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COUNTRY ANALYSIS BRIEFS

Kuwait

Last Updated: November 2006

Background

Kuwait contains 101.5 billion barrels of proven oil reserves (including its share of the Neutral Zone), or roughly 8 percent of the world's total oil reserves.

Kuwait's economy is heavily dependent on oil export revenues. Current high oil prices are producing a surge in oil export revenues for Kuwait, with 2005 the best year for oil export revenues in the past decade. Non-oil sectors of the Kuwaiti economy, particularly services, have also experienced strong growth fueled by the inflow of oil revenues. Real gross domestic product (GDP) grew by an estimated 4.8 percent in 2005, while inflation was running at around 4.1 percent. Despite its currently strong macroeconomic position, including sizable fiscal and trade surpluses, Kuwait would like to diversify its economy away from near-complete dependence on oil revenues. Currently, the country relies on oil revenues for around 90-95 percent of total export earnings and around two-fifths of GDP. Kuwait channels around 10 percent of its oil revenues into the "Future Generations Fund" for the day when oil income runs out. The bulk of this reserve is invested in the United States, Germany, the United Kingdom, France, Japan, and Southeast Asia. In order of importance, foreign assets are believed to be invested in stocks and bonds, fixed yield instruments (mostly short term), and real estate. Kuwait follows a generally conservative investment policy.

With approximately 65 percent of the population under the age of 25, and with around 90 percent of employees in the private sector currently non-Kuwaiti citizens, creating jobs for young Kuwaitis is a major objective of the government. Kuwait hopes to attract additional foreign investment, and has started a program to privatize state-owned businesses (outside the oil sector). Privatization is complicated by the need to protect the jobs of Kuwaiti citizens, who traditionally have been employed mostly (over 90 percent) by state-owned enterprises and the government.

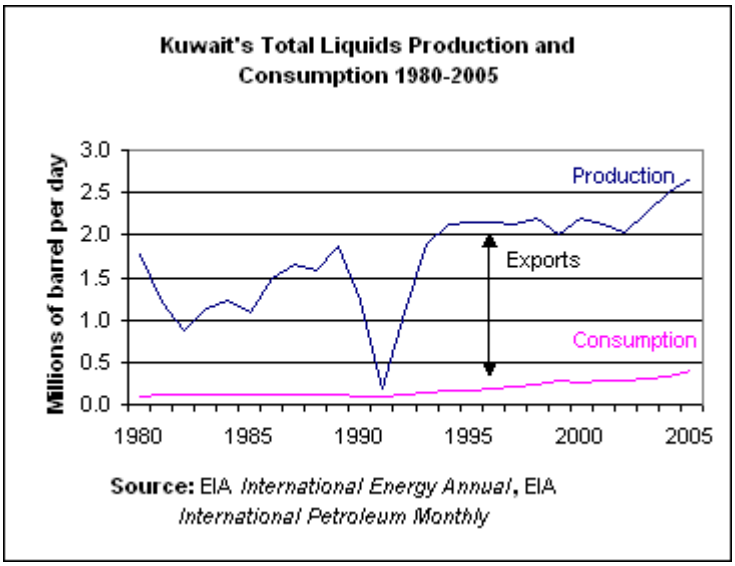
In March 2001, Kuwait's national assembly passed the "Foreign Direct Investment Act," which aimed at promoting foreign investment. Among other things, the Act eased restrictions on foreign banks, provided long-term protection to foreign investors against nationalization or confiscation, and eliminated the requirement for foreign companies to have a Kuwaiti sponsor or partner. In the oil sector, the Kuwaiti constitution forbids foreign ownership of Kuwait's mineral resources, but the

Kuwaiti government is exploring allowing foreign investment in upstream oil development under terms (see below for more details) which provide for per-barrel fees to the foreign firms rather than traditional production sharing agreements (PSA's). The Kuwaiti government is currently making an attempt to enact legislation to facilitate foreign investment in the upsteam oil sector, as part of its "Project Kuwait" initiative to boost production capacity. The Kuwaiti parliament is expected to take up the proposed legislation sometime in late 2006, but with strong opposition from several legislators .

Oil

Kuwait is OPEC's third largest oil producer and holds 8 percent of the world's proven, conventional world oil reserves.

Kuwait itself contains an estimated 101.5 billion barrels of proven oil reserves, roughly 8 percent of the world total, and around 1,600 producing oil wells. The Saudi-Kuwaiti Neutral Zone (also known as the "Divided Zone") area, which Kuwait shares with Saudi Arabia, holds an additional 5 billion barrels of reserves, half of which belong to Kuwait, bringing Kuwait's total oil reserves to 104 billion barrels. Most of Kuwait's oil reserves are located in the 70-billion barrel Greater Burgan area, which comprises the Burgan, Magwa and Ahmadi structures and has a production capacity of around 1.6 million bbl/d. Greater Burgan is widely considered the world's second largest oil field, surpassed only by Saudi Arabia's Ghawar field, and has been producing oil since 1938. Kuwait's Raudhatain, Sabriya, and Minagish fields have large proven reserves as well, with 5.1 billion, 4.3 billion, and 3.3 billion barrels of oil, respectively. All of these fields have been producing since the 1950's. They generally contain medium to light crude oil with gravities in the 30°-36° API range. The South Magwa field, discovered in 1984 to the west of Burgan, is estimated to hold at least 25 billion barrels of light crude oil with a 35°-40° API gravity.



In September 2003, Kuwait announced as much as 1 billion barrels of very light oil had been found in western Kuwait at the Kara al-Marou field. And in October 2003, Kuwait announced a new discovery of light crude oil (42.6° API) at Sabriya. In March 2006, Kuwait announced it made a large discovery of between 10 billion and 13 billion barrels of light oil in the Sabriya and Umm Niqa areas in the north of the country. In April 2006, KOC announced it had made an oil discovery in Arifjan, southeast of the Burgan oil field. Kuwait's oil minister stated that the new oil discovery bolstered Kuwait's official reserves by ten percent.

With most of Kuwait's major producing fields over sixty years old, field maturity is becoming a problem. In 2005, Kuwait Oil Company (KOC), citing field exhaustion, lowered its production plateau estimates for the Greater Burgan area from 2 million bbl/d to 1.7 million bbl/d over a 20-30 year period. This issue will place added significance on the development of other Kuwaiti reserves going forward.

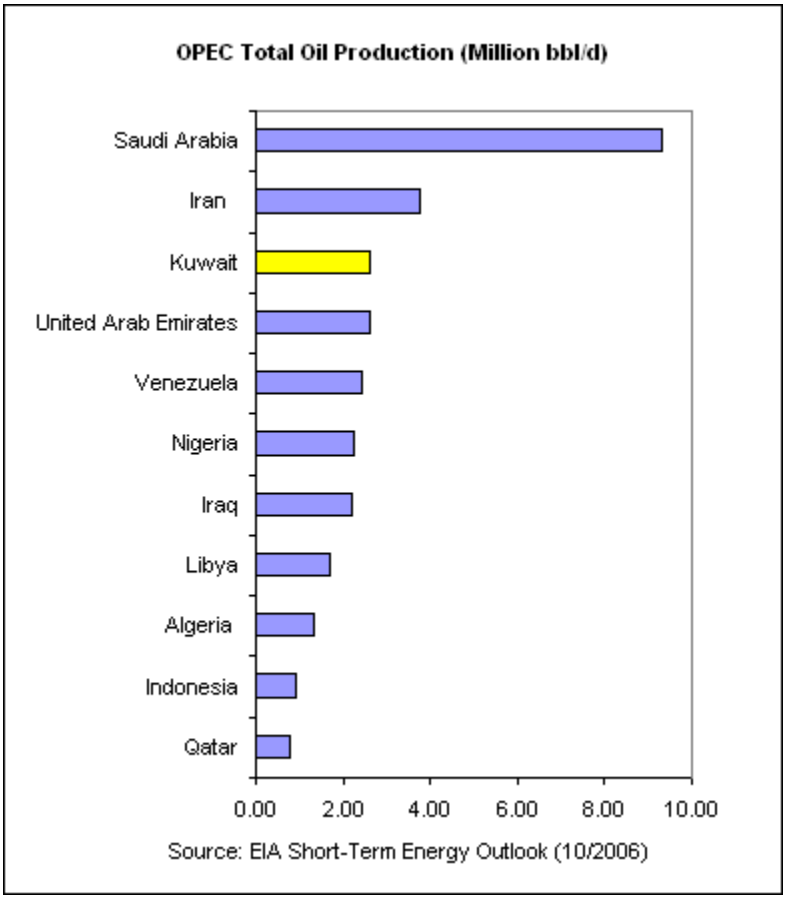
In early 2006, Kuwaiti energy planners came under pressure from the nation's parliament and the public to verify the size of the emirate's crude oil reserves, after doubt was cast by a leaked KOC memo which stated that reserves actually stood at approximately half of the declared 97 billion barrels. Kuwait has signaled its intent to defend its 100-billion-barrel estimate of proven reserves and has said that the report is inaccurate and incomplete, since it covered only a portion of Kuwait's fields. If the lower figure is confirmed by the Kuwaiti authorities, the reserves life falls

from 105 years at 2005 production levels to only 50 years. Additionally, at the lower reserves figure, if Kuwait were able to raise production to its 4mn bbl/d target (see below), the lifespan of its reserves would fall to roughly 30 years

According to *Platt's*, a special committee of oil experts had completed the new reservoir appraisal in August 2006 and submitted it to KOC management. It is expected that the report will then be handed on to the new Energy Minister, Sheikh Ali Jafrah al-Sabah for submission to parliament, when it reconvenes in October 2006.

Current Oil Production

Currently, Kuwait produces about 2.6 million bbl/d of crude oil, with output divided about equally between shallow wells and high-pressure wells. These wells, producing up to 10,000 bbl/d each, come from the deep "Marrat" structure which runs north-south through the country and contains an estimated 20 billion barrels of oil in place. Aside from the 1.6 million bbl/d Greater Burgan field, Kuwait's other main producing fields include the northern fields of Raudhatain (380,000 bbl/d of production capacity) and Sabriya (95,000 bbl/d of production capacity); the southwestern fields of Minagish and Umm Qudayr (190,000 bbl/d); Abdali (33,000), and Ratqa (45,000 bbl/d) in the north; and Kuwait's share of the Saudi-Kuwaiti Neutral Zone (270,000 bbl/d). Overall, around two-thirds of Kuwaiti oil production comes from the southeast of the country, with about one-fifth from northern Kuwait and about one-tenth from the west.



On January 31, 2002, an explosion and fire at an oil-gathering center near Kuwait's northern Raudhatain oil field killed four workers and injured seventeen, while cutting the field's oil and gas output sharply. The explosion, which reportedly was caused by a leak at a major oil pipeline, knocked out three critical gathering centers (the 280,000-bbl/d GC-15, 120,000-bbl/d GC-23, and 200,000-bbl/d GC-25), an electrical substation, and a natural gas booster station (BS-130). Production at Raudhatain was quickly restored to around 300,000 bbl/d by the end of February 2002, but further repairs were required on GC-15 to restore the rest. The facility reopened in January 2005, with repairs costing around $250 million. SK Corporation of South Korea was awarded a contract in May 2005 for construction of ten additional gathering centers, as well as other associated infrastructure. The $1.2 billion project is scheduled for completion in mid-2007.

Production Quotas
Kuwait's current OPEC production quota of 2.247 million bbl/d became effective July 1, 2005, with the next OPEC meeting scheduled for December 14, 2006. (Please see EIA Short-Term Energy Outlook "Table 3a. OPEC Oil Production")

Plans to Expand Oil Production

Project Kuwait

Kuwait continues to plan significant expansion of its production capacity. Kuwait hopes to reach capacity of 4 million bbl/d by 2010 and 5 million bbl/d by 2020. As part of this plan, known as "Project Kuwait," the country is considering permitting foreign oil companies to invest in upstream production, although only on "incentivised buy-back contract" (IBBC) arrangements, which do not involve production sharing, concessions, or the "booking" of reserves by foreign companies. Kuwait's constitution -- and longtime policy -- bars foreign investment in the country's natural resources, except as provided for by law. Unlike PSA's, the structure of the IBBC agreements allows the Kuwaiti government to retain full ownership of oil reserves, control over oil production levels, and strategic management of the ventures. Foreign firms are to be paid a "per barrel" fee, along with allowances for capital recovery and incentive fees for increasing reserves, in their role as service provider/contractor.

"Project Kuwait," to be developed over 25 years, was first formulated in 1997 by the SPC, to increase the country's oil production by 500,000 (and to help compensate for declines at the mature Burgan field), with the help of international oil companies (IOCs). In particular, Kuwait aims to increase output at five northern oil fields -- Abdali, Bahra, Ratqa, Raudhatain, and Sabriya (Kuwait's third largest field) -- from their current rate of around 650,000 bbl/d to 900,000 bbl/d within three years. Project Kuwait has been repeatedly delayed however, due to political opposition and resistance in parliament to the idea of allowing foreign companies into the country's oil sector. Its current estimated $8.5 billion cost is up from an earlier $7 billion. Legislation facilitating Project Kuwait was introduced again in the Kuwaiti parliament in early 2005 and approved by the Finance and Economic Committee in June 2005, but with amendments limiting its scope to four of the five fields, excluding Bahra. Final action on the bill by the full parliament is still pending, but is expected by the end of 2006.

However, the controversy over Kuwait's reserve figure could have a significant impact on the country's capacity expansion plans. Opposition MPs have called for production to be kept within 1 percent of reserves in order to ensure that oil is available for future generations, though the proposal has not yet been passed into law. Even taking the 100-billion-barrel figure, the 1 percent limit would restrict Kuwait's production to under 3 million bbl/d, increasing difficulty of efforts to pass the Project Kuwait legislation.

In February 2003, KPC completed a draft contract and proposed financial terms for Project Kuwait. There are three major consortia competing for the project, led by: 1) ChevronTexaco (along with Total, PetroCanada, Sibneft and Sinopec); 2) ExxonMobil (along with Shell, ConocoPhillips, and Maersk); and 3) BP (along with Occidental, ONGC/Indian Oil Corp.). Reportedly, KPC prefers to have three groups working under three separate IBBCs: one for Raudhatain and Sabriya (the largest IBBC); one for Ratqa, Bahra and Abdali; and one for Minagish and Umm Gudair. Currently, foreign companies like BP, Shell, and ChevronTexaco operate in Kuwait strictly under service contracts (SCs).

The fields which the Kuwaiti government intends to open to foreign investment are all currently operating fields in northern or western Kuwait, including Raudhatain, Sabriya, Ratqa, Bahra, Minagish, and Umm Gudair. Kuwait's largest field, Burgan, is to remain off-limits to foreign investment under the new plan. Kuwait also reportedly is planning to invest $6 billion in three areas near the Iraqi border -- Abdali, Ratqa, and Raudhatain -- while utilizing enhanced oil recovery (EOR) techniques in order to increase production capacity at Minagish from 150,000 bbl/d to 250,000 bbl/d. Agreements to assist in developing EOR techniques have already been reached with Chevron, ExxonMobil and the Japan National Oil Corporation (JNOC), in association with the Kuwaiti Institute for Scientific Research. One challenge that often comes along with EOR techniques like water injection is an increasing "water cut." KPC has estimated that increasing Kuwait output to 4 million bbl/d will produce 10 million bbl/d of water, which will need to be processed and disposed of.

Other Expansion Plans

To meet it expanded production goals, KOC has stated in June 2006 that is planning to mount an aggressive drilling program involving both deep and shallow exploration, but mainly focused on

developing heavy oil from the northern fields. KOC has estimated it will need to spend around $27.6 billion for domestic upstream oil development to meet the 2020 goal. The main development area will be in the Rutga field at the Lower Fars formation at 500 to 1,000 feet.

Pilot testing of the heavy oil should begin by early 2008. KOC also plans to begin drilling in South East Kuwait and West Kuwait. In South East Kuwait, which holds the vast Burgan field, production is to increase by 200,000 b/d to a total of 1.7 million bbl/d, while KOC aims to maintain capacity in West Kuwait at 500,000 b/d. Kuwait hopes the largest increases will come from the north, where KOC anticipates producing some 700,000 b/d of heavy oil from the shallow wells. Together with current capacity in the north of 650,000 bbl/d to 700,000 bbl/d, along with production from newer, deeper wells, Kuwait aims total production in the north by 2020 of an estimated 1.5 million b/d.

In September 2006, KOC announced plans for three new projects to boost crude oil output. According to officials, the projects include a gas booster station, a gathering centre and a water injection plant. Costs for Gathering Center 24 are estimated at $550 million and the water injection plant is expected to cost $450 million. The gathering centre at Sabriya in the north will have an estimated capacity of 465,000 bbl/d and 240 Mmcf/d of natural gas. The water injection plant, also in the north, is expected to handle 155,000 barrels of effluent water a day. Booster Station 160 in the southeast will complement two other stations in the area that are at maximum capacity. KOC plans to go ahead with the project upon approval from KPC.

As part of its current budget, KOC also has implemented a two phase project to make all its oil production facilities in South East Kuwait be able to handle sour crude laden with hydrogen sulfide. This process, know as going from “non-NACE” to “NACE,” involves meeting international standards for corrosion prevention set by the National Association of Corrosion Engineers. The contracts, which were awarded last year to Petrofac of the United Kingdom and South Korea's SK Engineering, are expected to be completed within two years. To transition from non-NACE to NACE, Kuwait will be required to replace about 80 percent of all South East Kuwait facilities, including several new gathering centers, new pipelines and condensate recovery units and entail rotating shut-in periods for some facilities.

Crude Oil Exports

In 2005, Kuwait exported the majority of its oil (over 60 percent, 1.38 million bbl/d) to Asia-Pacific countries such as Japan, India, Singapore, South Korea, Taiwan, and Thailand. Other oil exports were split between Western Europe (112,000 bbl/d) and to the United States (123,000 bbl/d). Kuwait's single export blend ("Kuwait Export") has a specific gravity of 31.4^{o}API (a typical medium Mideast crude), and is considered sour with 2.52 percent sulfur content. Around 90 percent of Kuwaiti crude oil is sold on term contracts, with the price of Kuwaiti crude oil tied to Saudi Arabian Medium (for western customers) and a monthly average of Dubai and Oman crudes (for Asian buyers). In June 2006, Kuwait also announced plans to increase crude sales to India by more than 10 percent. Kuwait provided about $4.5 billion worth of crude oil and oil products to India in 2005.

Kuwait has completed major renovations of Mina al-Ahmadi, the country's main port for the export of crude oil, which was virtually destroyed during the Gulf War. Kuwait also is planning a $900 million expansion at the port in order to add storage capacity and increase export capacity in conjunction with plans for expanded oil production in coming years. Besides Mina al-Ahmadi, Kuwait has operational oil export terminals at Mina Abdullah, Shuaiba and at Mina Saud. A new terminal is planned for Bubiyan Island, which will handle increased production from northern and western Kuwait under Project Kuwait.

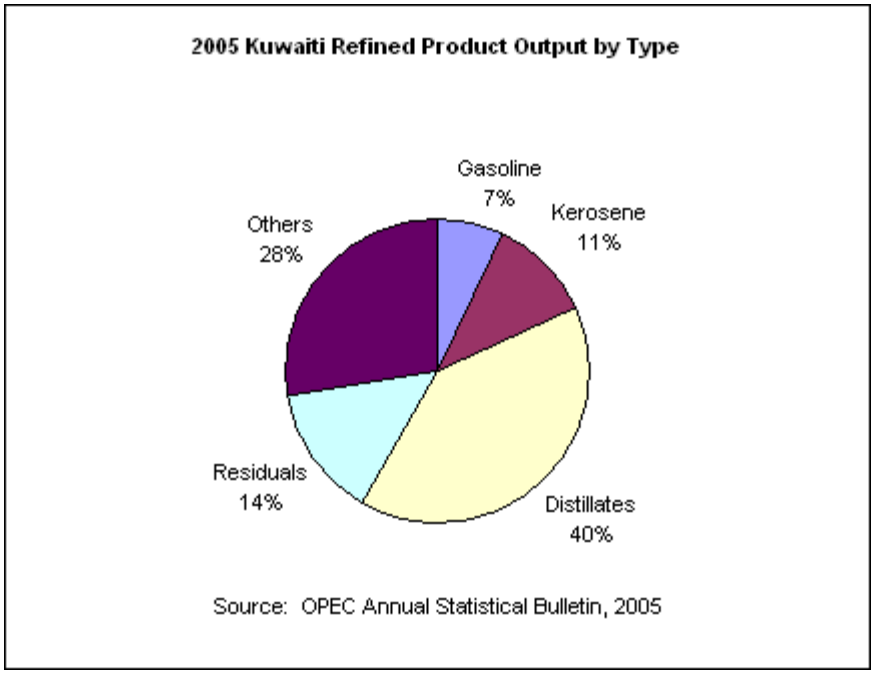
Neutral Zone

The Neutral Zone (or "Divided Zone") encompasses a 6,200 square-mile area partitioned equally between Kuwait and Saudi Arabia under a 1992 agreement. The Neutral Zone contains an estimated 5 billion barrels of oil and 1 trillion cubic feet (Tcf) of natural gas. Oil production in the Neutral Zone, which currently is running around 600,000 bbl/d (around half offshore and half onshore), is divided equally between Saudi Arabia and Kuwait. Major Neutral Zone onshore fields include Humma, South Fawaris, South Umm Gudair, and Wafra. Offshore fields include Hout and Khafji, which produce 33^{o} API and 28^{o} API gravity oils, respectively.

Refining/Shipping

At present, Kuwait's three domestic refineries have a combined capacity of roughly 936,000 bbl/d.

The country's largest refinery is Mina al-Ahmadi, with capacity of 466,000 bbl/d. Other large refineries include Mina Abdullah (270,500 bbl/d) and al-Shuaiba-1 (200,000 bbl/d). In 2005, some 614,000 bbl/d of refined product, roughly 65 percent of Kuwait's total production, were exported, mostly to Asia-Pacific countries (440,500 bbl/d) and Western Europe (119,900 bbl/d). High demand over the last two years has kept Kuwait's refining sector running at close to full capacity.



Kuwait reportedly is planning to spend over $8 billion through 2010 on upgrading its refining sector. One purpose of this upgrading would be to increase capacity to produce ultra-low-sulphur transportation fuels. Another would be to process an increasingly heavy and sour crude oil production slate as new oilfield developments come online. A contract for an upgrade to the Mina al-Ahmadi refinery was signed with Hyundai in May 2005, which will allow it to reconfigure lower-sulfur diesel and gasoline, and reduce the proportion of fuel oil in its product mix. The upgrade project is expected to be completed in 2007 at a cost of $400 million.

Kuwait also is considering construction of a new refinery at Al-Zour, with possible capacity of 615,000 bbl/d (and at a cost of $6 billion), which would begin operation around 2010. It would replace the Shuaiba refinery, which is the country's oldest and least technologically advanced. U.S.-based Fluor-Daniel was awarded a contract for the initial design and engineering work in November 2004, and bids for the construction contract are due by the end of October 2006. According to KPC officials, Kuwait will be able to export up to 74,000 bbl/d of low-sulfur fuel oil (LSFO) when refinery comes online.

Foreign Upstream Operations

Kuwait holds equity interests in oil production in 14 countries through the Kuwait Foreign Petroleum Exploration Company (KUFPEC), established in 1981. KUFPEC is active in Australia, Indonesia, and Tunisia, among others. Most of the interests are either small fields or minority stakes, though, and prior to recent oil price increases, KUFPEC's revenues have traditionally been under $200 million a year, making it a relatively minor part of Kuwait's state oil establishment. But, net profit rose to $136 million in the first half of 2006, up 16 percent from the same period in 2005. According to KUFPEC's website, the company is aiming to increase its production capacity to 100,000 bbl/d oil equivalent by 2010, up from around 35,000 bbl/d oil equivalent currently.

Foreign Downstream Operations

Kuwait Petroleum International (KPI) manages KPC's refining and marketing operations. KPI also owns refineries in Rotterdam and Italy, enabling it to supply a large share of its European retail outlets directly. KPC owns service stations in Belgium, Spain, Sweden, Luxembourg Thailand and Italy, with a refining joint venture with AGIP at Milazzo, Italy. Today, KPI markets approximately 300,000 bbl/d in Western Europe and Thailand through 5,000 retail stations.

With the growth of downstream markets in Asia, Kuwait has been keenly interested in acquiring downstream assets in large emerging markets such as China and India. To this end, KPC has entered into preliminary strategic alliances with both Shell and BP during 2005, which it hopes will help it secure a foothold in these high-growth markets. In July 2006, after months of deliberation, China signaled it will choose Nansha as the site for an integrated refining and petrochemical complex proposed by KPC in Guangdong province, according to *International Oil Daily*. China's large state refining firm Sinopec will likely be KPC's partner. KPC subsidiary KPI wants to build a refinery based on Kuwaiti crude supply, with a capacity of 200,000-400,000 barrels per day, with integratedpetrochemicals facilities. KPC would like to secure approvals for its refinery by the end of 2006, allowing start-up in 2010. KPC is expected to secure investment for the project from BP and Royal Dutch Shell and chemical firm Dow, who is already a strategic partner with KPC affiliate Petrochemical Industries Co. (PIC) in a petrochemical venture in Kuwait**.** BP and Shell have signed cooperation agreements with KPI and KPC, respectively.

In June 2006, Pakistan and Kuwait agreed to expand and strengthen the existing cooperation between the two countries in the oil and gas sector. Pakistan welcomed Kuwaiti investment for setting up a $1.2 billion 100,000 bbl/d oil refinery at Port Qasim and Kuwaiti participation in the privatization of state owned oil & gas units.

Petrochemicals

Kuwaiti officials have expressed interest in accelerating development of the country's relatively small petrochemical sector. This would accomplish several goals: boosting the value of Kuwait's crude oil reserves; helping to protect Kuwait's revenues during periods of low crude prices; and boosting Kuwaiti revenues while adhering to OPEC crude oil quota limitations. Historically, Kuwait's Petrochemical Industries Company (KPIC) has mainly manufactured low-value products such as urea, ammonia, and fertilizer for export. PIC is now beginning to move upmarket to production of higher-value products.

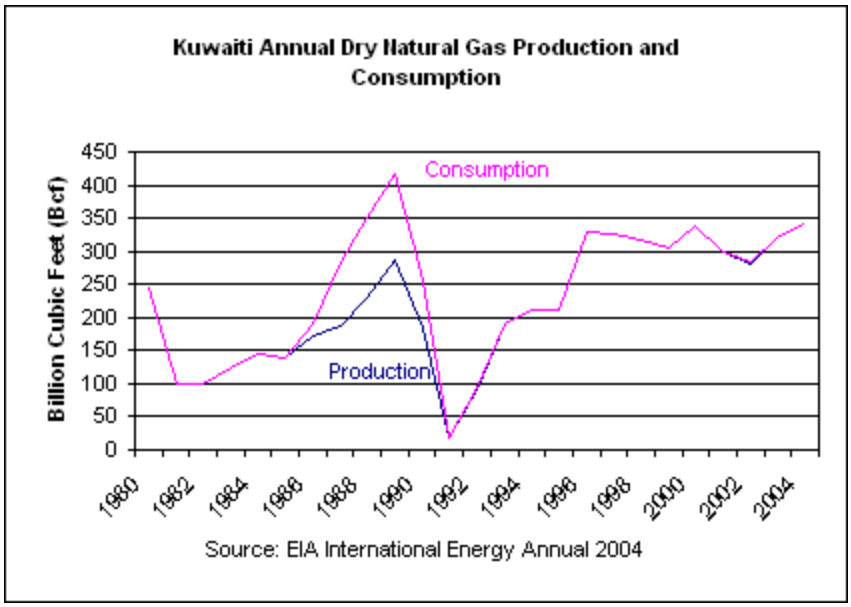
The Equate joint venture, involving PIC and Union Carbide (part of Dow Chemical), is the country's largest petrochemical project. The $2 billion industrial complex at Shuaiba, which came online in 1997, includes a 650,000 metric-ton-per-year ethylene cracker, two polyethylene units with a capacity of 450,000 metric tons per year (t/y), and a 350,000-t/y ethylene glycol plant, all of which are currently operating. The complex primarily serves the Asian and European markets. PIC and Union Carbide each have a 45 percent share in the project, with the remainder owned by Boubyan Petrochemical Company.

In April 2001, KPIC approved a $1.5 billion plan to construct "Equate II," which would produce olefin (ethylene, polyethylene, ethylene glycol). In May 2003, PIC and Dow Chemical announced that Equate II would be built at Shuaiba and integrated fully with Equate I when it comes online in 2007. Equate II is to have ethylene capacity of 850,000 t/y, ethylene glycol/ethyleneoxide capacity of 600,000 t/y, and polyethylene capacity of 450,000 t/y.

Natural Gas

Kuwait holds a modest amount of natural gas reserves but hopes to significantly increase its use of domestic and imported natural gas in electricity generation and other sectors to free up additional oil for export.

Kuwait produces a relatively modest volume of dry natural gas (around 343 billion cubic feet -- Bcf -- in 2004), the vast majority of which is "associated gas" (i.e., found and produced in conjunction with oil). Kuwait's total gas production in 2004 was 396 Tcf. Despite reserves of only 55.5 trillion cubic feet (Tcf), Kuwait hopes to significantly increase its use of natural gas in electricity generation, water desalination, and petrochemicals to free up as much as 100,000 bbl/d of oil for export. Kuwait also hopes to reduce flaring of associated gas by tying together gathering centers.



Aside from imports, Kuwait hopes to increase its domestic natural gas production, both through reduced flaring of associated gas and through new drilling. Exploratory drilling is currently being undertaken at the Raudhatain oilfield, reaching geological formations much deeper than the oil deposits, which are believed to be rich in natural gas. In 2006, a 35-Tcf non-associated find was discovered in northern Kuwait at the free natural gas fields in Sabriya and Umm Niqa areas. It is Kuwait's first natural gas find that was not part of an oil field. Initial studies proved that 60 to 70 percent of the discovered volume can be utilized. According to KOC, the early stages of the actual gas production would start at the end of 2007 after completing the needed surface installations.

Negotiations are continuing between Kuwait and Iran on the issue of the disputed Dorra offshore natural gas field. The Dorra field has been claimed by Saudi Arabia, Kuwait, and Iran, and may contain up to 11 trillion cubic feet (Tcf) of recoverable natural gas reserves. In July 2000, Saudi Arabia and Kuwait agreed on an equal sharing of the natural gas resources between the two countries. In 2000, Iran began drilling Dorra unilaterally, but stopped after protests from Kuwait and Saudi Arabia. In 2006, Kuwait launched a seismic tender for the Durra field. It aims to produce roughly 22.2 Bcf/d from the field by 2009.

In April 2006, Australia's WorleyParsons was awarded the $222 million engineering, procurement and construction management (EPCM) contract covering the Mina al-Ahmadi - Subiya natural gas-oil pipeline project. The project includes a 20-inch-diameter, 106-mile-long pipeline to supply natural gas and fuel for the proposed Subiya power station, north of Kuwait City. The Subiya feedstock scheme is the first local oil and natural gas project to be awarded on an EPCM basis as KOC adopted the new approach to speed up project completion.

Natural Gas Imports

In July 2000, Kuwait and Qatar signed a memorandum of understanding (MOU) for possible import of Qatari gas from the offshore North Field -- the largest non-associated natural gas field in the world -- into Kuwait. In February 2003, memoranda of understanding were signed for a $2 billion pipeline project from Qatar's port of Ras Laffan to Al-Zour South in southern Kuwait. Qatar Petroleum and ExxonMobil (operator of Qatar's North Field) also have signed an agreement on supplying the natural gas. Saudi Arabia has expressed opposition to the pipeline, which is to pass through Saudi territorial waters, and has not granted approval.

Besides Qatar, Kuwait is also looking at importing natural gas from Iran, most likely from its huge South Pars gas field. Iran and Kuwait signed a preliminary memorandum of understanding for natural gas sales in March 2005. The gas is to be used for power generation and water desalination. In any event, a natural gas deal with Iran is being held up by the need to resolve maritime border issues in the region, specifically on the Dorra offshore natural gas field (see below).

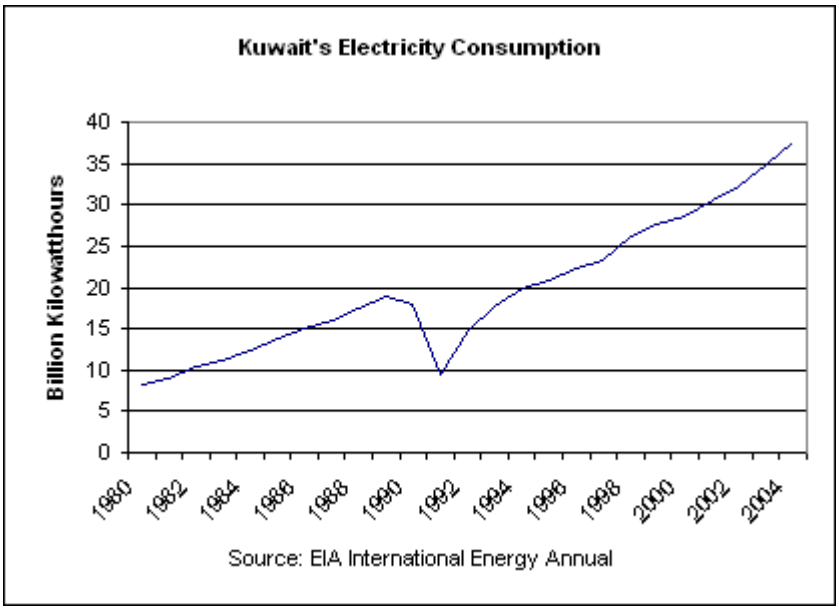
Prior to the 1990/1991 Gulf War, Kuwait received significant volumes of natural gas from Iraq.

The gas came from Iraq's southern Rumaila field through a 40-inch, 100-mile, 300 Mmcf/d pipeline to Kuwait's central manifold at Ahmadi. The natural gas was used in Kuwaiti electric power stations and liquefied petroleum gas (LPG) plants. Currently, Kuwait and Iraq are making plans to restart the pipeline. A memorandum of understanding between the two governments was concluded in December 2004. The first phase of the project is modest, involving only 35 million cubic feet per day (Mmcf/d), which would be transported through the existing pipeline. The second phase would involve an $800 million investment in refurbishment of the pipeline and associated pumping stations, which would allow the volume to increase to 200 Mmcf/d. For the time being, though, the security situation in Iraq has prevented even the first phase of the plan from being implemented. It remains unclear whether Kuwaiti gas demand could support both Iranian, Qatari, and Iraqi export projects simultaneously.

Electricity

All of Kuwait's electrical generation capacity is thermal and it is among the world leaders in per capita consumption.

Kuwait has five power stations (Doha East, Doha West, al-Subiya, Shuaiba South, and al-Zour South) and a total electrical generation capacity of about 9.4 gigawatts (GW). Due to heavy use of air conditioning, reliance on desalination for water, and highly subsidized electricity prices, Kuwait's per capita electricity consumption is amongst the highest in the world, at roughly 14,000 kilowatt hours. Overall, Kuwaiti power demand has been growing rapidly in recent years, and is expected to continue increasing at 7-9 percent a year in coming years, necessitating construction of new generating capacity. According to government estimates, roughly $3.6 billion in further investment is needed to increase generating capacity by 3,000 megawatts (MW) by 2010. Kuwait currently uses roughly 100,000 bbl/d of fuel oil for power generation but hopes to promote greater use of natural gas.



In March 2005, Siemens completed construction of the Al-Zour South power plant, which has a total generating capacity of 1,000 MW. Bids have been solicited for the 2,500-MW Al-Zour North power project, which involves five 500-MW steam turbine generating units and 75 million gallons-per-day of desalination capacity, with seven firms prequalified. The tender for construction of the plant is ongoing in 2006, with the first generating unit expected to be commissioned in 2008 and reaching full capacity by the end of 2009. The next project planned following Al-Zour North is Al-Zour South II, which will also involve 1,000 MW of generating capacity.

Currently, Kuwaitis pay among the lowest prices for power in the world, and the government has urged them to use power more judiciously to reduce waste. Meanwhile, Kuwait continues to expand its national power grid, and has accepted a proposal to link up with the grids of other Gulf Cooperation Council (GCC) countries. This grid linkup will provide each GCC country with additional spare capacity to handle peak demand periods and the ability to sell off spare capacity as available. Kuwait also has discussed broader linkages and cooperation with other Arab countries and its non-Arab neighbor, Iran. In the summer of 2006, Kuwait suffered from widespread electricity and water shortages. In response, the energy minister suspended five senior officials from their posts in September 2006 and ordered an inquiry be conducted.

Profile

Country Overview

Chief of State	Amir Sabah al-Ahmad al-Jabir al-Sabah (since 29 January 2006)
Head of Government	Prime Minister NASIR al-Muhammad al-Ahmad al-Sabah (since 7 February 2006)
Location	Middle East, bordering the Persian Gulf, between Iraq and Saudi Arabia
Independence	19 June 1961 (from UK)
Population (2005E)	2,335,648 note: includes 1,291,354 non-nationals

Economic Overview

Minister of Finance	Badr Mishari al-Humaydi
Currency/Exchange Rate (October 3, 2006)	1 Kuwaiti Dinar (KWD) = 3.44009 US Dollar
Inflation Rate (2005E)	4.1%
Gross Domestic Product (2005E)	$52.7 billion
Real GDP Growth Rate (2005E)	4.8%
Unemployment Rate (2004E)	2.2%
External Debt (2005E)	$16.2 billion
Exports (2005E)	$44.43 billion
Exports - Commodities	oil and refined products, fertilizers
Exports - Partners (2004E)	Japan 22.6%, US 13.4%, South Korea 13.4%, Singapore 12.4%, Taiwan 8.4%, Netherlands 4.1%
Imports (2005E)	$12.23 billion
Imports - Commodities	food, construction materials, vehicles and parts, clothing
Imports - Partners (2004E)	US 13.1%, Germany 12.7%, Japan 8.2%, China 5.9%, Italy 5.4%, UK 5.4%, Saudi Arabia 4.7%, France 4.6%
Current Account Balance (2005E)	$26.92 billion

Energy Overview

Minister of Energy and Oil	Ali al-Jarrah al-Sabah
Proven Oil Reserves (January 1, 2006E)	101.5 billion barrels
Oil Production (2006E)	2,682.6 thousand barrels per day, of which 95% was crude oil.
Oil Consumption (2005E)	405 thousand barrels per day
Crude Oil Distillation Capacity (2006E)	936 thousand barrels per day
Proven Natural Gas Reserves (January 1, 2006E)	56 trillion cubic feet
Natural Gas Production (2004E)	.396 trillion cubic feet
Natural Gas Consumption (2004E)	.342 trillion cubic feet
Recoverable Coal Reserves (2003E)	None
Coal Production (2004E)	None
Coal Consumption (2004E)	None

Electricity Installed Capacity (2004E)	9.4 gigawatts
Electricity Production (2004E)	40.4 billion kilowatt hours
Electricity Consumption (2004E)	37.5 billion kilowatt hours
Total Energy Consumption (2004E)	1.1 quadrillion Btus*, of which Oil (66%), Natural Gas (34%), Coal (0%), Nuclear (0%), Hydroelectricity (0%), Other Renewables (0%)
Total Per Capita Energy Consumption (2003E)	372.3 million Btus
Energy Intensity (2004E)	38,202.7 Btu per $2000-PPP**

Environmental Overview

Energy-Related Carbon Dioxide Emissions (2003E)	58.4 million metric tons, of which Oil (70%), Natural Gas (27%), Coal (0%)
Per-Capita, Energy-Related Carbon Dioxide Emissions (2003E)	23.2 metric tons
Carbon Dioxide Intensity (2004E)	2.5 Metric tons per thousand $2000-PPP**
Environmental Issues	limited natural fresh water resources; some of world's largest and most sophisticated desalination facilities provide much of the water; air and water pollution; desertification
Major Environmental Agreements	party to: Biodiversity, Climate Change, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Ozone Layer Protection signed, but not ratified: Marine Dumping

Oil and Gas Industry

Organization	The Supreme Petroleum Council governs the nationalized oil industry, which is run by Kuwait Petroleum Corporation (KPC). KPC subsidiaries include: Kuwait Oil Company (KOC) - exploration and production of oil and gas; Kuwait National Petroleum Company (KNPC) - refining and shipping; Kuwait Petroleum International (KPI) - refining and product marketing; Petrochemical Industries Company (PIC) - production and marketing of chemical products; Kuwait Foreign Petroleum Exploration Company (KUFPEC) - foreign exploration; and Kuwait Oil Tanker Corporation (KOTC) - tanker operations.
Major Oil Terminals	Mina Al-Ahmadi, Mina Abdullah, Shuaiba, Mina Saud
Foreign Company Involvement	BP, Chevron, Total, ExxonMobil, Shell, Arabian Oil Company, Parsons Corp., Fluor Corp.
Major Oil Fields (reserves, billion barrels)	Greater Burgan -- Burgan, Magwa, and Ahmadi (55); Raudhatain (5.1); Sabriya (4.3); Minagish (3.3); Abdali; Rugei; Bahra; Neutral Zone: Al-Hout and Khafji (6.3); Wafra (2); South Fawaris; Umm Gudair
Major Pipelines (capacity, Mmcf/d)	Raudhatain-Ahmadi; Minagish-Ahmadi; Umm Gudair-Shuaiba; Wafra-Mina Abdullah; Burgan-Ahmadi
Major Refineries (capacity, bbl/d)	Mina Al-Ahmadi (442,700 bbl/d), Mina Abdullah (256,500), Shuaiba (190,000)

* 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 OECD estimates based on purchasing power parity (PPP) exchange rates.

Links

EIA Links

EIA - Country Information on Kuwait

U.S. Government

CIA World Factbook - Kuwait

General Information
Information on Kuwait from ArabNet

Associations and Institutions
The Center for Middle Eastern Studies - Kuwait
Kuwait Law (Ali and Partners)

Foreign Government Agencies
Kuwait's Mission to the United Nations

Oil and Natural Gas
Kuwait Oil Company
KUFPEC
Oil Magazine

Electricity
IAEA
Energy Industry Today: Kuwait Energy News

Sources

Agence France Presse
APS Review Downstream Trends
Asian Wall Street Journal
Chemical Week
CIA World Factbook
Dow Jones News Wire service
Deutsche Presse-Agentur
Economist Intelligence Unit ViewsWire
FACTS, Inc
Financial Times
Global Insight
International Oil Daily
Lloyd's List
Middle East Economic Digest
Middle East Economic Survey
Oil and Gas Journal
Petroleum Economist
Petroleum Intelligence Weekly
Platts Oilgram News
Saudi Gazette
Stratfor.com
U.S. Energy Information Administration
World Markets Online
World Oil

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