroleum.

Major Foreign Oil Company Involvement (non-PDO): BP, CNPC, IPC, Itochu, Japex, Occidental, Phillips

Major Oil Fields: Roughly 1.8 billion barrels in reserves are located in the large northern structure containing the Yibal, Natih, Fahud, al-Huwaisah, Lekhwair, and Shibkah fields. Other key fields are the southern Marmul and Nimr fields as well as Occidental's 120-million barrel Safah field and the estimated 400-million barrel Amal Eastern High field, which contains heavy crude oil.

Major Refinery: Mina al-Fahal (85,000 bbl/d)

Major Oil Terminal: Mina al-Fahal

LINKS

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Links to other US government sites:

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