



Home > Country Analysis Briefs > [Jordan Country Analysis Brief](#)



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[Background](#) | [Oil](#) | [Natural Gas](#) | [Electricity](#) | [Profile](#) | [Links](#)

## Jordan

*Jordan occupies a strategic location in the Middle East, and is an important crossroads for regional energy integration. Jordan also is a potential alternative transit center for oil and gas exports from the Persian Gulf region.*

*Note: information contained in this report is the best available as of April 2004 and can change.*



### GENERAL BACKGROUND

Jordan's economy has resumed strong growth, recovering from the dislocations caused by the war in Iraq in 2003. Real gross domestic product (GDP) grew at 2.8% in 2003, but is projected to recover to 4.6% in 2004 and 5.2% by 2005. Much of the recent growth stems from expansion in the country's manufacturing sector. This has been driven in part by the U.S.-Jordan Free Trade Area agreement, which was ratified by the U.S. Senate in September 2001.

Exports of goods to neighbors Iraq and Saudi Arabia also are important to Jordan's economy. Much of the slowdown in economic growth in 2003 was attributable to

the temporary disruption in exports of manufactured goods to Iraq, which contributed to a 6% decline in manufacturing output from 2002 to 2003. Remittances from Jordanian workers in the Persian Gulf countries also are very important to Jordan's balance of payments.

Jordan was admitted to membership in the World Trade Organization (WTO) in April 2000, after agreeing to a package of trade and investment liberalization measures, as well as improvement in protections for foreign-owned intellectual property. The United States is now Jordan's largest export market, accounting for 22% of its exports in 2003.

A privatization program has been undertaken to reduce the Jordanian government's stake in sectors of the economy previously dominated by state-controlled firms. The Jordanian government sold a 40% stake in the Jordan Telecommunications Company to France Telecom in 2000, in the most significant privatization to date. Oil and electric power generation also are targeted for privatization, but progress in the energy sector has been relatively slow. As part of its preparations for admission to the WTO, Jordan in 2000 lifted most limits on foreign ownership of formerly state-owned companies.

## **OIL**

Jordan has no significant oil resources of its own, and must rely on imported oil for all of its needs (around 107,000 barrels per day -- bbl/d -- in 2003). The March 2003 invasion of Iraq has caused major changes in Jordan's energy supply situation. Prior to the war, Jordan had received supplies of crude oil from Iraq -- half free of charge, and half at prices significantly below market levels. The country also received around 20,000 bbl/d of refined petroleum products from Iraq. In the absence of a functioning pipeline, all of the oil supplied to Jordan by Iraq had been transported by trucks.

In the wake of the war, Jordan has had to seek alternative sources of supply. Kuwait, Saudi Arabia, and the United Arab Emirates were Jordan's main oil suppliers during the last nine months of 2003. Supplies have come in mainly by tanker, through Jordan's port at Aqaba. Press reports have indicated that at least some of this oil was sold at discounted prices, but the exact financial terms of the transactions have not been disclosed. Meanwhile, Jordan has sharply raised the retail prices charged to consumers for petroleum products.

Jordan has one refinery, at Zarqa, with a capacity of 90,400 bbl/d. The facility is in need of major upgrades, and its owner, the Jordan Petroleum Refining Corporation (JPRC), currently is studying its options. The facility was designed to produce a product mix skewed toward heavy fuel oil, which was needed at the time it was built to run electric power plants, but the local market is now in need of additional gasoline and diesel, while electric power generation is switching over to natural gas.

Jordan does possess a significant quantity of oil shale resources, possibly as much as 40 billion tons. Canada's Suncor has conducted limited exploration digging in the Lajjun area, southwest of Amman, and has conducted discussions with the Jordanian government on the possible development of an oil shale extraction facility, but no development agreement has been signed.

Jordan's state Natural Resources Authority (NRA) has been promoting oil exploration within the country, which has been relatively unexplored until now. TransGlobal Corporation holds a concession for the Wadi Araba area in Western Jordan. Other small independent companies have conducted surveys of other areas as well, but without yet finding commercial quantities of oil. To help attract foreign investment, the Jordanian government has plans to privatize its oil sector. In October 1995, the country set up the state-owned National Petroleum Co. (NPC) to handle upstream oil and gas exploration and development. In mid-1999, NPC divested its oil-drilling operation, which now operates as Petra Drilling Company. NPC is still active in the natural gas sector.

### **Oil Transportation**

A comprehensive settlement of the Arab-Israeli conflict could affect Middle East oil flows significantly. Jordan's geographic location between the Arabian peninsula and the Mediterranean coastal states of Israel and Lebanon offers the potential for alternative oil export routes for Persian Gulf oil to the West. At present, these oil exports must travel either by ship (through the Strait of Hormuz), by pipeline from Iraq to Turkey (capacity 0.8-1.6 million bbl/d), or via the Sumed (Suez-Mediterranean) Pipeline (capacity 2.5 million bbl/d).

In April 2003, there was some discussion of "reopening" the old oil pipeline from Mosul in northern Iraq to Haifa. The line, which was built in the 1930s, carried 100,000 bbl/d at its peak, but has been closed since Israel's establishment in 1948. Today, however the Mosul-Haifa pipeline is in extremely poor condition (the Iraqi section is completely rusted and the Jordanian section was sold as scrap metal several years ago), and reportedly would require hundreds of millions of dollars to repair/rebuild, even if this were politically feasible. Along those lines, Jordan has strongly denied any interest in rebuilding this pipeline at the present time, stating that "the pipeline no longer exists in Jordanian territory."

Utilization of the Trans-Arabian Pipeline (Tapline) could offer another potentially economic alternative. The Tapline was originally constructed in the 1940s with a capacity of 500,000 bbl/d, and intended as the main means of exporting Saudi oil to the West (via Jordan to the port of Haifa, then part of Palestine, now a major Israeli port city). Following the establishment of the state of Israel, the Tapline's terminal was diverted from Haifa to Sidon, Lebanon (through Syria and Lebanon).

Partly as a result of turmoil in Lebanon, and partly for economic reasons, oil exports via the Tapline were halted in 1975. In 1983, the Tapline's Lebanese section was closed altogether. Afterwards, the Tapline was used exclusively to supply oil to Jordan, from 1983 until Saudi Arabia terminated this arrangement in 1990 after the Iraqi invasion of Kuwait.

## **NATURAL GAS**

Jordan has modest reserves of natural gas, 230 billion cubic feet (Bcf), and has developed one gas field, at Risha in the eastern desert near the border with Iraq. The current output of around 30 million cubic feet per day (Mmcf/d) from the Risha field is used to fuel one nearby power plant, which generates about 10% of Jordan's electricity.

In August 2003, Jordan began imports of natural gas from Egypt. In May 2001, a 30-year agreement had been concluded with Egypt for gas sales to begin at a rate of 100 Mmcf/d beginning in 2003. Construction of the section of the pipeline in Egypt began in late 2001, starting from the existing pipeline terminus at El-Arish in Sinai. This section was completed in mid-2003, allowing deliveries to begin to one power plant at Aqaba. The second phase of the project, which will connect to the Rihab power plant in northern Jordan, is currently under construction and scheduled for completion by then end of 2005.

Arab governments also have been discussing the potential of extending the Egypt-Jordan pipeline and increasing its capacity - dubbed the Arab Gas Pipeline (AGP) project. The extensions under discussion have included a link to Syria and Lebanon, an extension to Turkey, and a subsea pipeline from Lebanon to Cyprus. At present, though, it seems unlikely that extensions to Turkey or Cyprus will be built in the near term.

## **ELECTRICITY**

Almost all electricity production in Jordan currently is carried out by the National Electric Power Company (NEPCO), a state-owned utility, and its subsidiaries. The Zarqa power plant, with a capacity of 400 megawatts (MW), and the Aqaba power plant, with a capacity of 650 MW, are the country's two main power generation facilities. Electricity demand is growing, and the Jordanian government has been seeking ways to attract foreign capital to fund additional capacity. In December 2001, the Jordanian government awarded a contract to the UK's Rothschild and Sons to provide advice on the privatization scheme. Jordan's basic plan for the future of its electric utility system involves having NEPCO maintain ownership of transmission assets, but relying on private power generation and privatizing existing generation assets. NEPCO's distribution subsidiary, the Central Electric Distribution Company (CEDC), also is to be privatized, along with the Central Electric Generating Company (CEGC). Under a decision adopted by the Jordanian cabinet in March 2004, CEDC will be sold off, along with a 60% stake in CEGC. Two other private distribution firms already exist - the Jordan Electric Power Company (JEPCO) in the Amman area and the Irbid District Electricity Company (IDECO) covering the area around Irbid.

In May 2000, Jordan awarded its first contract for an independent power producer (IPP) to Tractebel of Belgium. The Rihab power plant will have a capacity of 450 MW, and will be located near Amman. It is to be fuelled with natural gas from Egypt when it is completed.

An area of potential regional cooperation involves integration of individual national power transmission grids into a regional power network. Such a network would, among other benefits, allow power companies to take advantage of differences in peak demand periods, reduce the need for (and the costs associated with) installation and maintenance of reserve power generating capacity, and provide outlets for surplus generating capacity (mainly from Israel to Jordan).

The first step in this enterprise, the linking of the Egyptian and Jordanian power grids via an underwater cable between Aqaba and Taba (across the Gulf of Aqaba in Sinai), was completed in October 1998 and formally inaugurated in April 1999. Syria and Jordan also have linked their electric grids. Israel, for the time being, has been excluded from the grid linking projects, but has continued discussions with Jordan on the subject and may join the network once political hurdles related to the Arab-Israeli peace process have been overcome.

*Sources for this report include: CIA World Factbook; Dow Jones News Wire service; Economist Intelligence Unit ViewsWire; Global Insight Middle East Economic Outlook; Hart's Middle East Oil and Gas; Jordan Times; Middle East Economic Digest; Middle East Economic Survey; Oil and Gas Journal; Petroleum Economist; Petroleum Intelligence Weekly; U.S. Energy Information Administration.*

## **COUNTRY OVERVIEW**

**Chief of State:** King Abdallah bin Hussein

**Prime Minister:** Ali Abu Raghhab

**Independence:** May 25, 1946 (from the United Kingdom)

**Population (2003E):** 5.5 million

**Location/Size:** Middle East, northwest of Saudi Arabia/89,213 sq. kilometers, slightly smaller than Indiana

**Major Cities:** Amman (capital), Irbid, Al'Aqabah, Ma'an

**Languages:** Arabic (official), English

**Ethnic Groups:** Arab (98%), Circassian (1%), Armenian (1%)

**Religions:** Sunni Muslim (96%), Christian (4%)

## **ECONOMIC OVERVIEW**

**Currency:** Jordanian Dinar (JD)

**Market Exchange Rate (4/9/04):** US\$1 = JD 0.71

**Gross Domestic Product (GDP) (2003, market exchange rate):** \$9.7 billion

**Real GDP Growth Rate (2003E):** 2.8% **(2004F):** 4.6%

**Consumer Price Inflation (2003E):** 2.3% **(2004F):** 3.0%

**Major Trading Partners:** Iraq, USA, Germany, India, Italy, United Kingdom, Saudi Arabia

**Merchandise Exports (2003E):** \$4.9 billion

**Merchandise Imports (2003E):** \$3.0 billion

**Merchandise Trade Balance (2003E):** -\$1.9 billion

**Major Export Products:** Chemicals; phosphates; potash; food; manufactures; textiles

**Major Import Products:** Food; machinery; chemicals; transport equipment; crude oil

**Current Account Balance (2003E):** \$679 million

**Total External Debt (2003E):** \$7.6 billion

## **ENERGY OVERVIEW**

**Minister of Energy and Mineral Resources:** Mr. Mohammad al-Bataineh

**Proven Oil Reserves (1/1/04E):** 1 million barrels

**Oil Production (2003E):** 40 bbl/d

**Oil Consumption/Net Imports (2003E):** 107,000 bbl/d

**Main Oil Import Sources:** Saudi Arabia, Kuwait, United Arab Emirates  
**Crude Oil Refining Capacity (1/1/04E):** 90,400 bbl/d  
**Natural Gas Reserves (1/1/04E):** 220 billion cubic feet (Bcf)  
**Natural Gas Production/Consumption (2002E):** 11 Bcf  
**Electric Generation Capacity (1/1/03E):** 1.7 gigawatts (99.7% thermal; 0.3% hydro)  
**Electricity Generation (2001E):** 7.1 billion kilowatthours

## ENVIRONMENTAL OVERVIEW

**Minister of Water & Irrigation:** Hazim al-Nasir

**Total Energy Consumption (2001E):** 0.23 quadrillion Btu\* (<0.1% of world total energy consumption)

**Energy-Related Carbon Dioxide Emissions (2001E):** 15.8 million metric tons of carbon dioxide (<0.1% of world carbon dioxide emissions)

**Per Capita Energy Consumption (2001E):** 33.7 million Btu (vs U.S. value of 341.8 million Btu)

**Per Capita Carbon Dioxide Emissions (2001E):** 2.3 metric tons of carbon dioxide (vs U.S. value of 20.2 metric tons of carbon dioxide)

**Energy Intensity (2001E):** 14,725 Btu/ \$1995 (vs U.S. value of 10,810 Btu/ \$1995)\*\*

**Carbon Dioxide Intensity (2001E):** 1.00 metric tons of carbon/ thousand \$1995 (vs U.S. value of 0.62 metric tons/ thousand \$1995)\*\*

**Fuel Share of Energy Consumption (2001E):** Oil (94.0%), Natural Gas (4.6%), Coal (0.0%)

**Fuel Share of Carbon Dioxide Emissions (2001E):** Oil (96.4%), Natural Gas (3.6%), Coal (0.0%)

**Status in Climate Change Negotiations:** Non-Annex I country under the United Nations Framework Convention on Climate Change (ratified November 12th, 1993). Not a signatory to the Kyoto Protocol.

**Major Environmental Issues:** Limited natural fresh water resources; deforestation; overgrazing; soil erosion; desertification.

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

\* 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 based on OECD data based on Purchasing Power Parity (PPP) exchange rates.

## ENERGY INDUSTRIES

**Organization:** Natural Resources Authority (NRA) - state body responsible for overall direction of Jordan's energy resources; National Petroleum Company; Petra Drilling Company; Jordan Petroleum Refinery Co. - operates Jordan's single refinery at Zarqa, near Amman; National Electric Power Corporation (NEPCO)

**Major Port:** Aqaba

**Major Oil and Gas Fields:** Risha (natural gas)

**Major Pipelines:** Tapline - closed (Ras Tanura - Haifa)

**Major Refineries (crude capacity):** Zarqa (90,400 bbl/d)

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## LINKS

For more information from EIA on Jordan, please see:

[EIA - Country Information on Jordan](#)

Links to other U.S. government sites:

[CIA World Factbook - Jordan](#)

[U.S. Department of Energy - Office of Fossil Energy - Jordan](#)

[U.S. State Department Consular Information Sheet - Jordan](#)

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

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

[Department of Commerce - International Trade Administration - Jordan](#)

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[Jordan's Embassy in the U.S.](#)

[Jordan's National Information Systems](#) for information on government functions, organizations and official agencies

[National Electric Power Company \(NEPCO\)](#)

[Jordan's Investment Promotion Corporation](#)

[Jordan Export Development & Commercial Centres Corporation](#)

[The Center for Middle Eastern Studies - Jordan](#)

[Information on Jordan from Arab.net](#)

[MENA Petroleum Bulletin](#)

[Planet Arabia.com](#)

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