

COUNTRY ANALYSIS BRIEFS

Pakistan

Last Updated: December 2006

Background

Pakistan has seen minimal growth in its energy sector, but the country's economy has experienced vital growth, in spite of the earthquake in 2005.

Pakistan's economy has recovered from years of sluggishness, caused primarily to droughts, with growth experienced in the agriculture, industry and service sectors. In fiscal year (FY) 2004/2005 (ending in June), Pakistan achieved gross domestic product (GDP) growth of 8.4 percent and in 2005/2006 the country had GDP growth of 6.6 percent. High inflation (9.1 percent) in 2004/2005 was attributed to escalating oil prices, higher housing rents and food item shortages. In an effort to decrease inflation, the central bank of Pakistan announced that it would raise interest rates. The strategy worked, with inflation decreasing to 7.6 percent by the end of FY 2005/2006. The International Monetary Fund (IMF), and the World Bank, both major donor organizations to Pakistan, have acknowledged the favorable performance and progress in Pakistan's structural reforms, but have stressed even greater reform in the public institutions and the public energy sector where progress has been slow. In 2004, the IMF approved a fresh loan of nearly \$250 million as part of its overall \$1.5 billion aid package to Pakistan. In 2005, the United States began the first installments of a \$3 billion aid package, which will continue through 2010. In 2006, the World Bank approved loans of \$185 million for various reform and infrastructure projects, in addition to the nearly \$850 million loaned to the country in 2005.



The devastating earthquake that struck Pakistan in October 2005 destroyed lives and caused considerable damage to the country's infrastructure. However, the majority of the damage occurred in rural areas of the country and had minimal impact on the economy. Furthermore, international aid inflows in the aftermath of the earthquake have served to bolster Pakistan's economy. The United States pledged \$510 million for rebuilding Pakistani infrastructure, but relief coordinators estimate that Pakistan will need billions of dollars and up to ten years to fully rebuild. Pakistan and India decided to extend aid to one another after the earthquake. They also agreed to continue confidence building measures, which include the notification of missile testing, creating new bank branches and increasing the number of airline destinations in both countries.

Energy Overview

In recent years, the combination of rising oil consumption and flat oil production in Pakistan has

led to rising oil imports from Middle East exporters. In addition, the lack of refining capacity leaves Pakistan heavily dependent on petroleum product imports. Natural gas accounts for the largest share of Pakistan's energy use, amounting to about 50 percent of total energy consumption. Pakistan currently consumes all of its domestic natural gas production, but without higher production Pakistan will need to become a natural gas importer. As a result, Pakistan is exploring several pipeline and LNG import options to meet the expected growth in natural gas demand. Pakistan's electricity demand is rising rapidly. According to Pakistani government estimates, generating capacity needs to grow by 50 percent by 2010 in order to meet expected demand.

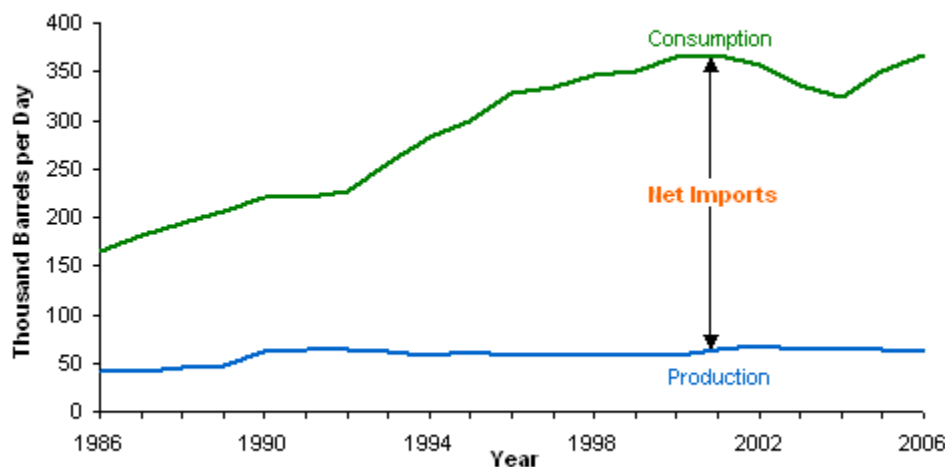
Oil

Pakistan produces some oil, but imports the majority of oil consumed in the country.

Overview

According to *Oil and Gas Journal (OGJ)*, Pakistan had proven oil reserves of 300 million barrels as of January 2006. The majority of produced oil comes from proven reserves located in the southern half of the country, with the three largest oil-producing fields located in the Southern Indus Basin. Additional producing fields are located in the Middle and Upper Indus Basins. Since the late 1980s, Pakistan has not experienced many new oil fields coming online. As a result, oil production has remained fairly flat, at around 60,000 barrels per day (bbl/d). During the first eleven months of 2006, Pakistan produced an average of 58,000 bbl/d of crude oil. However, Pakistan has ambitious plans to increase its current output to 100,000 bbl/d by 2010. Due to Pakistan's modest oil production, the country is dependent on oil imports to satisfy domestic oil demand. As of November 2006, Pakistan had consumed approximately 350 thousand barrels of oil and various petroleum products, of which, more than 80 percent was imported. The majority of oil imports come from the Middle East, with Saudi Arabia as the lead importer.

Pakistan's Oil Production and Consumption, 1986-2006*



Source: EIA, *International Energy Annual 2004*;
Short Term Energy Outlook November 2006

*2006 is forecast

Sector Organization

Pakistan's Ministry of Petroleum and Natural Resources regulates the country's oil sector. The Ministry grants oil concessions by open tender and by private negotiation. To encourage oil sector investment, the Ministry has offered various tax and royalty payment incentives to oil companies. Pakistan's three largest national oil companies (NOCs), include the Oil and Gas Development Corporation Limited (OGDCL), Pakistan Petroleum Limited (PPL) and Pakistan State Oil (PSO). All three operate under joint ventures and partnerships with various international oil companies (IOCs) and other domestic firms. Major IOCs operating in Pakistan include BP (UK), Eni (Italy), OMV (Austria), Orient Petroleum Inc. (OPI, Canada), Petronas (Malaysia) and Tullow (Ireland).

Privatization

In response to conditions laid down by lenders, such as the IMF and the World Bank, Pakistan continues to strive for privatization of its state-owned companies. For instance, the government has on offer a 51 percent stake in PPL, as well as a 54 percent stake in PSO. PPL owns the Sui fields in Balochistan, as well as exploration interests in 22 blocks, while PSO holds a majority share in the domestic diesel fuel market with more than 3,800 retail outlets. In November 2006,

Pakistan plans to have a share issue from OGDCL for the equivalent of 15 percent of the NOCs capitalization. Five percent of the company was previously divested in November 2003 in an initial public offering (IPO). Pakistan hopes to reap significant revenues from these privatizations over the next several years.

Exploration and Production

BP is the largest oil producer in Pakistan, with production averaging approximately 30,000 bbl/d. The oil major operates 43 fields and more than 100 wells throughout the country. OGDCL is Pakistan's second-largest oil producer, with average production at 25,000 bbl/d. While there is no prospect for Pakistan to reach self-sufficiency in oil, the government has encouraged private (including foreign) firms to develop domestic production capacity. In 2005, NOCs and IOCs drilled a total of 29 onshore development wells in Pakistan. BP led the development by drilling ten wells in its Lower Indus Basin acreage, while ODCGL drilled nine wells, with the majority being on its acreage in the Middle Indus Basin. PPL expanded its interests in 2005, by drilling offshore at the Pasni X2 shallow water field. It was the first time a Pakistani oil company had explored offshore.

Licensing Rounds

Historically, Pakistan has held few large licensing rounds, and instead, has conducted private negotiations for acreage between individual companies and the Ministry of Petroleum and Natural Resources. In February 2006, Pakistan opened a rare licensing round offering nine onshore and offshore blocks. From the blocks offered, the Pakistani government awarded OGDCL three exploration licenses in the southern Sindh and Balochistan provinces. The licenses cover the Tegani, Thal and Than Beg Blocks and OGDCL has committed to conducting geological surveys and to drilling four exploration wells on the blocks. In June 2006, the government awarded POL an exploration license for the Kirthar Block in southern Pakistan. In July 2006, Pakistan awarded BP three blocks (U, V, and W) in the offshore Indus Delta region.

Downstream

Pakistan's net oil imports are projected to rise substantially in coming years as demand growth outpaces increases in production. Demand for refined petroleum products also exceeds domestic oil refining capacity, so nearly half of Pakistani oil imports are refined products. Pakistan's largest port is located at Karachi, which serves as the principle point of entry for oil imports. PSO leads Pakistan's fuel distribution market, with its main storage facilities located at Port Mohammed Bin Qasim.

Refining

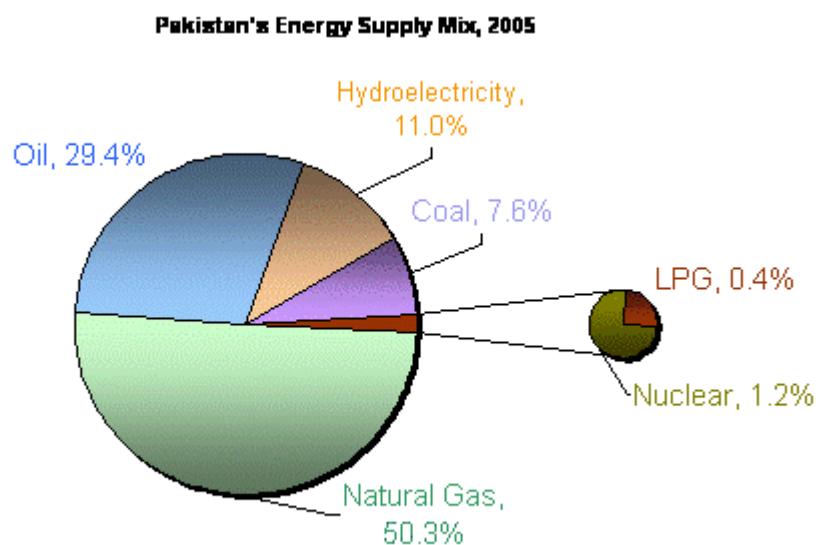
Pakistan has five refineries, with total refining capacity of just under 270,000 bbl/d. The largest of the refineries is the Pak-Arab Refinery Complex (PARCO), which became operational in late 2000, with 95,000 bbl/d of refining capacity. In July 2004, Bosicor Pakistan Limited (BPL) began commercial operations at its Mouza Kund plant, near Karachi. The 30,000-bbl/d refinery is supplied with shipments of crude oil from Qatar. The plant allowed Pakistan to become a supplier of naphtha, which constitutes 20 percent of the output. The plant produces about 10,000 bbl/d of fuel oil, 6,000 bbl/d of diesel, and 5,500 bbl/d of naphtha, among other products. PSO has a supply contract to purchase the entire output of BPL's products for the next 10 years. In June 2006, Kuwait agreed to fund a \$1.2 billion oil refinery, which would have a planned capacity of 100,000 bbl/d. The refinery would be located at Port Qasim in Karachi.

Natural Gas

Overview

According to OGJ, Pakistan had 28 trillion cubic feet (Tcf) of proven natural gas reserves in 2006. The bulk of these reserves are located in the southern half of Pakistan. In 2004, Pakistan produced and consumed 968 billion cubic feet (Bcf). In light of the current onshore exploration activities and resource outlook, the Pakistani government expects minor increases in natural gas production in the short-term. However, natural gas production is expected to decline over the next 15-25 year period, while natural gas demand is expected to increase. The Pakistani government is currently developing plans to import additional natural gas (see Proposed Pipelines below) in order to satisfy increasing demand. According to the Pakistan Energy Yearbook, natural gas is currently the country's largest energy source, making up 50 percent of Pakistan's energy mix in FY 2004/2005.

Pakistan's largest energy source is natural gas. Currently, Pakistan is looking at import options to increase natural supply in the country.



Source: Pakistan Energy Yearbook, 2005

Sector Organization

Pakistan's state-owned PPL and OGDCL produce around 30 percent and 25 percent, respectively, of the country's natural gas. The two companies are the country's largest natural gas producers. OMV is the largest foreign natural gas producer (17 percent of total country's production) in Pakistan. Additional foreign operators include BP, Eni, and BHP Billiton. The Pakistani government has enacted numerous policies to encourage private sector leadership of natural gas development, including privatization of state-run businesses, regulation that encourages competition and tax incentives geared towards increasing exploration and production.

Exploration and Production

Pakistan's largest natural gas production occurs at the Sui field, which is located in the Southern Indus Basin. PPL operates Sui field, with production averaging 655 Mmcf/d. Additional producing fields include Mari (446 Mmcf/d), Sawan (366 Mmcf/d), and Bhit (316 Mmcf/d). In 2005, BHP Billiton signed a Gas Sales and Purchase Agreement (GSPA), in which the company will supply an additional 150 million cubic feet per day (Mmcf/d) of natural gas from its Zamzama field. BHP Billiton will complete phase II development of Zamzama in the third quarter of 2007. Petronas brought its Rehmat field online in March 2005. The field produces an estimated 30 Mmcf/d, which is sold to consumers in Pakistan's southern Sindh province. In the past few years, the country discovered seven new natural gas fields. The Pakistani government expects the development of these new fields to add an additional 1 Bcf/d to Pakistan's natural gas production.

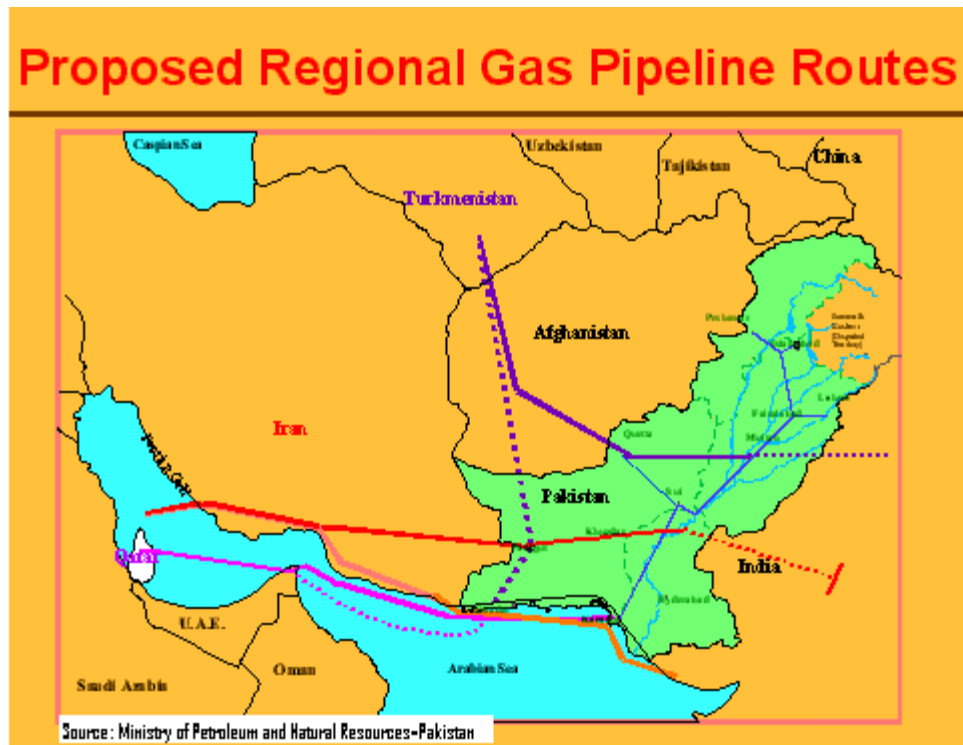
Proposed Pipelines

Pakistan's government is working on plans to build a pipeline that spans from Iran's massive natural gas reserves to Indian markets across Pakistani territory. In August 2006, Iran and Pakistan extended a previously signed (April 2005) memorandum of understanding (MoU) until 2007. One of the main concerns for both Pakistan and India is how much Iran will charge for the natural gas. To help mediate the pricing issue, the three countries appointed an international consultant this past summer. Iran has offered to cover 60 percent of the construction costs of the pipeline and Pakistani officials have stressed their ability to safeguard the pipeline. Pakistan could earn about \$70 million annually in transit fees from the pipeline. If India decides to forego its part in the pipeline project, Pakistan and Iran have agreed to work on a bilateral Iran-Pakistan pipeline project.

A second natural gas import possibility that has been considered is an eventual link to the Dolphin Project in Qatar. This plan would supply natural gas from Qatar's North Dome field to Pakistan via a sub sea pipeline from Oman. Even though Pakistan has signed a preliminary agreement to eventually purchase natural gas from Qatar, it remains to be seen if further action on the project will be taken.

A third natural gas pipeline option that has been discussed is a line from Turkmenistan to

Pakistan via Afghanistan. Pakistan faces various hurdles with this option, which include the security situation in Afghanistan and the price Turkmenistan would charge for the natural gas. In addition, completed feasibility studies on the project, funded by the Asian Development Bank (ADB), indicate that the Turkmenistan field of Daulatabad will only be able to supply a portion of the natural gas needed by Pakistan.



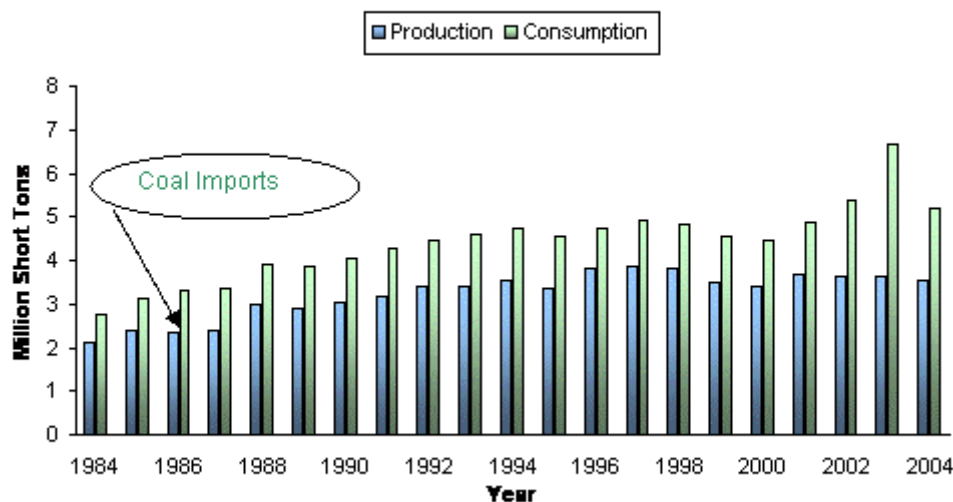
Liquefied Natural Gas (LNG)

In addition to natural gas import pipelines, Pakistan is pursuing LNG import options to meet energy needs. In October 2006, UAE-based Dana Gas and its partners, Single Buoy Moorings and the Granada Group signed a MoU to build an LNG import facility, with 3.5 million tons per year capacity. The facility would be completed in 2010 and would be located at Port Qasim, near Karachi.

Coal

Coal currently plays a minor role in Pakistan's energy mix.

Coal currently plays a minor role in Pakistan's energy mix, although the country contains an estimated 3,362 million short tons (Mmst) of proven recoverable reserves. Pakistan produces small amounts of coal, 3.5 Mmst in 2004, and imports additional coal, 1.7 Mmst in 2004, to satisfy demand. Recently, the discovery of low-ash, low-sulfur lignite coal reserves in the Tharparkar (Thar) Desert in Sindh province, estimated at 1,929 Mmst, has increased both domestic and foreign development interest. China, which began developing various electric power plants in tandem with the coal mines in 1994 in Pakistan, has shown the most interest in the Thar region. However, several factors have hindered development of the Thar coal reserves, including the depth and moisture level of the lignite reserves, a scarcity of fresh water, and lack of road and power infrastructure.

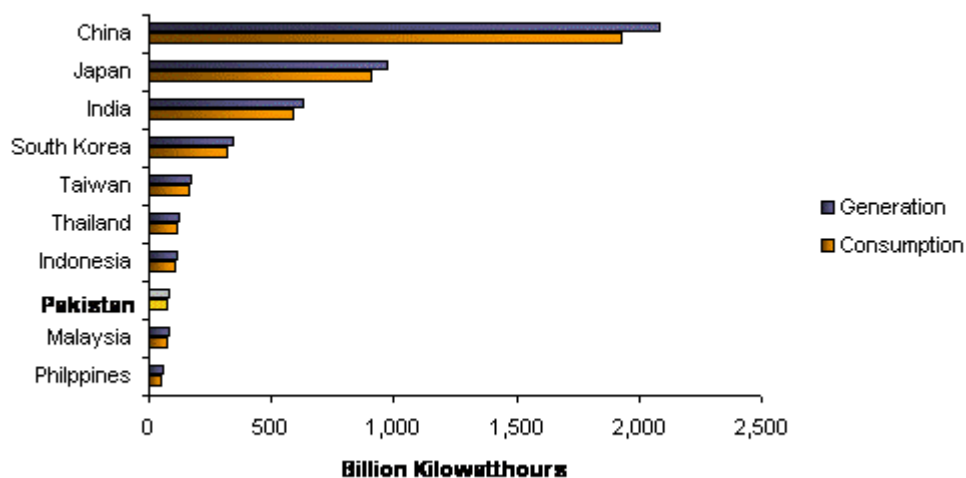
Pakistan's Coal Production and Consumption, 1984-2004

Source: EIA *International Energy Annual 2004*

Electricity

Pakistan could see increased power shortages by 2010 unless actions are taken to increase electricity generation and reduce transmission losses.

Pakistan had 20.4 gigawatts (GW) of installed electric generating capacity in 2004. Conventional thermal plants using oil, natural gas, and coal account for about 66 percent of Pakistan's capacity, with hydroelectricity making up 32 percent and nuclear 2 percent. The Pakistani government estimates that by 2010, Pakistan will have to increase its generating capacity by more than 50 percent to meet increasing demand. In 2004, Pakistan generated 80.2 billion kilowatt-hours (Bkwh) of electricity while consuming 74.6 Bkwh. Pakistan's total power generating capacity has increased rapidly in recent years, due largely to foreign investment, leading to a partial alleviation of the power shortages Pakistan often faces in peak seasons. However, much of Pakistan's rural areas do not have access to electric power and about half the population is not connected to the national grid. Rotating blackouts ("load shedding") are also necessary in some areas. In addition, transmission losses are about 30 percent, due to poor quality infrastructure and a significant amount of power theft.

Top Asian Electricity Generation and Consumption, 2004

Source: EIA *International Energy Annual 2004*

Sector Organization

The electric power sector in Pakistan is operated by the Water and Power Development Authority

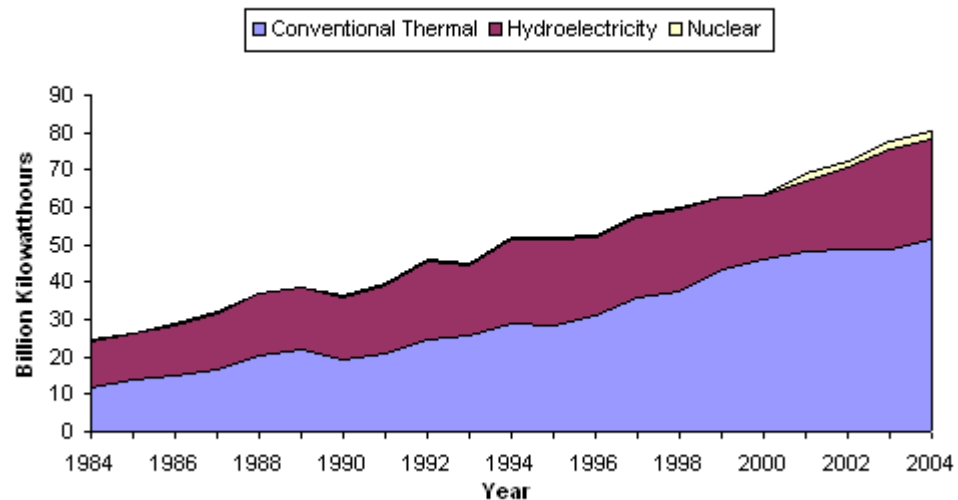
(WAPDA), and the Karachi Electricity Supply Corporation (KESC), with additional generation contribution from Independent (private) Power Producers (IPPs). WAPDA is responsible for supplying power to all of Pakistan, with the exception of Karachi, which is supplied by KESC. Currently, 15 IPPs operate in Pakistan under a Build-Own-Operate (BOO) basis. The National Electric Power Regulatory Authority (NEPRA) regulates the power sector in Pakistan, which includes power generation, transmission and distribution. NEPRA is also responsible for determining electricity rates in Pakistan.

Disputes over rate adjustments are common within the industry. For example, in July 2004, NEPRA announced that electricity rates would be lowered for domestic, industrial and agricultural customers in the three distribution areas of Hyderabad, Peshawar, and Quetta. The affected distribution companies complained that, due to lower rates, they would be unable to cover their operating costs. NEPRA advised the federal government to subsidize the providers at a cost of around \$24 million. WAPDA is at the center of a public sector "circular debt" problem, in which state firms and government ministries have failed to pay power bills, while WAPDA has failed to meet obligations to them and to private sector creditors, especially state-owned PSO.

Privatization

The Pakistani government continues to seek reform in the state-held electric companies. In November 2005, the Privatization Commission in Pakistan sold KESC to Hassan Associates, a group of local and Saudi investors. KESC controls a power transmission network in the southern part of Karachi. Because KESC has struggled to make a profit, the Pakistani government has supported the company with a \$200 million annual subsidy. But, Hassan Associates has indicated that they are confident in their ability to make a profit from KESC in the future. The Pakistani government will maintain a 26 percent share of the company. Plans have also been made to transform WAPDA into three generation companies, eight distribution companies and a transmission entity with the hope of seeing it privatized.

Pakistan's Electricity Generation, by Source, 1984-2004



Source: EIA *International Energy Annual 2004*

Hydroelectricity

Hydroelectric power represents a third of Pakistan's power source, however, periodic droughts affect the availability of hydropower production. WAPDA controls the country's major hydroelectric plants, with the largest being the Tabela plant at 3,046 megawatts (MW) installed capacity. The Tabela plant was the largest hydroelectric plant in Asia until China began building the Three Gorges project, which will have 18,000 MW of installed capacity. Additional hydroelectric plants in operation include Mangla (1,000 MW), Warsak (240 MW), and Chashma (184 MW).

Although Pakistan has plans to develop additional hydroelectric generating capacity, infrastructure constraints, such as access roads in mountainous regions and resettlement costs of affected populations have stalled progress. Nevertheless, Eden Enterprises is going ahead with its Suki Kinari (655 MW) hydropower project. Eden Enterprises, along with Pakistani partners own

95 percent of S.K. Hydro, which was given a 35-50 year concession period for the power plant. Construction is expected to begin in 2009, with the plant coming online in 2011. The Private Power and Infrastructure Board (PPIB) is currently reviewing six additional hydropower projects for the Swat River. If approved, the projects would provide several hundred MW of additional hydroelectric power capacity to the country.

Conventional Thermal

WAPDA operates the majority of thermal power plants in Pakistan, with over 5,000 MW of installed capacity in its control. The Guddu plant is the largest plant operated by WAPDA, with a capacity of 1,650 MW. In recent years, growth in Pakistan's thermal power generation has come primarily from new independent power producers (IPPs), some of which have been funded by foreign investors. The two largest IPPs in Pakistan are Kot Addu (1,600 MW) and Hubb River (1,300 MW), both of which supply power to WAPDA. The Kot Addu plant was privatized in 1996 (from WAPDA). International Power holds a 36 percent equity stake in the Kot Addu plant. The Pakistani government has recognized that the majority of thermal plants in the country are run on fuel oil and produce considerable amounts of pollution. In an effort to reduce pollution, the government would like to see fuel oil-power plants converted to natural gas in the future.

Other Renewables

Pakistan is working to expand the use of renewable energy to help bridge the gap of energy deficiency in the country. In 2003, the Pakistani government created the Alternative Energy Development Board (AEDB). AEDB's primary objective is to help Pakistan achieve a 10 percent renewable energy share in the country's energy mix. AEDB is working to create an environment in Pakistan that is conducive to investment from the private sector in renewable energy. In July 2006, Turkish-based Zorlu Enerji Grubu signed a letter of intent to install a 50-MW wind farm. Zorlu would operate the wind farm for 20 years once the project is completed in 2008. Zorlu has indicated that it would like to install an additional 2,000 MW of renewable energy capacity in Pakistan by 2015.

Nuclear

Pakistan has one nuclear power plant, Chashma-1, with 300 MW of installed capacity. The Pakistan Atomic Energy Commission operates the nuclear plant. Pakistan is currently working on second nuclear power plant (Chashma-2), with the help of China National Nuclear Corporation. The plant will have 325 MW of installed capacity and could be completed by 2009.

Environment

High levels of toxic emissions and a lack of energy efficiency standards are two of the environmental issues facing Pakistan.

In Pakistani cities, widespread consumption of low-quality fuel, combined with a dramatic expansion in the number of vehicles on the roads, has led to significant air pollution problems. Lead and carbon emissions are major air pollutants in urban centers such as Karachi, Lahore, and Islamabad. A lack of energy efficiency standards has contributed to Pakistan's high carbon dioxide intensity. One hopeful trend is that Pakistan has increasingly been using compressed natural gas (CNG) to fuel vehicles. Currently, government vehicles and taxis that have been using liquefied petroleum gas (LPG) are being converted to CNG.

Profile

Country Overview

Chief of State	President General Pervez Musharraf, elected June 20, 2001
Location	Southern Asia, bordering the Arabian Sea, between India on the east and Iran and Afghanistan on the west and China in the north
Independence	14 August 1947 (from UK)
Population (2005E)	162,419,946

Economic Overview

Minister of Commerce	Mr. Humayun Akhtar Khan
Currency/Exchange Rate (11/21/2006)	1 Pakistani Rupee (PKR) = 0.0165 USD
Inflation Rate (2005E)	9.1%
Gross Domestic Product (GDP, 2005E)	\$88 billion

Real GDP Growth Rate (2004E, 2005E)	6.4%, 8.4%
Unemployment Rate (2005E)	10.4%
External Debt (2005E)	\$36.7 billion
Exports (2005E)	\$15.8 billion
Exports - Commodities	textiles (garments, bed linen, cotton cloth, and yarn), rice, leather goods, sports goods, chemicals, manufactures, carpets and rugs
Exports - Partners (2004E)	US 21.3%, UAE 9.8%, UK 7.1%, Germany 5.2%, Hong Kong 4.2%, Saudi Arabia 4.1%
Imports (2005E)	\$26.5 billion
Imports - Commodities	petroleum, petroleum products, machinery, plastics, transportation equipment, edible oils, paper and paperboard, iron and steel, tea
Imports - Partners (2004E)	China 10.8%, US 10.2%, UAE 9.3%, Saudi Arabia 9%, Japan 7%, Kuwait 5.3%, Germany 4.2%
Current Account Balance (2005E)	(\$1.3 billion)

Energy Overview

Minister of Petroleum and Natural Resources	Mr. Amanullah Khan Jadoon
Proven Oil Reserves (January 1, 2006E)	0.3 billion barrels
Oil Production (2006E)	59.4 thousand barrels per day, of which 97% was crude oil.
Oil Consumption (2006E)	350 thousand barrels per day
Crude Oil Distillation Capacity (2006E)	269 thousand barrels per day
Proven Natural Gas Reserves (January 1, 2006E)	28.2 trillion cubic feet
Natural Gas Production (2004E)	967.6 billion cubic feet
Natural Gas Consumption (2004E)	967.6 billion cubic feet
Recoverable Coal Reserves (2003E)	3,362 million short tons
Coal Production (2004E)	3.5 million short tons
Coal Consumption (2004E)	5.2 million short tons
Electricity Installed Capacity (2004E)	20.4 gigawatts
Electricity Production (2004E)	80.2 billion kilowatt hours
Electricity Consumption (2004E)	74.6 billion kilowatt hours
Total Energy Consumption (2004E)	2 quadrillion Btus*, of which Natural Gas (46%), Oil (35%), Hydroelectricity (14%), Coal (5%), Nuclear (1%), Other Renewables (0%)
Total Per Capita Energy Consumption (2003E)	12.4 million Btus
Energy Intensity (2004E)	5,086.7 Btu per \$2000-PPP**

Environmental Overview

Energy-Related Carbon Dioxide Emissions (2003E)	104.4 million metric tons, of which Oil (46%), Natural Gas (45%), Coal (9%)
Per-Capita, Energy-Related Carbon Dioxide Emissions	0.7 metric tons

(2003E)

Carbon Dioxide Intensity (2004E)	0.3 Metric tons per thousand \$2000-PPP**
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Environmental Issues	water pollution from raw sewage, industrial wastes, and agricultural runoff; limited natural fresh water resources; a majority of the population does not have access to potable water; deforestation; soil erosion; desertification
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Major Environmental Agreements	party to: Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Ozone Layer Protection, Ship Pollution, Wetlands signed, but not ratified: Marine Life Conservation
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Oil and Gas Industry

Organization	Oil and Gas Development Corporation (OGDC), a state company, handles oil and gas exploration and development; Water and Power Development Authority (WAPDA) supplies electricity to most of the country; Karachi Electric Supply Corporation Limited (KESC) serves the greater Karachi metropolitan area; Pakistan Atomic Energy Commission (PAEC) operates one nuclear power plant
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Major Oil/Gas Ports	Gwadar, Karachi, Muhammed bin Qasim, Ormaro
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Foreign Company Involvement	AES, Atlantic Richfield, BHP Billiton, British National Power, BP, Coastal Power, Eni, Gaz de France, General Electric, Lasmo Oil (U.K.), Marubeni (Japan), Monument Oil & Gas, OMV, Orient Petroleum Inc., Petronas, Premier Oil, Royal Dutch Shell, Tullow, Xenal (Saudi Arabia)
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Major Oil Fields	Dhurnal, Fimkasser, Liari, Mazari, Thora
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Major Natural Gas Fields	Bhit, Dhodak, Kadanwari, Mari, Prikoh, Qadipur, Sawan, Sui
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Major Pipelines	Sui Northern Gas Pipeline; Sui Southern Gas Pipeline; Pak-Arab Refinery Company (PARCO) petroleum product pipeline
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Major Refineries (capacity, bbl/d)	Pak-Arab Refinery near Multan (95,000 bbl/d); Attock Refinery in Rawalpindi (35,625 bbl/d), National Refinery in Korangi (62,050 bbl/d), Pakistan Refinery Ltd. in Karachi (46,300 bbl/d)
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* 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 Pakistan](#)

U.S. Government

[CIA World Factbook - Pakistan](#)

[U.S. Embassy, Islamabad, Pakistan](#)

[U.S. Embassy, Islamabad, Pakistan, Report on Investment Climate in Pakistan](#)

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[U.S. State Department Country Commercial Guide - Pakistan](#)

[U.S. State Department Background Notes on Pakistan](#)

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[Dawn \(Daily Newspaper\)](#)

[Pakistan Economist](#)

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[Embassy of the Islamic Republic of Pakistan in the U.S.](#)

[Official Pakistan Government site](#)

[Privatization Commission of Pakistan](#)

Oil and Natural Gas

[Bosicor Pakistan Limited](#)
[Pak-Arab Refinery, Ltd.](#)

Electricity

[Alternative Energy Development Board \(AEDB\)](#)
[Karachi Electricity Supply Corporation \(KESC\)](#)
[National Electricity Power Regulatory Authority \(NEPRA\)](#)
[Private Power and Infrastructure Board \(PIIB\)](#)
[Water and Power Development Authority \(WAPDA\)](#)

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World Gas Intelligence
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