

*August 2004*

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Brunei

Brunei is important to world energy markets because it exports nearly 180,000 barrels per day of oil, is a large liquefied natural gas producer (third largest in Asia), and because it is located close to vital sea lanes through the South China Sea linking the Indian and Pacific Oceans.

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



GENERAL BACKGROUND

Brunei's small, wealthy economy is based heavily upon proceeds from exports of crude oil and natural gas, with revenues from the hydrocarbons sector accounting for over 33% of gross domestic product (GDP), around 80%-90% of exports, and 75%-90% of government revenues. Per capita GDP places Brunei among the World Bank's high-income non-OECD group of countries, with substantial income from

overseas investment supplementing income from domestic sources. The country's manufacturing sector is very small. The government provides for all medical services and subsidizes food and housing. Real GDP growth in 2004 is projected to be 3.3%, up from the 3.2% growth reported in 2003, largely due to current high oil prices.

Brunei's main economic problems include lack of diversity in the economy, heavy reliance on the volatile oil and natural gas sectors, huge state subsidies, a civil service which employs over half of Brunei's workforce, extensive state economic controls, a small tax base (the country has no personal income tax and a low tariff regime), and only slow movement towards privatization. In 1998, the collapse of Amedeo Development Corporation, run by Prince Jefri, and the loss of many billions of dollars -- possibly half the country's foreign exchange reserves -- caused a financial crisis which is still being resolved.

Brunei would like to diversify away from hydrocarbons into areas like communications technology, financial services, rubber, rice farming, halal (Muslim dietary law) food, and forestry services, plus energy-intensive industries like petrochemicals, oil refining, and aluminum smelting. Brunei also would like to turn itself into a major shipping hub. In January 2003, Brunei unveiled plans aimed at attracting \$4.5 billion in foreign investment by 2008 and at diversifying

the economy. The Brunei Economic Development Board (BEDB) reportedly is looking at building a 500-megawatt power plant, a new jetty, and a container port in the Sungai Liang area both to tap into the country's natural gas resources as well as to help establish new industries. The country is located close to vital sea lanes through the South China Sea, linking the Indian and Pacific Oceans and potentially well-positioned to take advantage of international shipping through the region.

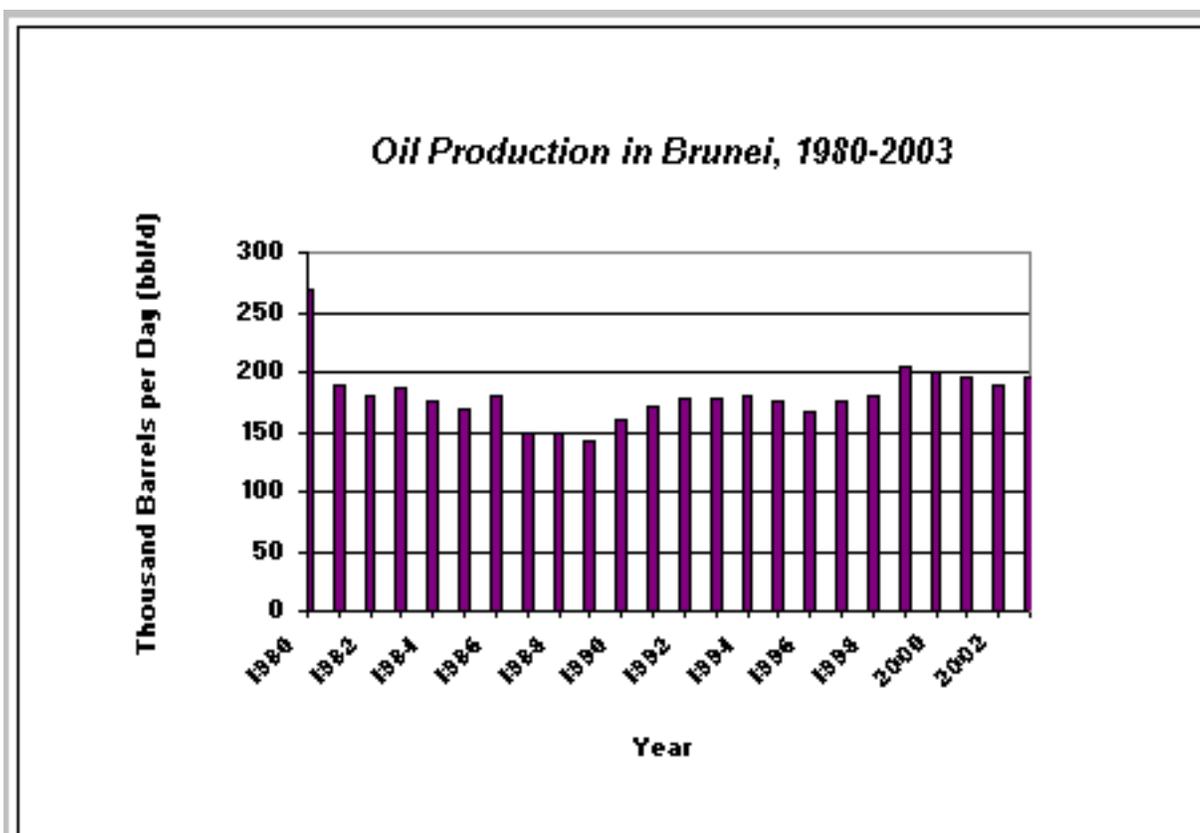


OIL

Brunei contains proven crude oil reserves of 1.35 billion barrels and produced 196,000 bbl/d in 2003, of which 170,000 bbl/d was mainly low-sulfur crude oil, plus around 26,000 bbl/d of natural gas liquids. Oil production began in Brunei in 1929, with the discovery of the giant onshore Seria Field.

Production from Seria peaked at around 115,000 bbl/d in the 1950s, but has now fallen to around 27,000 bbl/d. Brunei's oil production peaked in 1979 at about 240,000 bbl/d, but was cut back deliberately to extend life of the fields and to improve recovery rates. Overall, the country's upstream oil sector requires around \$300 million annually, according to the *Petroleum Economist*, in order simply to maintain current production capacity from mature fields.

Brunei's oil industry is completely dominated by Brunei Shell Petroleum (BSP). BSP extracts oil from seven offshore oil fields, including Champion (which contains about 40% of total oil reserves and produces around 50,000 bbl/d), Southwest Ampa (the oldest field, with more than half of Brunei's natural gas reserves and production), Fairley, Fairley-Baram, Gannet, Magpie (producing since 1977, now at 10,000 bbl/d), and Iron Duke. BSP also operates two onshore fields (Rasau and Seria-Tali). Another field, Egret, is expected to come online for oil production in 2006 and produce about 30 million bbl of oil over the next 15-20 years. Major customers for Brunei's oil include Japan, South Korea, the United States, Australia, New Zealand, China, and India.



BSP, a 50-50 joint venture between Royal Dutch/Shell and the government of Brunei, for years had been the only oil producer in the country and still operates the country's only

oil refinery. Recently, the sector has opened to other players. In early 2002, for instance, Total, S.A. of France (which has been active in Brunei since the 1980s) was awarded an exploration license in Brunei's deepwater Block J, located around 60 miles offshore, along with partners BHP Billiton Petroleum (25% share) and Amerada Hess (15%).

One of the most pressing concerns for Brunei's oil industry is the need to

settle a territorial dispute with neighboring Malaysia, over the deep-sea acreage that includes blocks J and K off the coast of Borneo. In June 2003, Total suspended exploration work in Block J, following an April 2003 incident in which several naval patrol boats from Malaysia chased away a Total ship. Foreign extractors Murphy Oil (U.S.) and Petronas (Malaysia) recently discovered a large (700-million-barrel) oil field -- called "Kikeh" -- which may extend into Block J. Brunei claims that Block J and the adjacent Block K (awarded to a joint venture of Shell, Conoco and Mitsubishi) are completely within its Exclusive Economic Zone (EEZ). Brunei is counting on Blocks J and K to maintain the country's oil and gas output another decade or more, and without these Blocks, Brunei may be forced to move more rapidly away from an economy based on hydrocarbons.

Malaysian officials have offered to devise a joint-development zone with Brunei, but this would necessitate Brunei redrawing its contracts with Shell, Conoco, and Mitsubishi. In March 2004 Shell Malaysia announced a new oil discovery at Gumusut, near the disputed territory, making Brunei's need for a settlement even more urgent.

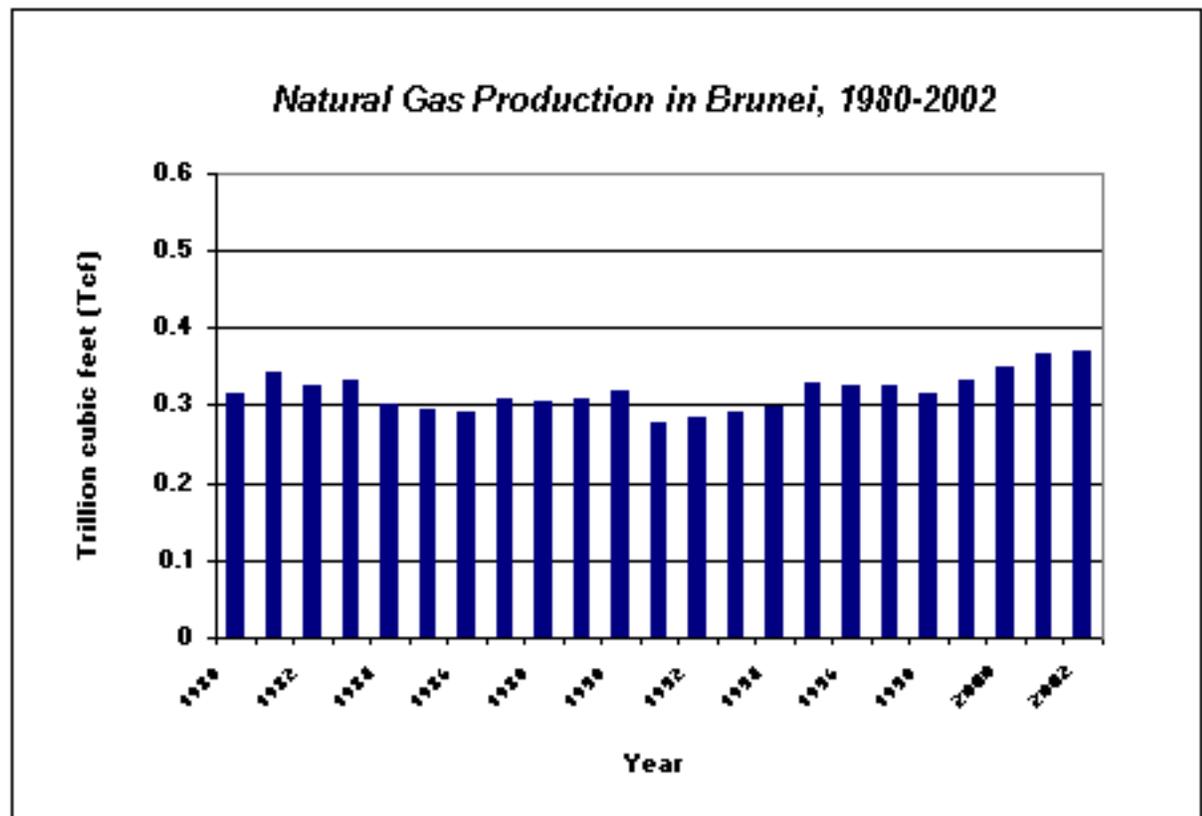
Downstream

Brunei has one refinery, part of BSP, with a capacity of about 8,600 bbl/d. Around 5,000-6,000 bbl/d of the refinery's output is used for local consumption. The remainder of Brunei's crude oil is exported and refined elsewhere.

NATURAL GAS

Brunei produced around 366 billion cubic feet (Bcf) of natural gas in 2002. Around 90% of gas destined for the country's one LNG terminal is produced by BSP and the rest by Total S.A. Discussions are underway now to determine whether sales of gas to new domestic industrial customers would be economically advantageous over the current policy of exporting almost all of Brunei's gas production.

Brunei became the first Asian liquefied natural gas (LNG) exporter in 1972. Brunei is the fourth-largest producer of LNG in the world and the third-largest natural gas



producer in Southeast Asia. Today, major customers for Brunei's LNG exports include Japan, which takes around 85% of Brunei's LNG exports under a 20-year contract renewed in 1993, and South Korea, which imports about 11% of Brunei's exports. The Brunei LNG (BLNG) joint venture between Mitsubishi (25%), Shell (25%), and the Brunei government (50%) produces Brunei's LNG, with LNG being liquefied at the company's Lumut plant. The plant produces about 330 bcf of LNG annually, and in 2003 BLNG shipped a record-breaking 214 cargoes, according to company information . The vast majority of BLNG sales are on a long-term contract basis, although there have been a few spot sales to Spain and the United States.

Long-term prospects for natural gas and LNG development in Brunei are excellent. BLNG has a master plan to expand its capacity by adding another 194 Bcf-per-year train to its existing five trains by 2008. The plan also includes further modernization of the existing plant, similar to the rejuvenation program carried out by Shell Global Solutions and completed in 1994. As a result of the program, the Lumut plant now operates at 140% of its design capacity.

In 2004, BLNG undertook the replacement of the plant's Main Cryogenic Heat Exchangers (MCHE) after 30 years of operation. The first of four new MCHEs was erected in February and the last one is due to be operational in 2005. The MCHE replacement is expected to extend the life of the facility for another 30 years. Additionally, BSP contracted with Shell Global Solutions for a \$400 million revitalization of gas extraction facilities in the Ampa and Fairley fields.

Besides exports, Brunei would like to use its natural gas to develop domestic petrochemicals and energy-intensive industries. The government signed a memorandum of understanding with American aluminum producer, Alcoa, in September 2003 to study the feasibility of constructing a \$1.5 billion gas-fired aluminum smelter in Seria. The Brunei Economic Development Board has reportedly offered discounted gas to the plant.

ELECTRICITY

Brunei's installed electric generating capacity in 2002 was 0.48 gigawatts (GW), of which all was natural gas-fired. Brunei's power demand is growing at a rapid rate of around 7%-10% annually. Brunei's power plants all operate single natural gas turbines, with the exception of the Lumut cogeneration facilities and the new Belingus Power Station. Household customers account for 38% of electricity usage in Brunei, and represent 63% of customers, while the government accounts for 29% of usage, but only 6% of customers. The oil and gas sector and commercial customers account for 15% and 19% of electricity usage respectively.

COUNTRY OVERVIEW

Sultan and Yang di-Pertuan, Prime Minister: Sultan Hassanal Bolkiah (since October 5, 1967)

Independence: January 1, 1984 (from the United Kingdom)

Population (2004E): 365,000

Location/Size: Southeastern Asia, bordering the South China Sea and

Malaysia on the north-west corner of the island of Borneo/2,228 square miles (slightly larger than Delaware)

Major Cities: Bandar Seri Begawan (capital)

Languages: Malay (official), English, Chinese, Iban, and other indigenous dialects

Ethnic Groups: Malay (62%), Chinese (15%), indigenous (6%)

Religions: Muslim (67%), Buddhist (13%), Christian (10%), indigenous beliefs and other (10%)

ECONOMIC OVERVIEW

Finance Minister: Sultan Hassanal Bolkiah

Currency: Brunei Dollar (BND)

Market Exchange Rate (7/27/04): US\$1 = 1.72 BND

Gross Domestic Product (GDP, Market Exchange Rates) (2003E): \$4.8 billion

Real Per Capita GDP (2003E, PPP): \$15,869

Real GDP Growth Rate (2003E): 3.2% **(2004F):** 3.3 %

Inflation Rate (consumer prices) (2003E): 0.3% **(2004F):** 1.2%

Unemployment Rate (official estimate, 2002E): 4.6% (higher for recent graduates)

Merchandise Exports (2003E): \$4.3 billion

Merchandise Imports (2003E): \$2.2 billion

Merchandise Trade Balance (2003E): \$2.1 billion

Major Trading Partners (2003): Japan, Singapore, United Kingdom, United States, South Korea, Malaysia

Major Export Products: Natural gas and crude oil, refined oil products

Major Import Products: Machinery and transport equipment, manufactured goods, food

ENERGY OVERVIEW

Minister of Industry and Primary Resources: Pehin Dato Haji Abdul Rahman Taib

Proven Oil Reserves (1/1/04): 1.35 billion barrels

Oil Production (2003E): 196,000 bbl/d, of which 170,000 bbl/d was crude

oil
Oil Consumption (2003E): 12,000 bbl/d
Net Oil Exports (2003E): 184,000 bbl/d
Crude Oil Refining Capacity (1/1/04E): 8,600 bbl/d
Natural Gas Reserves (1/1/03E): 13.8 trillion cubic feet (Tcf)
Natural Gas Production (2002E): 366 billion cubic feet (Bcf)
Natural Gas Consumption (2002E): 59 billion cubic feet (Bcf)
Electric Generation Capacity (1/1/02E): 0.48 gigawatts
Net Electricity Generation (2002E): 2.5 billion kilowatthours (all natural gas-fired)

ENVIRONMENTAL OVERVIEW

Total Energy Consumption (2002E): 0.09 quadrillion Btu* (<0.1% of world total energy consumption)

Energy-Related Carbon Dioxide Emissions (2002E): 5.2 million metric tons (<0.1% of world carbon dioxide emissions)

Per Capita Energy Consumption (2002E): 262.2 million Btu (vs. U.S. value of 339.1 million Btu)

Per Capita Carbon Dioxide Emissions (2002E): 4.0 metric tons (vs U.S. value of 5.5 metric tons)

Energy Intensity (2002E): 13,846 Btu/ \$ nominal-PPP (vs. U.S. value of 9,344 Btu/\$ nominal-PPP)**

Carbon Dioxide Intensity (2002E): 0.80 metric tons/\$ nominal-PPP (vs. U.S. value of 0.55 metric tons /\$ nominal-PPP)**

Fuel Share of Energy Consumption (2002E): Natural Gas (77.8%), Oil (22%)

Fuel Share of Carbon Dioxide Emissions (2001E): Natural Gas (69%), Oil (31%)

Status in Climate Change Negotiations: Not a party to or signatory of the Kyoto Protocol.

Major Environmental Issues: Seasonal smoke/haze resulting from forest fires in Indonesia.

Major International Environmental Agreements: Party to the Endangered Species, Law of the the Sea, Ozone Layer Protection, and Ship Pollution

treaties.

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

**GDP based on CIA World Factbook estimates based on purchasing power parity (PPP) exchange rates

OIL AND GAS INDUSTRIES

Refinery: Brunei Shell Petroleum Co. Sdn. Bhd. -- Seria (8,600 bbl/d)

Foreign Energy Company Involvement: Shell, in a joint venture called Brunei Shell Petroleum, is the country's main oil and gas production company, and operates Brunei's only refinery. Mitsubishi is active in the Brunei LNG joint venture, and Total S.A.(along with New Zealand's Fletcher Energy) is the operator at a new offshore oil and gas field, Maharajah/Lela/Jamaludin.

Oil and Gas Fields: Offshore: Champion, Southwest Ampa, Fairley, Fairley-Baram, Magpie, Gannet, and Iron Duke. Onshore: Rasau, Seria-Tali.

Sources for this report include: Agence France Presse; Alexander's Gas and Oil Connections; Asian Wall Street Journal; Australian Department of Foreign Affairs and Trade (Country Brief on Brunei); Borneo Bulletin; Brunet; Business Times (Singapore); CIA World Factbook; Dow Jones News wire service; Economist Intelligence Unit ViewsWire; Far Eastern Economic Review; Global Insight; Hart's Deepwater International; Japan Economic Newswire; Los Angeles Times; New York Times; Oil and Gas Journal; Petroleum Intelligence Weekly; Petromin ("Oil, Gas and LNG in Brunei -- The Future"); U.S. Commerce Department, International Trade Administration -- Country Commercial Guides; U.S. Energy Information Administration; U.S. State Department Background notes on Brunei; Washington Post; World Bank List of Economies 2004; World Markets Analysis; World Oil.

LINKS

For more information from EIA on Brunei, please see:

[EIA - Country Information on Brunei](#)

Links to other U.S. Government sites:

[CIA World Factbook - Brunei](#)

[US Department of State Consular Information Sheet -- Brunei](#)

[US Embassy in Brunei](#)

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