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Background | Oil | Natural Gas | Electricity | Environment | Profile | Links

Saudi Arabia

With one-fourth of the world's proven oil reserves and some of the lowest production costs, Saudi Arabia is likely to remain the world's largest net oil exporter for the foreseeable future. During 2003, Saudi Arabia supplied the United States with 1.7 million barrels per day of crude oil, or 18%, of U.S. crude oil imports during that period.

Information contained in this report is the best available as of June 2004 and is subject to change.

GENERAL BACKGROUND

With oil export revenues making up around 90-95% of total Saudi export earnings, 70%-80% of state revenues, and around 40% of the country's gross domestic product (GDP), Saudi Arabia's economy remains, despite attempts at diversification, heavily dependent on oil (although investments in petrochemicals have increased the relative importance of the downstream petroleum sector in recent years).

Oil prices were strong during 2003, and have increased sharply in early 2004. Combined with relatively high Saudi oil output since early 2003, Saudi Arabia's oil export revenues were up sharply in 2003 compared to 2002. For 2004, this trend is expected to continue, as oil export revenues increase once again. Partly as a result of these strong oil export revenue increases, Saudi Arabia's real GDP growth was an estimated 5.5% in 2003, up from 2.0% growth in 2002. For 2004, Saudi real GDP growth is expected to be lower, but still strong, at 4.0%. Meanwhile, during fiscal year 2003, Saudi Arabia had been expecting a budget deficit of around $10 billion. However, this was based on an extremely conservative price assumption of $17.50 per barrel for Saudi oil, and also did not take into account the huge production surge which actually occurred. As a result, the country experienced a large budget surplus, on the order of $12 billion, in 2003. For 2004, the Saudi budget reportedly is based on a $19 per barrel price for Saudi oil and production of 7.7 million barrels per day (bbl/d). Through mid-June 2004, both of these estimates are far below actual levels.

In spite of the recent surge in its oil income, Saudi Arabia continues to face serious long-term

economic challenges, including high rates of unemployment (around 15%-20%), one of the world's fastest population growth rates, and the consequent need for increased government spending. Saudi Arabia's per capita oil export revenues (in inflation adjusted dollars) remain far below high levels reached during the 1970s and early 1980s (around $3,371 per person in 2003, versus $22,174 in 1980, for instance). This is in large part due to the fact that Saudi Arabia's young population has more than doubled since 1980, while oil export revenues in real terms have fallen sharply (also, in recent years the value of the dollar -- the currency in which oil is traded -- has fallen, hurting Saudi Arabia's terms of trade). Meanwhile, Saudi Arabia has faced nearly two decades of heavy budget and trade deficits, the expensive 1990/1991 war with Iraq, and total government debt approaching 100% of Saudi GDP. On the other hand, Saudi Arabia does have extensive -- around $100 billion -- foreign assets, which provide a substantial fiscal "cushion." Finally, surging oil export revenues removes an incentive for Saudi Arabia to undertake needed economic reforms, such as reduction in the bloated state sector, as urged by the IMF and others.

Movement towards economic reform in Saudi Arabia remains uneven at best. For instance, reducing subsidies and increasing tariffs on electricity have proven problematic, with a rate increase announced in April 2000 subsequently reversed in October in the face of widespread public opposition. Besides economic reform, Saudi Arabia also has made only slow progress on another of its main domestic goals -- attracting foreign direct investment (FDI). In January 2004, the Saudi cabinet approved a reduction in taxes on foreign direct investment (to 20% in most sectors; 30% in the natural gas sector) as part of an effort to speed up the economic reform and privatization process in the country.

Currently, large state corporations, like oil firm Saudi Aramco (which has a monopoly on Saudi upstream oil development and controls 98% of the country's oil reserves) and the Saudi Basic Industries Corporation (SABIC; the world's 11th largest petrochemical producer) dominate the Saudi economy. To date, there has not been a single sale of state assets to private control, and privatization largely has been limited to allowing private firms to take on certain service functions. In May 2002, Saudi Oil Minister Ali Naimi (reappointed in May 2003 for a third, four-year term) stated that the country was considering privatizing some operations of Saudi Aramco. One impetus for Saudi privatization is its desire to join the World Trade Organization (WTO), but progress has been slow towards achieving this goal (accession talks reportedly could be concluded by July 2004).

In general, Saudi Arabia also has moved cautiously and slowly towards government subsidy cuts, tax increases, or financial sector reforms. Saudi leadership (Crown Prince Abdullah, in particular) has indicated that it sees privatization -- although controversial -- as a "strategic choice," and has created (in August 1999) a "Supreme Economic Council" charged with boosting investment, creating jobs for Saudi nationals, and promoting privatization. Changes to the law governing foreign investment, granting the same basic rights to foreign investors as to Saudi nationals, were approved in April 2000. Among other measures, the new investment law reduced taxes on foreign business profits from a maximum 45% to 30%, and provided greater legal protections against expropriation of investments.

In November 1999, King Fahd stated that "the world is heading for...globalization" and that "it is no longer possible for [Saudi Arabia] to make slow progress." In the context of successfully becoming integrated into the global economy, Fahd also emphasized the importance of regional unity among Gulf states -- economically, politically, and militarily. Along these lines, a customs union among GCC countries was agreed upon at the December 1999 GCC summit. The union is to take effect in March 2005. Currently, goods from GCC countries are exempt from all Saudi import duties, as long as 40% of their value has been added within the GCC and the producing company is owned at least 51% by GCC citizens.

In a treaty signed in June 2000, Saudi Arabia and Yemen agreed on the delineation of sections of their common border which had been in dispute since the 1930s. The deal is expected to open up opportunities for increased Saudi trade and investment in Yemen, a possible pipeline across Yemen to the Arabian Sea (see below for more details), and the possible award of oil and gas exploration rights for areas in Yemen adjacent to previously disputed areas of the border. In February 2001, Saudi Arabia and Syria signed a bilateral free-trade agreement. On June 11, 2001, Saudi Arabia announced (in a letter to UN Secretary General Kofi Annan) that it was taking ownership of Iraq's pipeline to the Saudi Red Sea coast (closed since August 1990), citing Iraqi threats and aggressive actions, including (allegedly) a series of cross-border raids in recent months. Saudi Arabia said that Iraq's behavior had "destroyed any rationale for maintaining the [pipeline] facilities."

OIL

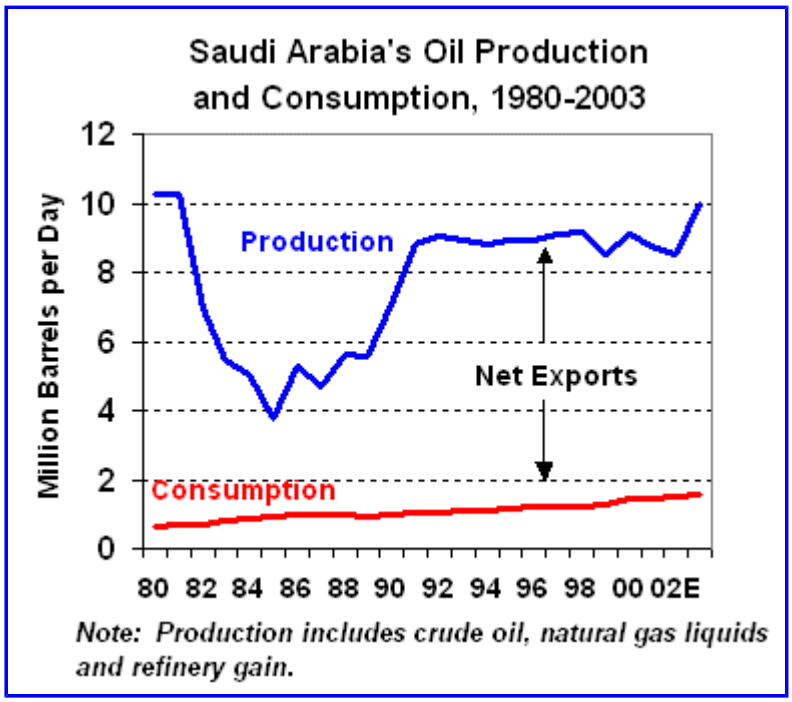
According to the *Oil and Gas Journal*, Saudi Arabia contains 259.4 billion barrels of proven oil reserves (plus another 2.5 billion barrels in the Saudi-Kuwaiti Neutral Zone), around one-fourth of proven, conventional world oil reserves. The country may contain up to 1 trillion barrels of ultimately recoverable oil. Saudi Arabia is the world's leading oil producer and exporter, and its location in the politically volatile Gulf region adds an element of concern for its major customers, including the United States. Saudi Arabia maintains crude oil production capacity of around 10.0-10.5 million bbl/d, and claims that it is "easily capable" of producing up to 15 million bbl/d in the future and maintaining that production level for 50 years. Aramco claims that the average depletion rate for Saudi oil fields is 28%, with the giant Ghawar field having produced 48% of its proved reserves. Aramco also claims that, if anything, Saudi oil reserves are underestimated, not overestimated. Some outside analysts, notably Matthew Simmons of Houston-based Simmons and Company International, have disputed Aramco's optimistic assessments of Saudi oil reserves and future production, pointing to -- among other things -- more rapid depletion rates and a higher "water cut" than the Saudis claim. EIA forecasts that Saudi oil production capacity could reach 18.2 million bbl/d by 2020, and 22.5 million bbl/d by 2025.

During 2003, Saudi Arabia produced around 9.9 million bbl/d of total oil -- including crude oil, natural gas liquids, and "other liquids"oil, and also iincluding half of the Saudi-Kuwaiti Neutral Zone's 614,000 bbl/d). This was up sharply from Saudi Arabia's 8.5 million bbl/d of total oil production in 2002. Saudi oil production surged in 2003 as the country utilized its spare production capacity to help compensate for losses from Venezuela, Nigeria, and Iraq. Also, in early June 2004, OPEC met and agreed to raise crude oil output quotas by 2 million bbl/d as part of an effort towards lowering oil prices, which had surpassed $40 per barrel in some cases. As a result, beginning July 1, 2004, Saudi Arabia's official OPEC crude oil production quota will be raised to 8.288 million bbl/d, up from the country's previous quota of 7.638 million bbl/d. Currently (mid-June 2004), Saudi Arabia is estimated to be producing 9.1 million bbl/d of crude oil, well in excess of its new quota level. In addition to crude oil, Saudi Arabia produces around 1.1 million bbl/d of natural gas liquids (NGLs) and "other liquids," not subject to OPEC quotas.

Although Saudi Arabia has around 80 oil and gas fields (and over 1,000 wells), more than half of its oil reserves are contained in only eight fields, including Ghawar (the world's largest oil field, with estimated remaining reserves of 70 billion barrels) and Safaniya (the world's largest offshore oilfield, with estimated reserves of 35 billion barrels). Ghawar's main producing structures are, from north to south: Ain Dar, Shedgum, Uthmaniyah, Farzan, Ghawar, Al Udayliyah, Hawiyah, and Haradh. Overall, Ghawar alone accounts for about half of Saudi Arabia's total oil production capacity.

In March 2002, Aramco awarded major turnkey contracts to Italy's Snamprogetti ($630 million) and Technip-Coflexip ($360 million) aimed at increasing total Saudi oil production capacity by 800,000

bbl/d (500,000 bbl/d of Arabian light and 300,000 bbl/d of Arabian medium), by October 2004. The $1.2 billion project, known as the Qatif producing facilities development program (QPFDP), is located in the eastern part of the country near Dhahran, and will serve crude oil production from fields in the area. QPFDP involves construction of two gas-oil separation plants (GOSPs), as well as gas treatment and oil stabilization facilities. Qatif production is slated to replace production elsewhere in Saudi Arabia, not to boost overall capacity. In June 2004, *Reuters* reported tjat Saido Arabia planned to bring on the first production from Qatif (and also from another field, Abu Safa), by July 2004.



Another potential project, at the Khurais field, could increase Saudi production capacity by 800,000 bbl/d at a cost of $3 billion. This would involve installation of four GOSPs, with a capacity of 200,000 bbl/d each, at Khurais, which first came online in the 1960s but was mothballed by Aramco (along with several other fields -- Abu Hadriya, Abu Jifan, Harmaliyah, and Khursaniyah) in the 1990s.

The $280 million Haradh-2 project aims to increase production capacity at the Haradh oil field to 900,000 bbl/d -- triple current production -- by 2006. This will involve adding a second, 300,000-bbl/d GOSP to Haradh (in addition to one 300,000-bbl/d GOSP inaugurated in January 2004), while shutting in some heavy oil production in the Ghawar area. Haradh also will produce significant volumes of non-associated natural gas, natural gas condensates (perhaps 170,000 bbl/d), and sulfur. The project is being carried out by Aramco, along with private companies like Foster-Wheeler.

In early January 2000, Saudi Arabia announced that it was establishing an 11-member Supreme Petroleum Council (SPC) to oversee oil and gas policies in the country. In mid-October 2000, the government announced that the Council would take over certain powers from Aramco. One purpose of the SPC is to help push Saudi Arabia's overall goal of accelerating private sector and foreign involvement in the country's oil sector, although there is opposition by conservatives.

Saudi Arabia produces a range of crude oils, from heavy to super light. Of Saudi Arabia's total oil production capacity, about 65%-70% is considered light gravity, with the rest either medium or heavy; the country is moving to reduce the share of the latter two grades. Lighter grades generally are produced onshore, while medium and heavy grades come mainly from offshore fields. The Ghawar field is the main producer of 34^{o} API Arabian Light crude, while Abqaiq (a super-giant field with 17 billion barrels of proven reserves) produces 37^{o} API Arab Extra Light crude. Since 1994, the Hawtah Trend (also called the Najd fields), which includes the Hawtah field and smaller satellites (Nuayyim, Hazmiyah) south of Riyadh, has been producing around 200,000 bbl/d of 45^{o}-50^{o} API, 0.06% sulphur, Arab Super Light. Overall, the Najd fields are estimated to contain 30 billion barrels of liquids and major reserves of natural gas. Offshore production includes Arab

Medium crude from the Zuluf (over 500,000 bbl/d capacity) and Marjan (270,000 bbl/d capacity) fields and Arab Heavy crude from the Safaniya field. Most Saudi oil production is considered "sour," containing relatively high levels of sulfur.

The Neutral Zone contains about 5 billion barrels of proven oil reserves. Within the Neutral Zone, Japan's Arabian Oil Co. (AOC) traditionally had operated two offshore fields (Khafji and Hout) with 300,000 bbl/d in production, but in February 2000, it lost the concession (in January 2003, AOC reached an agreement with Kuwait on the right to purchase at least 100,000 bbb/d of crude for the next 20 years from Khafji). The offshore Saudi Neutral Zone had represented Japan's most significant upstream oil interest, with 80% of revenues going to AOC and 10% each to Saudi Arabia and Kuwait. ChevronTexaco, meanwhile, operates three onshore fields (Wafra, South Fawaris, and South Umm Gudair) in the Neutral Zone. Saudi Arabia had stated that it wanted AOC and Japan to increase their investments in Saudi Arabia (including more than $1 billion in a railway linking remote mining areas to export terminals), as well as their purchases of Saudi oil, as a condition for renewal of AOC's drilling rights in the Neutral Zone. In August 2001, Saudi Arabia rejected a request by AOC to reopen talks on the Saudi Neutral Zone concession. In September 2002, Saudi Oil Minister Naimi proposed that Japan invest in Saudi natural gas fields rather than oil.

Besides the Kuwaiti-Saudi Neutral Zone, Saudi Arabia also produces oil jointly with Bahrain, from the Abu Safa offshore oilfield. In addition to what is produced in its territory, Bahrain receives oil via subsea pipeline from Abu Safa. As a way of supporting their neighbor's economy, the field's Saudi administrators donate all of the income from its 143,000 bbl/d of production to Bahrain. In late 2002, Bahrain announced that the Saudi petroleum company Aramco would begin development work aimed at increasing Abu Safa's production capacity to as much as 300,000 bbl/d by mid-2004 (as of June 2004, however, there was little sign as to exactly when the oil production might come online). The remainder of the oil that Bahrain receives from Saudi Arabia comes from the oil fields around Dammam. The Abu Safa pipeline passes through this area on its way to Bahrain. Unlike the Abu Safa oil which it receives as a gift, Bahrain purchases the Dammam oil, albeit at a discounted rate.

Saudi Arabia's long-term goal is to develop its lighter crude reserves, including the Shaybah field located in the remote Empty Quarter area bordering the United Arab Emirates. Shaybah contains an estimated 15.7 billion barrels (or higher) of premium grade 41.6^{o} API sweet (nearly sulfur-free) crude oil, with production potential believed to be 1 million bbl/d (output as of early April 2004 was around 560,000 bbl/d). Overall, the Shaybah project cost around $2.5 billion, with production starting in July 1998. According to Oil Minister Naimi (October 1999), the development of Shaybah showed that "the cost of adding...capacity - that is, all the infrastructure, producing and transportation facilities - necessary to produce one additional barrel of oil per day in Saudi Arabia is, at most, $5,000 compared to between $10,000 and $20,000 in most areas of the world. So both our current production costs, and the costs for developing more production capacity for the future, are probably the world’s lowest." The Shaybah complex includes three gas/oil separation plants (GOSPs) and a 395-mile pipeline to connect the field to Abqaiq, Saudi Arabia's closest gathering center, for blending with Arab Light crude (Berri and Abqaiq streams). In addition to oil, Shaybah has a large natural gas "cap" (associated gas), with estimated reserves of 25 trillion cubic feet (Tcf). Gas production of 880 million cubic feet per day (Mmcf/d) is reinjected, along with natural gas liquids (NGLs). A possible gas recovery project could be implemented within 5 or 6 years, potentially for use in petrochemical production.

In May 2000, a new law aimed at attracting foreign investment to the Saudi energy sector came into effect. The law permits full foreign ownership of Saudi property and licensed projects, sets up the

General Investment Authority (SAGIA) as a "one-stop shop" for foreign investors, and reduces taxes on company profits from 45% to 30%. Previously, foreign companies were limited to a 49% share of joint ventures with Saudi domestic partners. Several important sectors, however, remain closed to 100% foreign ownership, including (as of June 2003): upstream oil, pipelines, media and publishing, insurance, telecommunications, defense and security, health services, wholesale and retail trade, and more. Thus, the new foreign investment law is far less attractive than it appears at first glance. However, in January 2001, SAGIA reported that foreign investment commitments had reached $1.6 billion, including 53 licenses (29 industrial, 24 non-industrial).

In October 1999, Oil Minister Naimi stated that Saudi oil policy was based on four facts: 1) the largest oil reserves and among the lowest production costs -- around $1.00-$2.00 per barrel -- in the world (the country also has extremely low finding costs, estimated at around 10 cents per barrel); 2) maintenance of significant spare oil production capacity; 3) a national economy closely linked to the oil industry; and 4) a stable political and economic system. Naimi also stressed the importance of "a stable international oil market" where "wide and rapid swings in prices are undesirable."

Exports, Ports and Pipelines

Saudi Arabia is a key oil supplier to the United States, Europe, and Jordan (the Saudis provide 50,000 bbl/d to Jordan, half of that country's needs, as a replacement for Iraqi oil supplies). Asia (China, Japan, South Korea, etc.) now takes over 40% of Saudi Arabia's crude oil exports, as well as the majority of its refined petroleum product exports. During 2003, Saudi Arabia exported 1.77 million bbl/d of oil (of which 1.72 million bbl/d was crude) to the United States. For this time period, Saudi Arabia ranked second (after Canada, and just ahead of Mexico) as a source of total (crude plus refined products) U.S. oil imports, and first for crude only (ahead of Mexico, Canada, and Venezuela). Saudi Arabia is eager to maintain and even expand its market share in the United States for a variety of economic and strategic reasons. During 2003, Saudi Arabia's share of U.S. crude oil imports was 17.8% (up from 16.6% during 2002).

Most of Saudi Arabia's crude oil is exported from the Persian Gulf via the huge Abqaiq processing facility, which handles around two-thirds or so of the country's oil output. Saudi Arabia's primary oil export terminals are located at Ras Tanura (6 million bbl/d capacity; the world's largest offshore oil loading facility) and Ras al-Ju'aymah (3 million bbl/d) on the Persian Gulf, plus Yanbu (as high as 5 million bbl/d) on the Red Sea. Combined, these terminals appear capable of handling around 14 million bbl/d, around 3.5-4.0 million bbl/d higher than Saudi crude oil production capacity (10-10.5 million bbl/d), and about 6 million bbl/d in excess of Saudi crude oil production in 2002. Despite this excess capacity, there have been reports that the Saudis are planning to conduct a feasibility study on construction of an oil pipeline from the Empty Quarter of southeastern Saudi Arabia through the Hadramaut in Yemen to the Arabian Sea.

Saudi Arabia operates two major oil pipelines. The 5-million bbl/d East-West Crude Oil Pipeline (Petroline), operated by Aramco since 1984 (when it took over from Mobil), is used mainly to transport Arabian Light and Super Light to refineries in the Western Province and to Red Sea terminals for export to European markets. The Petroline was constructed in 1981, with initial capacity of 1.85 million bbl/d on a single, 48-inch line (AY-1). The Petroline was expanded in 1987, during the height of the Iran-Iraq war (and specifically the so-called "tanker war" in the Gulf), to 3.2 million bbl/d, with the addition of a parallel ("looped") , 56-inch line (AY-1L). Finally, in 1993, Petroline capacity was increased to 5.0 million bbl/d by adding significant pumping capability on the line. Reportedly, the Saudis expanded the Petroline in part to maintain Yanbu as a strategic option to Gulf port facilities in the event that exports were blocked at that end. A study in 1997 by the Baker Institute indicated that capacity on the Petroline could be expanded significantly by using so-called "drag reduction agents" (DRAs), and that this could enhance the line's strategic value.

In purely economic terms, Yanbu remains a far less economical option for Saudi oil exports than Ras Tanura. Among other factors, shipments from Yanbu add about 5 days roundtrip travel time for tankers through the Bab al-Mandab strait to major customers in Asia compared to Ras Tanura (via the Strait of Hormuz). In addition, according to Oil Minister Naimi, the Petroline is only utilized at half capacity. Given this fact, as well as the desire to boost natural gas usage (see below), Saudi Aramco has begun converting the AY-1 (48-inch) line to natural gas pumping capability. The natural gas will supply Yanbu's petrochemical and power facilities.

Running parallel to the Petroline is the 290,000-bbl/d Abqaiq-Yanbu natural gas liquids pipeline, which serves Yanbu's petrochemical plants. The Trans-Arabian Pipeline (Tapline) to Lebanon is mothballed, and the 1.65-million-bbl/d, 48-inch Iraqi Pipeline across Saudi Arabia (IPSA), which runs parallel to the Petroline from pump station #3 (there are 11 pumping stations along the Petroline, all utilizing on-site gas turbine electric generators) to the port of Mu'ajjiz, just south of Yanbu, was closed indefinitely following the August 1990 Iraqi invasion of Kuwait (also, in June 2001, Saudi Arabia seized ownership of IPSA "in light of the Iraqi government's persistence in its stands"). Theoretically, IPSA could be used for Saudi oil transport to the Red Sea, although the Saudis have stated that "there are no plans" to do so. According to Oil Minister Naimi, Saudi Arabia has "surplus oil export and pipelines capacity...[including the] East-West oil pipeline system [which] can carry and deliver 5 million bbl/d" but is being run at "only half capacity."

Aramco's shipping subsidiary Vela has the world's largest fleet of oil tankers, including 19 VLCC's (very large crude carriers) and 4 ULCC's (ultra large crude carriers). Overall, Vela carries around half of Saudi oil exports. In addition to tankers, Aramco owns or leases oil storage facilities around the world, in places like Rotterdam, Sidi Kerir (the Sumed pipeline terminal on Egypt's Mediterranean coast), South Korea, the Philippines, the Caribbean, and the United States.

Refining

Saudi Arabia has eight refineries, with combined crude throughput capacity of around 1.75 million bbl/d, plus around 1.6 million bbl/d of refining capacity overseas. A new, 200,000-bbl/d fractionation unit at the Ras Tanura refinery was completed in August 2003, raising Saudi refining capacity close to 2 million bbl/d. Also slated for upgrading is the Rabigh refinery on the Red Sea coast. Plans call for boosting capacity at Rabigh, Saudi Arabia's largest domestic refinery, to as high as 400,000 bbl/d, as well as upgrading the refinery's product slate away from low-value heavy products towards gasoline and kerosene at an estimated cost of $3-$4 billion. In addition, the project will add a world-class ethane cracker fed by natural gas from the Eastern Province via a converted oil line of the East-West crude oil pipeline. In May 2004, Japan's Sumitomo agreed to a $4.3 billion joint venture deal to build a major petrochemical plant at Rabigh. The plant is to come onstream in 2008, and will produce ethylene and propylene.

Saudi Arabia has ambitious plans for expanding petrochemical production using natural gas as a feedstock. State-owned (70%) SABIC, the Middle East's largest non-oil industrial company (and expected to become one of the world's top five ethylene producers by 2005), accounts for around 10% of world petrochemical production. In February 2001, SABIC completed a $1 billion expansion at the Yanbu petrochemical facility, making it the largest polyethylene plant in the world, and in April 2003, Aramco awarded a turnkey contract to Snamprogetti to build to new units at the complex. In early January 2002, SABIC agreed to a $1.15 billion loan to fund a new petrochemicals plant in the eastern Saudi Arabian industrial city of Jubail. The complex is scheduled to come online in the second half of 2004, and to produce 1 million tons per year of ethylene, plus olefins, polyethylene, and glycol ethylene.

In August 2002, the Saudi Press Agency reported that Crown Prince Abdullah had formally

inaugurated an underground strategic oil storage facility in the city of Jeddah. The facility reportedly has storage capacity of 945,000 barrels of crude oil and refined products at five sites, and is linked by pipeline to refineries. Overall, Saudi Arabia reportedly is moving towards having a strategic oil reserve capable of holding 12 million barrels of oil products and capable of being tapped in an emergency.

Security Issues

At the beginning and end of May 2004, two major terrorist attacks in Saudi Arabia raised concerns about security in the Kingdom. Specifically, the safety of Western oil workers, of which there are more than 3,000 working for Aramco (out of 54,000 total employees), and of Saudi oil facilities in general, has been called into question. In the first attack, on May 1, a group of armed men killed six Westerners and a Saudi at the offices of ABB Lummus in Yanbu. Following the attack, for which al Qaeda claimed responsibility, all 90 employees working on a joint Sabic/Exxon-Mobil refinery project in Yanbu chose to leave the country. The Yanbu attack was followed by another such incident the last weekend in May, this time at a residential compound in Khobar, which killed 22 people -- mainly foreigners. During the first two weeks of June 2004, several more Westerners were murdered, including one who was kidnapped and beheaded.

In late April 2004, Aramco's Chief Executive, Abdullah Jumah, said that "there is nowhere in the world that oil facilities are protected as well as in Saudi Arabia." According to Jumah, Aramco employs 5,000 security guards to protect oil facilities. In addition, the Saudi National Guard, regular Saudi military forces, and Interior Ministry officers are tasked with protecting oilfields, pipelines (the country has around 10,000 miles), ports (Ras Tanura, Al Juaymah, Yanbu), refineries, and other oil facilities (gathering centers, gas-oil separation plants, etc.). In May 2004, Nawaf Obaid, an advisor to the Saudi royal family, said that the Saudi government had added $750 million to its security budget over the past two years to beef up security in the oil sector. According to Obaid, the Saudis spent $5.5 billion in 2003 on oil security. In addition to direct security, Saudi Arabia is known to maintain "redundancy" (i.e., multiple options for transportation and export) in its oil system, in part as a form of indirect security against any one facility being disabled.

NATURAL GAS

According to *Oil and Gas Journal*, Saudi Arabia's proven natural gas reserves are estimated at 224.7 trillion cubic feet (Tcf), ranking fourth in the world (after Russia, Iran, and Qatar), and up about 5 Tcf from 2002. Most (around 60%) of Saudi Arabia's currently proven natural gas reserves consist of associated gas, mainly from the onshore Ghawar field and the offshore Safaniya and Zuluf fields. The Ghawar oil field alone accounts for one-third of the country's proven natural gas reserves. However, it is important to note that only 15% of Saudi Arabia has been "adequately explored for gas," according to Aramco's vice president for new business development, Khalid al-Falih. Most new associated natural gas reserves discovered in the 1990s have been in fields which contain light crude oil, especially in the Najd region south of Riyadh. Most of Saudi Arabia's non-associated gas reserves (Mazalij, Al-Manjoura, Shaden, Niban, Tinat, Al-Waar, etc.) are located in the deep Khuff reservoir, which underlies the Ghawar oil field. Natural gas also is located in the countries extreme northwest, at Midyan, and in the Empty Quarter (Rub al Khali) in the country's southeastern desert. The Rub al Khali alone is believed to contain natural gas reserves as high as 300 Tcf.

Another large natural gas field, called Dorra, is located offshore near the Khafji oil field in the Saudi-Kuwaiti Neutral Zone and may be developed by Japan's AOC. Dorra development is controversial, however, because part of it is also claimed by Iran (which calls the field Arash). The maritime border between Kuwait and Iran remain undemarcated, but Saudi Arabia reached an agreement with Kuwait in July 2000 to share Dorra equally. Currently, Iran is resisting any moves

by Kuwait and Saudi Arabia to develop the field on their own. Iran and Kuwait have been discussing their offshore boundary since 2000.

With domestic hydrocarbons demand growing rapidly (for power generation, petrochemicals, and desalination), increasing natural gas production -- and replacing oil consumption with natural gas -- is a priority for the Saudi government. Gas development is slated to consume a large share of Aramco's budget (in late 1999, Aramco decided to invest $45 billion over 25 years on upstream gas development and processing facilities), and Aramco is aiming to add 3-5 Tcf of new non-associated natural gas reserves per year to meet rapid (5%-7% annual) gas demand growth. Non-associated gas development is desirable in particular because it guarantees a steady flow of gas regardless of oil output, which tends to fluctuate. Currently, non-associated gas accounts for 40% of Saudi Arabia's total gas reserves.

In June 2003, Saudi Oil Minister Naimi officially announced termination of negotiations with foreign energy companies on the $15-$20 billion "Saudi Gas Initiative" (SGI), which had promised to be the first major reopening of Saudi Arabia's upstream hydrocarbons sector to foreign investment since nationalization in the 1970s. Companies which had been selected (in 2001) for the three "core ventures" under the SGI were: 1) South Ghawar -- ExxonMobil (35%), Shell (25%), BP (25%), Phillips (15%); 2) Red Sea -- ExxonMobil (60%), plus Marathon (20%) and Occidental (20%); and 3) Shaybah -- Shell (40%), Total (30%), and Conoco (30%). The SGI had aimed to increase foreign investment and natural gas development in the country, while integrating upstream gas development with downstream petrochemicals, power generation, and water desalination. SGI had been seen as the key to Saudi Arabia's entire foreign investment strategy. However, negotiations broke down over two major stumbling blocks: the extent of gas reserves to be opened to upstream development and whether or not this should include gas from the Saudi Aramco Reserve Area (SARA); and the rates of return to participating companies (the companies wanted a significantly higher rate than the Saudis were offering). Prior to the cancellation, Saudi Arabia and the foreign oil companies had failed to meet numerous deadlines for agreement on the SGI throughout 2001 and 2002.

Core Venture 1, in South Ghawar, would have been one of the world's largest ($15 billion) integrated natural gas projects, including exploration, pipelines, two gas-fired power plants, two petrochemical plants, two desalination units, and more. Core Venture 2 was to involve exploration in the Red Sea, development of the Barqan and Midyan fields on the Red Sea coast in northwestern Saudi Arabia, as well as construction of a petrochemical plant, a power station, desalination capacity, etc., at a cost of $4 billion. Core Venture 3 would have involved exploration near Shaybah in the Rub al-Khali ("Empty Quarter") of southeastern Saudi Arabia, development of the Kidan gas field, laying of pipelines from Shaybah to the Haradh and Hawiyah natural gas treatment plants east of Riyadh, and construction of a petrochemical plant in Jubail, at a cost of $4 billion.

Following cancellation of the SGI, Saudi Arabia repackaged the project as a series of smaller, more focused contracts, with better rates of return than previously offered. At the same time, the Saudis moved away from the integrated upstream/downstream gas, water, power, and petrochemical nature of the SGI, and instead specifically targeted upstream natural gas development in the area that had comprised Core Venture 3. Downstream and "midstream" elements of the SGI will now be handled separately, in large part by SABIC and Aramco. In July 2003, Saudi Arabia reached a tentative deal (officially signed on November 15) with Royal Dutch/Shell and Total on Blocks 5-9 and 82-85 in the Shaybah and Kidan areas of the "Empty Quarter" region. Besides the major European companies, Saudi Aramco -- replacing ConocoPhillips -- will have a 30% share in the $2 billion project. Shell will maintain a 40% share and Total the remaining 30%. The deal covers an area of 81,000 square miles.

In January 2004, Russia's Lukoil won a tender to explore for and produce non-associated natural gas in the Saudi Empty Quarter. Lukoil will operate in Block A, near Ghawar, as part of an 80/20 joint venture with Saudi Aramco. Also in January 2004, China's Sinopec won a tender for gas exploration and production in Block B, while an Eni-Repsol consortium was granted a license to operate in Block C. Under terms of the agreements, Aramco will take "sales quality gas" on a take-or-pay basis for $0.75 per million Btu, while condensates and natural gas liquids will be sold at international market rates (note: Saudi accession to the WTO will most likely require it to give up the dual pricing system for natural gas, and also to set up a comprehensive, transparent regulatory framework for the natural gas sector). In addition, the Saudi government will fund a pipeline connection from the country's Master Gas System (MGS) to contract delivery points.

Additional natural gas production is being encouraged as a feedstock for the country's growing petrochemical industry (at Yanbu and Jubail, for instance), as well as for electricity generation, desalination plants and other industrial establishments, and as a replacement for direct oil burning. In July 2003, Saudi Arabia invited more than 40 companies to bid on three onshore natural gas blocks in the South Ghawar area. As of December 2003, approximately 20-30 companies reportedly had expressed interest.

Using natural gas instead of oil domestically will help free up additional crude oil for export (OPEC quotas are on production, not exports). Overall, Saudi Arabia aims to triple natural gas output (to 15 Bcf/d) by 2009. To date, Saudi Arabia has not expressed great interest in exporting liquefied natural gas mainly due to doubts regarding economic viability and concerns that gas exports could compete with more lucrative oil exports.

Domestic demand is driving a $4.5 billion expansion of the MGS, which was completed in 1984. The MGS feeds gas to the industrial cities of Yanbu on the Red Sea and Jubail, which combined account for 10% of the world's petrochemical production. Prior to the MGS, all of Saudi Arabia's natural gas output was flared.

In October 2002, construction was completed on a $4 billion, 1.4-billion-cubic-feet (Bcf)-per-day, non-associated gas processing plant at Hawiyah, located south of Dhahran and east of Riyadh near the giant Ghawar oil field. Hawiyah represents the largest Saudi natural gas project in more than 10 years, and the first to process only non-associated gas (from the deep Khuff and Jauf reservoirs). Hawiyah was officially inaugurated in October 2002, and reportedly is producing enough natural gas to free up around 260,000 bbl/d of Arabian Light crude oil for export.

Besides Hawiyah, Foster Wheeler has been managing a $2 billion project to build a new natural gas processing plant at Haradh, 120 miles southwest of Dhahran. The Haradh plant is similar in scope to one at Hawiyah. When completely online -- reportedly all four trains were completed as of June 2003 -- total Saudi natural gas processing capability will increase by around 1.5 Bcf/day, to around 9.5 Bcf/day. Eventually, a $900-$1,100 million, 3,800-Mmcf/d "straddle plant" -- a natural gas reprocessing plant located adjacent to a gas transmission line for the purpose of extracting light hydrocarbon liquids newly formed due to recurring compression and decompression of gas during transmission -- may be built as well. If so, the straddle plant will likely service both Haradh and Hawiyah and increase Saudi NGL production..

In other natural gas-related developments, a key pipeline project was completed in June 2000 to extend the MGS from the Eastern Province (which contains large potential gas and condensate reserves) to the capital, Riyadh, in the Central Province. This is part of a broader expansion of the existing gas transmission system in Saudi Arabia, reportedly to include the construction of around 1,200 miles of additional natural gas pipeline capacity (on top of 10,500 miles of oil, gas,

condensate, products, and natural gas liquid pipelines currently in operation) by 2006.

ELECTRICITY

Saudi Arabia's rapidly growing population and artificially low power prices (as a result of low, government mandated tariffs and consumer subsidies) are increasing demand on electric utilities, as power demand grows by 4.5% or more each year. Saudi Arabia's Industry and Electricity Ministry estimates that the country will require up to 20 gigawatts (GW) of additional power generating capacity by 2019 -- nearly the same amount as today's 26.6 GW -- at a cost of $12 billion. Most of this money is slated to come from the private sector, possibly including foreign investors. Also, the vast majority of this capacity will either be natural gas-fired or combined cycle, as part of the government's plans to expand gas utilization in the power sector (and elsewhere) significantly. Meanwhile, new industrial projects have been delayed and brownouts have occurred due to inadequate power supplies, especially during the summer peak cooling demand season. Taking this into account, the Saudi Electric Company (SEC; see below) in late September 2003 announced plans for seven new electric power stations (Al-Mazahimiyah, Al-Qurayyat 2, Salboukh, Riyadh PP10, Rabigh 2, Yanbu 2, Shuqaiq 2) with total capacity of 14.5 GW, plus ten new power transmission projects. Reportedly, current power projects being implemented in Saudi Arabia are worth $4.5 billion.

Privatization of Saudi Arabia's electricity sector is under consideration, and along these lines, an independent Electricity Regulatory Authority (ERA) was established by Saudi Arabia's Supreme Economic Council in November 2001. The new authority is to "regulate electricity services" in the country, as part of a continuing move towards restructuring of the power sector. The Saudi government appears to be moving towards a significant restructuring of the country's power sector, including moves towards unbundling of power generation, transmission, and distribution, plus an increase in private sector involvement in the sector. In December 2003, Aramco reportedly set up a $500+ million private finance initiative (PFI) to construct power plants at four of its industrial sites in the eastern part of the country.

In July 2002, the Supreme Economic Council passed a resolution setting out a framework for private sector involvement in developing independent water and power projects (IWPPs). Saudi Arabia reportedly is hoping to attract private sector investment for up to 60% equity in IWPP projects, and is considering a guarantee that electricity and water produced would be purchased by local Saudi companies. Initial IWPP projects identified for development include a 700-MW, 176-million-gallon-per-day (mmg/d) plant at Shuaiba on the Red Sea coast 70 miles southeast of Jiddah; a 700-MW, 23-mmg/d plant at Shuqaiq in the country's Southwest; a 2,500-MW, 176-mmg/d plant at Ras Az Zour in the Eastern Province; and a 1,100-MW, 75-mmg/d, gas-fired plant at Jubail on the east coast. Saudi Arabia's Saline Water Conversion Corp. (SWCC) has estimated that the country will need to spend $50 billion on water projects through 2020 in order to meet the Kingdom's rapidly growing water demand. The Water and Electricity Company (WEC), a joint venture of SWCC and the SEC, will act as offtakers of the power and water from the IWPPs, under a 20-year power and water purchase agreement (PWPA). In March 2004, *Gulf News* reported that Saudi Arabia planned to establish 10 IWPPs by 2016, at a total cost of $16 billion.

On February 16, 2000, Electricity Minister Dr. Hashem Ibn Abdullah Yamani signed a merger agreement between Saudi Arabia's 10 existing power companies (SCECOs), and on April 5, 2000, the long-anticipated Saudi Electric Company (SEC), a joint-stock company owned 50% by the Saudi government, was established. Also in April 2000, Saudi Arabia officially removed subsidies for electricity (although there are reports that, de facto, subsidies continue). SEC was formed from the country's 10 regional power companies (including the four SCECO's -- East, West, Central, and South -- which controlled 85% of the country's power supplies). The four SCECO companies had

operated at a loss because they had been required to sell power below cost to Saudi consumers, as well as due to inefficiencies and difficulties with non-payment of bills. The government for years has subsidized the cost of electricity and has paid a guaranteed dividend to private shareholders. In November 2002, the Saudi cabinet approved a plan to privatize SEC.

Creation of the SEC (and possibly further splitting the company into units dealing with generation, transmission, and distribution companies) could open the door to private sector construction of new power plants on BOO (Build-Own-Operate) and BOT (Build-Own-Transfer) bases. The future of IPP's (Independent Power Producers) in Saudi Arabia remains uncertain, however, with major challenges including: tariffs, the legal and operating framework, taxation, and fuel supply. In January 2003, the Electricity Services Regulatory Authority (ESRA) was set up as an independent "watchdog" in charge of the country's power sector, IPPs, and IWPPs.

Several projects now underway employ financing mechanisms that are new to Saudi Arabia's electric power sector. For example, the 1,200-MW, PP9 power station north of Riyadh has been funded with extra revenues generated by a special tariff imposed on heavy users since January 1995. The $1.7 billion, Ghazlan II power project is being financed by an internationally syndicated, $500 million, commercial loan (the first such loan in Saudi history), and being built by a consortium led by Mitsubishi and Bechtel. Ghazlan II consists of four, 600-MW steam turbine units, the first of which came online in the summer of 2001, and the second in July 2002. Combined with the existing 1,600-MW Ghazlan I facility located on the Gulf coast north of Dammam, the entire complex -- when completed -- will have power generating capacity of 4,000 MW and will supply Saudi Arabia's Eastern Province.

Meanwhile, plans for a $1.7 billion, 1,100-MW, gas-fired power plant at Shuaiba on the Red Sea coast apparently are moving ahead, following a groundbreaking ceremony in May 2000, attended by Crown Prince Abdullah. ABB (Asea Brown Boveri) had been awarded the contract on a turnkey basis. Also at Shuaiba, in January 2001, SEC signed a $419 million contract with the Anglo-French engineering company Alstom to expand the Shuaiba oil-fired power plant by 780 MW (units 4 and 5). These two new units should enter service in late 2003 or early 2004. Finally, in May 2001, U.S.-based CMS Energy, along with joint venture partner A.H. al Zamil Group, was chosen to build a 250-MW cogeneration power project for the Saudi Petrochemical Company (Sadaf). This project also represents Saudi Arabia's first privately-owned IPP. A contract on the $170 million IPP was signed in July 2003. However, CMS's involvement in the project was called into question in September 2003 when Michigan state regulators questioned the company for failing to file an application for certification under the Public Utility Holding Company Act (PUHCA). In response, CMS said it was looking to sell its interest in the project.

On October 9, 2000, Saudi Arabia approved plans for setting up a new utility company (UCO) in the twin industrial cities of Yanbu and Jubail. The company, named Marafeq, is being founded by the Royal Commission, the Public Investments Fund, Saudi ARAMCO, and SABIC, with local investors also holding a stake in the company. UCO may be privatized when it becomes profitable. In January 2003, Marafeq (UCO) reportedly commenced construction of several water and electricity projects in Jubail and Yanbu, at a cost of around $2 billion.

Besides generation, Saudi Arabia also requires additional investment in power transmission. At present, around 20% of Saudis are not connected to the national power grid. Creating a unified national grid could require over 20,000 miles of additional power transmission lines. Currently, Saudi Arabia has around 150,000 miles of transmission lines. For 2003, SEC set a goal of connecting 184,000 new subscribers, including people living in 617 villages and remote habitations. An expansion of the Jizan power plant in remote southwestern Saudi Arabia will also help provide

power to households in that part of the country.

ENVIRONMENT

Saudi environmental issues are seen related mainly to oil exploration and production. Despite technological advances in exploration and production, offshore oil development continues to have a significant impact on the marine environment, as do oil spills and illegal discharges.

Several air quality initiatives, including the introduction of unleaded gasoline into the country in 2001, should reduce Saudi Arabia's level of air pollution, but rising rates of energy consumption and carbon emissions portend possible future problems for the Kingdom. Oil production and development make the country very energy- and carbon-intensive. Saudi Arabia's plentiful supply of domestic oil and gas reserves has stifled incentives for the country to develop a significant renewable energy sector.

COUNTRY OVERVIEW

Head of State: King Fahd ibn Abd al-Aziz al-Sa'ud
Crown Prince: Abdullah ibn Abd al-Aziz al-Sa'ud
Independence: September 23, 1932 (unification)
Population (2002E): 21.7 million (growing around 3% per year)
Location/Size: Between the Arabian Gulf and the Red Sea/865,000 square miles (about 1/4 the size of the United States)
Major Cities: Riyadh (royal capital), Jeddah (administrative capital), Mecca, Medina, Dammam, Jubayl, Buraydah
Language: Arabic
Ethnic Groups: Arab (90%), Afro-Asian (10%)
Religion: Muslim (100%) - predominantly Sunni, with a minority Shi'ite population mainly concentrated in eastern Saudi Arabia

ECONOMIC OVERVIEW

Currency: Riyal
Market Exchange Rate (6/17/04): US$1 = 3.75 riyals
Gross Domestic Product (GDP - market exchange rate) (2003E): $210.5 billion
Real GDP Growth Rate (1995-2000 average): 1.9% **(2002E):** 1.2% **(2003E):** 5.5% **(2004F):** 4.0%
Inflation Rate (consumer prices) (2002E): -0.6% **(2003E):** 0.3% **(2004F):** 0.6%
Unemployment Rate (Saudi American bank estimate) (2002E): 15% (unofficial estimates are higher)
Current Account Balance (2002E): $11.7 billion **(2003E):** $9.9 billion **(2004F):** $11.6 billion
Major Trading Partners (2002): Japan, United States, European Community
Merchandise Exports (2003E): $77.3 billion (mainly crude oil and petroleum products)
Merchandise Imports (2003E): $30.8 billion (mainly industrial goods, metals, food)
Merchandise Trade Balance (2003E): $46.5 billion
Oil Export Revenues (2003E): $80.4 billion **(2004F):** $77.4 billion
Oil Export Revenues/Total Export Revenues (2003E): 90%-95%
External Debt (2003E): $39 billion (19% of GDP)
Net Official Foreign Assets (2003E): $68 billion

ENERGY OVERVIEW

Minister of Petroleum and Mineral Resources: Ali bin Ibrahim al-Naimi (since 8/95)
Minister of Water and Electricity: Abdullah al-Hussayen (since 4/04)
Proven Oil Reserves (1/1/04E): 261.9 billion barrels (includes half of Neutral Zone -- NZ)

Total Oil Production (2003E; includes NZ): 9.9 million barrels per day (bbl/d), of which 8.8 million bbl/d was crude oil, 1.0 million bbl/d was natural gas liquids (NGLs), and 80,000 bbl/d was "other liquids" (including MTBE)
Total Oil Production (2002E; includes NZ): 8.53 million barrels per day (bbl/d), of which 7.63 million bbl/d was crude oil, 810,000 bbl/d was natural gas liquids (NGLs), and 80,000 bbl/d was "other liquids" (including MTBE)
OPEC Crude Oil Production Quota (effective 4/1/04): 7.638 million bbl/d **(effective 7/1/04):** 8.288 million bbl/d
Crude Oil Production Capacity (2004E): 10.0-10.5 million bbl/d
Total Oil Consumption (2003E): 1.57 million bbl/d
Net Oil Exports (2002E): 7.0 million bbl/d **(2003E):** 8.3 million bbl/d
Crude Oil Refining Capacity (1/1/04E): 1.75 million bbl/d
Natural Gas Reserves (1/1/04E): 231.1 trillion cubic feet (Tcf) (includes half of NZ)
Natural Gas Production/Consumption (2002E): 2.0 Tcf
Electric Generating Capacity (2003E): 26.6 gigawatts (all thermal)
Net Electricity Generation (2002E): 138.2 billion kilowatthours

ENVIRONMENTAL OVERVIEW

Total Energy Consumption (2002E): 5.1 quadrillion Btu* (1.3% of world total energy consumption)
Energy-Related Carbon Dioxide Emissions (2002E): 328.8 million metric tons (1.3% of world carbon dioxide emissions)
Per Capita Energy Consumption (2002E): 218.7 million Btu (vs. U.S. value of 339.1 million Btu)
Per Capita Carbon Dioxide Emissions (2002E): 3.8 metric tons (vs. U.S. value of 5.5 metric tons of carbon dioxide)
Energy Intensity (2002E): 17,820 Btu/$ nominal -- PPP (vs U.S. value of 9,348 Btu/$ nominal)**
Carbon Intensity (2002E): 1.1 metric tons of carbon/thousand $nominal -- PPP (vs U.S. value of 0.55 metric tons/thousand $)**
Fuel Share of Energy Consumption (2002E): Oil (59.8%), Natural Gas (41.2%)
Fuel Share of Carbon Dioxide Emissions (2002E): Oil (66.2%), Natural Gas (33.8%)
Status in Climate Change Negotiations: Non-Annex I country under the United Nations Framework Convention on Climate Change (ratified December 28th, 1994). Not a signatory to the Kyoto Protocol.
Major Environmental Issues: Desertification; depletion of underground water resources; the lack of perennial rivers or permanent water bodies has prompted the development of extensive seawater desalination facilities; coastal pollution from oil spills.
Major International Environmental Agreements: A party to Conventions on Climate Change, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea and Ozone Layer Protection.

* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar, wind, wood and waste 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 figures from CIA Factbook estimates based on purchasing power parity (PPP) exchange rates.

OIL AND GAS INDUSTRIES

Organization: The Supreme Petroleum Council governs the nationalized oil industry, including

Saudi Arabian Oil Co. (Saudi Aramco) crude production, refining and marketing; Saudi Basic Industries Corp. (SABIC) petrochemicals.
Major Foreign Oil Company Involvement: AOC, BP, Eni, ExxonMobil, Occidental, Repsol, Shell, Sinopec
Major Oil Terminals: Ras Tanura (world's largest offshore oil loading facility, on the Persian Gulf; 6 million bbl/d capacity), Yanbu (on the Red Sea, fed by Petroline; 5 million bbl/d capacity), Jubail, Ras al-Ju'aymah (on the Persian Gulf northwest of Ras Tanura; 3 million bbl/d capacity), Jiddah (on Red Sea south of Yanbu), Jizan (on Persian Gulf, refined products), Ras al-Khafji (on Persian Gulf in the Saudi-Kuwaiti Neutral Zone, crude oil), Rabigh (on Red Sea, north of Jiddah, crude oil and refined products), Zuluf (offshore Persian Gulf, linked to Zuluf oil field)
Major Oil Fields: Ghawar, Safaniya, Najd, Abqaiq, Berri, Manifa, Zuluf, Shaybah, Abu Saafa, Khurusaniya
Major Pipelines (capacity - million bbl/d): Petroline (4.8), IPSA (1.65 -- closed since August 1990), Tapline (0.5 -- closed since 1984), Abqaiq-Yanbu NGL line (0.3)
Major Refineries (capacity, 1/1/04E): Aramco - Rabigh 400,000 bbl/d, Ras Tanura 300,000 bbl/d, Yanbu 190,000 bbl/d, Riyadh, 120,000 bbl/d, Jeddah 60,000 bbl/d; Sadui Aramco/Mobil - Yanbu 340,000 bbl/d; Petromin/Shell - al-Jubail 305,000 bbl/d; Arabian Oil Company - Ras al-Khafji 30,000 bbl/d

Sources for this report include: Agence France Presse; Alexander's Gas and Oil Connections; APS Review Gas Market Trends; APS Review Oil Market Trends; Baker Institute; Bloomberg; BBC Summary of World Broadcasts; Business Week; Cambridge Energy Research Associates; Chemical News and Intelligence; CIA World Factbook; Deutsche Presse-Agentur; Dow Jones; Economist Intelligence Unit (EIU) Business Middle East and ViewsWire; Energy Day; Financial Times; Global Insight; Gulf News; Hart's Africa Oil and Gas; Hart's Middle East Oil and Gas; International Financial Law Review; International Market Insight Reports; LPG World; Middle East Economic Digest (MEED); Middle East Economic Survey (MEES); Middle East Newsfile; New York Times; Oil Daily; Oil and Gas Journal; Petroleum Economist; Petroleum Finance Company; Petroleum Intelligence Weekly; Reuters; Saudi Gazette; The Times (London); U.S. Energy Information Administration; World Gas Intelligence; World Markets Analysis; World Oil.

LINKS

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Links to other U.S. government sites:
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U.S. Department of Energy's Office of Fossil Energy's International section - Saudi Arabia
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Lonely Planet Guide: Saudi Arabia

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