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June 2004

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Vietnam

Vietnam is important to world energy markets because of its potential to become a regional oil and natural gas supplier. Ongoing exploration has led to several oil and gas discoveries in recent years.

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



GENERAL BACKGROUND

Vietnam's economy has maintained its relatively high levels of growth despite the global economic slowdown during 2001 and 2002, largely due to the fact that the country is less integrated into the world economy and less vulnerable to declines in demand for its exports. Growth in Vietnam's real gross domestic product (GDP) was 7.2% in 2003, and is projected at 7.0% for 2004. Vietnam has had Normal Trade Relations status with the United States since late 2001, although it will be several more years before it can join the World Trade Organization (WTO).

A significant development in the country's economic reforms was the first auction of a state-owned enterprise, which occurred in February 2003. Hai Phong Agricultural Mechanical Engineering Company was sold to the Viet Tin Construction Joint Stock and Trading Company for \$300,000. The auction was financed by the Australian government, with technical assistance from the World Bank, in an attempt to speed up the privatization of inefficient state enterprises.

Much of Vietnam's large population relies heavily on *non-commercial* biomass energy sources such as wood, dung, and rice husks. As a result, Vietnam's per capita *commercial* energy consumption ranks among the lowest in Asia. Vietnam's

commercial energy consumption, especially of natural gas, is predicted to rise substantially in coming years.

Vietnam is involved in an ongoing territorial dispute with other regional states over the potentially hydrocarbon rich Spratly Islands. Vietnam, China, the Philippines, Brunei, Taiwan, and Malaysia all make claims to the Spratlys.

OIL

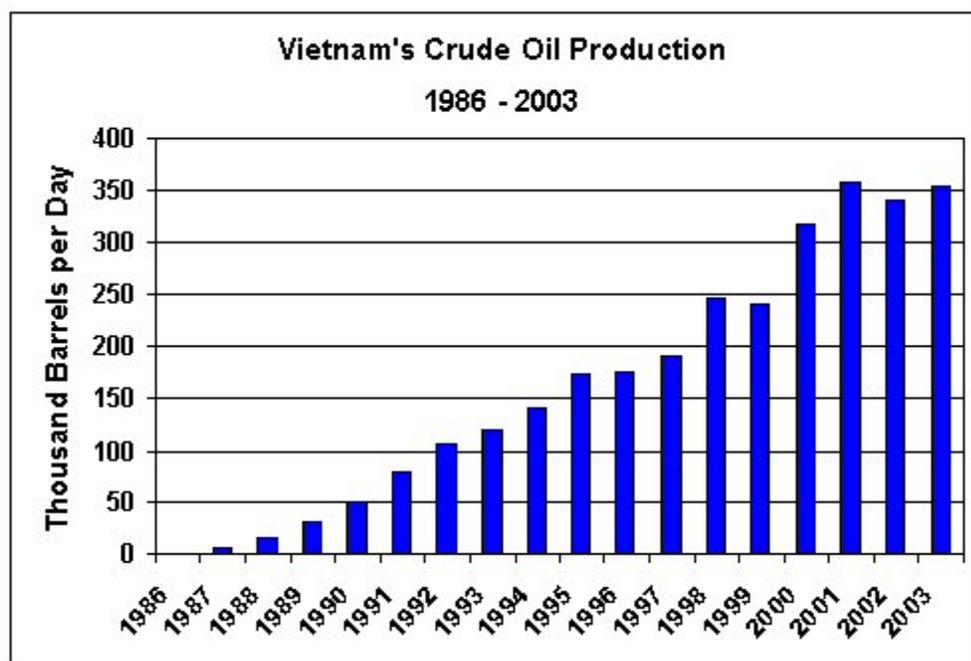
Vietnam has 600 million barrels of proven oil reserves, and further discoveries are likely. Crude oil production averaged 352,507 barrels per day (bbl/d) in 2003. The country has six operating oil fields, of which Bach Ho (White Tiger), Rang Dong (Dawn), Hang Ngoc, and Dai Hung (Big Bear) are the largest. Most oil exploration and production activities occur offshore in the Cuu Long and Nam Con Son Basin. Vietnam currently has no operating oil refineries - therefore a large portion of its oil production is exported. Export markets include Japan (the largest importer of Vietnamese oil), Singapore, the United States, and South Korea. Vietnam had net exports of an estimated 150,507 bbl/d of oil in 2003.

The Vietnamese government controls both the upstream (exploration and production) and downstream (transport and refining) oil and natural gas industries. For upstream activities, Vietnam Oil and Gas Corporation (PetroVietnam), a government-owned company, is the only firm authorized to conduct petroleum operations. Any petroleum exploration and production activities by foreign investors must be conducted in cooperation with PetroVietnam. For downstream activities, several government-owned companies, such as Petrolimex and Petec under the Ministry of Trade, PetroVietnam Trading Company (Petechem) under PetroVietnam, SaigonPetro under Ho Chi Minh City People's Committee, and Vinapco under Vietnam Airlines, have been licensed to import petroleum products. Petrolimex is the largest petroleum products importer.

Vietnam has been considering an international public stock offering of a minority stake in PetroVietnam, similar to public stock offerings carried out by major Chinese oil and gas firms in recent years. In mid- 2003, Vietnam's Ministry of Finance issued regulations allowing domestic firms to offer bonds to the public. PetroVietnam was one of the first firms to take

advantage of the new regulations due to its involvement in a number of large projects (including the nation's first oil refinery) for which it needs to raise capital.

The government has issued around 44 investment licenses for oil and gas exploration since the



industry was opened to foreign partners in 1998. More than 30 companies, including American, European, Korean, and Japanese firms, now operate in offshore Vietnam. However, several foreign companies have withdrawn from their contracts. Reasons include problems with the Vietnamese regulatory framework and disappointment at recovering smaller quantities of oil and gas than anticipated. In May 2003, Zarubezhneft, a Russian oil company, decided to withdraw from the development of the Dai Hung oilfield, which it had been developing in conjunction with PetroVietnam. Zarubezhneft will maintain its interest in the Bach Ho field (block 9-01), which is currently the largest oil-producing field in Vietnam.

In January 2003, PetroVietnam and Petronas Carigali Overseas Company of Malaysia signed a contract to explore and exploit oil and gas in lot 01-02/97, located on Vietnam's continental shelf. First drilling is expected to be carried out in mid-2004.

Some of the new entrants to Vietnam's upstream have made substantial finds. During 2002, large oil and gas deposits were discovered in the Ca Ngu Vang (Golden Tuna) and Voi Trang (White Elephant) fields. The Ca Ngu Vang well, drilled by SOCO Vietnam, was the first well to be drilled on Block 9-2. SOCO's estimates state that there could be as many as 250 million barrels of oil in that area. The Voi Trang well, drilled by the Hoang Long Joint Operating Company, was the second well drilled on Block 16-1.

A major oil find in Block 15-1 of the Cuu Long Basin was announced in October 2000 by a consortium including ConocoPhillips, the Korean National Oil Company (KNOC), SK Corporation of South Korea, and the French firm Geopetrol. After further exploratory drilling in early 2001, KNOC announced that Block 15-1 contained recoverable reserves of around 400 million barrels. Fields located on this block include Su Tu Den (Black Lion), Su Tu Vang (Golden Lion), and Su Tu Trang (White Lion), all of which came online in early 2004. Su Tu Den is currently producing 60,000 bbl/d. The discovery well at Su Tu Trang flowed 8,682 bbl/d and is scheduled to be developed in 2008. The consortium plans to drill appraisal wells in Su Tu Vang during late 2004. Conoco also holds interests in some adjacent blocks, including Block 15-2, which contains the 40,000 bbl/d Rang Dong field. Total oil production from the Cuu Long Basin is expected to reach 100,000 bbl/d by mid-2004.

In April 2003, PetroVietnam discovered a major oil deposit in Dai Hung (Big Bear). The field is located off the southern province of Ba Ria-Vun Tau with a daily capacity of 6,300 bbl/d of oil and 4.32 million cubic feet of gas. Throughout 2003, further exploratory drilling took place in an attempt to assess the total reserve of the oil field.

In June 2003, PetroVietnam signed a deal with Pertamina of Indonesia and Petronas of Malaysia, to develop an offshore oil and gas block in the South China Sea. The block, SK-305, is located in Malaysian waters close to Vietnamese and Indonesian maritime territory. In late 2002, the companies agreed to jointly develop two blocks in Vietnam's Nam Con Son basin, the first three-way cooperation between national oil companies in South-East Asia. Exploration in Block 46/02, which is located adjacent to the Vietnamese-Malaysian PM-3 joint development area, has yielded another oil discovery initially producing 7,300 bbl/d.

Following the commencement of drilling operations in the Su Tu Den (Black Lion) crude field in October 2003, the state-owned Vietnam National Oil and Gas Corporation, known as Petrovietnam, has reported rapidly expanding production volumes. In the first quarter of 2004 Petrovietnam reported that it had exported 496,000 bbl/d of crude oil, a year-on-year increase of 14%. The Su Tu Den operation is owned by a consortium comprising Petrovietnam (with a 50% stake), ConocoPhillips (US), the Korea National Oil Corporation and SK Corp (South Korea). By June

2004 crude oil production at the Su Tu Den oilfield is expected to reach 95,000 bbl/d. The Bach Ho (White Tiger) oilfield, however, remains the country's largest, accounting for around 70% of total production. Despite its crude oil production capacity, Vietnam remains reliant on imports of petroleum products because of its lack of refining capacity.

Refining

Currently, Vietnam does not have a major refinery, but it is in the process of building its first. The \$1.3 billion Dung Quat Refinery, which is located in Quang Ngai province, will have a capacity of about 140,000 bbl/d. The project began as a joint venture between PetroVietnam and the Russian firm Zarubezhneft. Initial construction has begun, and the facility was scheduled to be completed by late 2002. However, delays have pushed the completion date back to 2004, and it may not be fully operational until 2007 (four years behind its original schedule). In December 2002, Russian state oil company Zarubezhneft announced that it had withdrawn from the oil refinery construction project, but will still perform some construction work as a subcontractor. Vietnamese firm PetroVietnam has reimbursed Zarubezhneft \$230 million it had invested in the venture, and some of that money will be re-invested in Vietnam's oil and gas industry. Since losing foreign support, PetroVietnam has struggled to make progress on the refinery and may now be bowing to calls to move the refinery closer to production and end use markets. The proposed location is in the south of the country, on Long Son Island, close to the Nam Con Son oil basin in the South China Sea.

A second refinery project is under consideration. Mitsubishi and JGC Corporation signed a memorandum of understanding with PetroVietnam in October 2001 covering a feasibility study for the project. A collaboration agreement for the feasibility study was signed by Mitsubishi and ABB Lummus Global (an American technical consulting firm), in January 2003. The location being considered is Ngai Son, in Thanh Hoa province.

PetroVietnam's storage and transportation division, Petrolimex, is planning to build a major new oil storage facility in central Khanh Hoa province. The depot will have a total storage capacity of 3.68 million barrels, easily the largest in the country and equivalent to approximately three weeks of total national oil consumption. Petrolimex plans to have the facility completed by January 2006.

NATURAL GAS

As with oil, Vietnam's natural gas production and consumption are rising, with further increases expected as additional fields come on stream. The target set by PetroVietnam for natural gas production is 202 billion cubic feet for 2004. The Cuu Long basin is the largest Vietnamese natural gas production area, and is a source of associated natural gas from oil production. An existing 62-mile pipeline from the Bach Ho field is operating near peak capacity. The Ruby and Rang Dong oil fields, both of which have considerable amounts of associated natural gas, are located near the pipeline. Following the installation of a new platform in the Rang Dong oil field, associated natural gas from the field, which used to be flared offshore, will now be transported onshore for use. The estimated 60 million cubic feet per day (Mmcf/d) of gas is scheduled to be consumed in power plants in southern Vietnam. Additionally, the new platform will increase the exploration capacity of Rang Dong from 30,000 bbl/d to almost 70,000 bbl/d.

In December 2002, a South Korean consortium headed by Korea National Oil Corporation (KNOC) signed an agreement to install facilities to be used to pump and supply up to 130 Mmcf/d of natural gas to Vietnam. The natural gas, located in the Rong Doi and Rong Doi Tay fields on Block 11-2 of the Nam Con Son Basin, will be purchased by PetroVietnam for 23 years. Sale will commence in 2005, when facilities are expected to be completed. PetroVietnam is in turn expected to sell the natural gas to Electricity of Vietnam (EVN). It is estimated that the area, which includes the Flying Dragon field, could hold up to 1.2 Tcf of natural gas.

In February 2003, a new natural gas discovery was made at the Tien Hai field in northern Vietnam. The field is believed to be capable of producing at 1.76 MMcf/d, making it one of the largest discoveries in the north of the country. Tien Hai is located in the Red River delta, one of the oldest production areas in Vietnam. Vietnam's large foreign-funded gas-to-power projects are all located off the southern coast of the country.

In September 2002, it was announced that a new 3,100-mile natural gas pipeline, which will be Asia's largest, will pass through Vietnam. The pipeline, which will be built through the Asia-Pacific Economic Cooperation (APEC) forum's Partnership for Equitable Growth (PEG), will link an Indonesian natural gas field with Vietnam, Malaysia, Thailand, and China. Construction costs are estimated at \$8 billion, with 30% of funding expected to come from the five nations' oil and gas industries. The rest is expected to be provided by international organizations and other countries.

In the Cuu Long operating area, a new discovery of gas and high-quality condensate has been made at the Su Tu Trang (White Lion) field. The field is being developed in a joint venture partnership with ConocoPhillips, the Korean National Oil Corp. (KNOC), and SK Corp. Preliminary estimates indicate that the field holds 6 Tcf of wet gas reserves.

A new oil and gas reserve was discovered in the Dai Hung field in Vietnam's southern continental shelf in April 2003. The new well should produce around 6,300 bbl/d commercial oil and 4.3 Mmcf/d of gas. The reserve was found by the Vietnam-Russia Oil and Gas Joint Venture Enterprise, Vietsovetro.

In 1992, BP, Conoco, and ONGC (India) formed a joint venture with PetroVietnam to develop natural gas resources in the Nam Con Son basin, in the Lan Tay and Lan Do fields. Conoco purchased its stake from Norway's Statoil, which sold off its Vietnamese assets in October 2001. The fields contain an estimated 2.4 Tcf of natural gas. Now BP and PetroVietnam are working together to develop the deposit, and BP hopes to bring first gas ashore no later than 2006.

In May 2004, PetroVietnam and Thailand's state-owned oil & gas conglomerate, PTT PCL, signed a memorandum of understanding on conducting a feasibility study to build a natural gas pipeline network in southern Vietnam. 12 industrial zones covering 2,500 hectares in Ho Chi Minh City are encompassed in the study. The study is scheduled to be completed by the end of 2005, with any investment to build the pipeline to start in 2006.

In the Nam Con Son Basin, a 230-mile pipeline, which cost an estimated \$565 million to construct, was completed in June 2002. It now connects the Lan Tay and Lan Do fields to the Vietnamese mainland at Vung Tau, and natural gas delivery began in November 2002. At 247 billion cubic feet (Bcf) per year, pipeline capacity currently exceeds production from the fields, although the extra capacity will eventually transport gas from the nearby Hai Tach, Moc Tinh, and Rong Doi fields, as well as from probable future gas finds in the area. By April 2004, after an increase in output from the Lan Tay gas field, the pipeline was flowing approximately 282 Mmcf/d, about 42% of its total capacity. The pipeline comes ashore near the Dinh Co Gas Terminal, and an extension takes some of the gas inland about 20 miles to the Phu My power plant complex.

The Malay basin is another potentially hydrocarbon-rich area. TotalFinaElf and Unocal have both found natural gas in exploratory drilling in the area. Additionally, Talisman Energy has found natural gas at the Cai Nuoc field in block 46. The discovery is close to block PM-3-CAA, which straddles the maritime border with Malaysia, and is expected to contain between 70 and 100 Bcf of recoverable gas reserves. The PM-3 block has the capacity for 270 Mmcf/d of gas. The region is

near the Mekong Delta, which is sparsely populated. Although companies are considering constructing a natural gas pipeline to the Delta, demand in the region might not be able to support the construction. A feasibility study for a pipeline to bring natural gas ashore from the PM3 Block, shared by Vietnam and Malaysia, was commissioned in July 2001. In September 2001, Vietnam's prime minister approved study, paving the way to build the \$230 million project in southernmost Ca Mau province. The pipeline will stretch for about 180 miles under the sea from the PM3 Block to the mouth of the Doc River in Tran Van Thoi district, then 27 miles over land to the Ca Mau industrial zone. It is designed to have an annual capacity of approximately 70 Bcf and will be put into operation during the first quarter of 2005. Gas from the pipeline will be used to supply a 720-MW power plant and a nitrogenous fertilizer plant.

The Phu My power-generating complex is supplied by natural gas from the Nam Con Son basin. The basin's reserves are estimated at nearly 2.1 Tcf of gas. Gas from the basin came on stream in late 2002, and in February 2004, the operators of the Nam Con Son project - a consortium of Britain's BP, India's ONGC Videsh and ConocoPhillips from the US, along with PetroVietnam - announced that it had brought onshore 35 Bcf of gas since it commenced operations. Gas is brought onshore via the \$565 million, 218-mile Nam Con Son pipeline.

Liquefied Petroleum Gas

Vietnam is a growing consumer and exporter of liquefied petroleum gas (LPG), with almost 70% of urban households using LPG for cooking and other purposes. Japan is the major consumer of Vietnamese LPG exports, receiving the country's first export shipment in May of 1999. According to UK government estimates, domestic consumption is increasing rapidly, and hit a new high of 400,000 tons in 2001. Estimates for 2002 put the country's consumption level at 480,000 tons. There is only one local producer of LPG in Vietnam, called the Dinh Co Plant, which is able to meet about 70% of national demand.

Vietnam's LPG sector has been open to foreign companies since 1998. Saigon Petro, Elf Gas, Petrolimex, and Mobil Unique (a consortium of Mobil, Mitsui, and Unique Gas & Petrochemical), and PTT of Thailand are the major companies involved in the sector. Unique Gas & Petrochemical Plc (UGP), which is involved in the Thai LPG market, could enter the Vietnamese market in the near future. The country's first liquefaction plant at Dinh Co receives gas from the Bach Ho field. It is 100% foreign-owned and is now operating near capacity.

COAL

Vietnam contains coal reserves estimated at 165 million short tons (Mmst), the majority of which is anthracite. Production has increased dramatically since the mid-1990s. In 2002, Vietnam produced just over 14 Mmst, an increase from 11 Mmst the previous year. These increases have resulted in an increase in exports (primarily to Japan) and an increase in coal stockpiles. In 2002, Vietnam exported a record amount of coal, at 5 Mmst. Exports made up one third of the coal industry's sales for the year. China has become a large importer of Vietnamese coal, importing two million tons in 2002. The other large export markets for Vietnam's coal sector include Japan, Thailand, the European Union, Mexico, and Brazil.

The Vietnamese government is promoting the construction of coal-fired power plants. Vinacoal plans to build as many as seven new power plants over the next decade, with a total capacity of 2,170 megawatts (MW). One 100-MW plant at Na Duong is under construction and scheduled to come online in 2004, and six more are under consideration. Vietnam's coal consumption is expected to increase as it becomes a larger electricity producer, with coal-fired power plants eventually accounting for 25% of the country's total electricity production. The Vietnamese government estimates that it will need to use 10.2 Mmst of coal per year by 2010 to meet increasing domestic

demand, which it projects will be as high as 20,000 MW by then. Vietnam previously had focused much more on hydropower, and the shift to coal marks an important change in Vietnam's energy sector.

In March 2003 a large coal bed was discovered in the Red River Delta region of northern Vietnam. It is estimated that the new bed contains 1.64 billion tons of coal. The Vietnam Coal Corporation, Vinacoal, plans to use the new reserve for thermal power plants. Vinacoal has asked the Japanese New Energy and Industrial Technology Development Organization (NeDo) to conduct further studies regarding exploration and exploitation of coal in the region.

ELECTRICITY

Although per capita consumption of electricity in Vietnam is among the lowest in Southeast Asia, demand has been on the rise for the past several years, straining the country's generating capacity. As an emerging market, Vietnam has experienced rapid commercial growth, mass migration to major cities, and rising living standards, all of which have contributed to the country's growing demand for electricity. In 2002, Vietnam had a total electric generating capacity of 8.3 gigawatts (GW). For 2001, hydropower accounted for roughly 60% of electricity generation, while thermal power accounted for about 40%. Electricity demand in Vietnam is forecast to grow 15%-16% a year by 2010. Vinacoal is working to bring seven new coal power facilities online before 2010. Additionally, the state power company is planning to add 16 hydropower plants by 2010. Additionally, power generation facilities in the south are being built to take advantage of the natural gas discoveries offshore. Due to the large amount of investment required to meet forecasted electricity demand EVN is facing pressure to end its monopoly and open the door to the investment in power production and distribution facilities.

The state power company, Electricity of Vietnam (EVN), is working on a plan to develop a national electricity grid by 2020, patching together several regional grids. By 2005, EVN aims to build hydropower plants in the central and central highland regions. Three hydroelectric dams, with capacities of between 285 MW and 370 MW, are planned, and construction of the first at Dai Ninh began in 2001. EVN also plans to increase Vietnam's natural gas consumption, using gas from offshore fields to fuel new power plants. Two small gas-fired plants are currently in operation. Construction of Vietnam's first nuclear power plant is included in the plan, to be completed by 2020.

In March 2004, EVN announced plans to spend \$1.3 billion building and refurbishing power plants in 2004 with a combined capacity of 1,510 MW. The projects include, the add-on combined cycle power plant Phu My 2.1, the hydro electricity station Can Don, the thermo Phu My 3 and Phu My 4 plants and Na Duong. Additional projects include the Song Ba Ha, Bac Binh, Se San 4, Dong Nai 3 and Dong Nai 4 hydro-stations and the Quang Ninh, Ninh Binh extension and the O Mon 600 MW thermal plant. In addition to power plants, the Tan Dinh 500kV power station will be built and the Cai Lay-O Mon section of the Nha Be-O Mon 500kV power transmission line will be erected in 2004.

In early March 2003, the 720-MW Phu My 3 power plant in the Phu My power generating complex in Ba Ria-Vung Tau province commenced operations, thereby pushing up the country's power generating capacity by nearly 10%. The \$450 million plant, which is owned by a consortium led by UK's BP, is the first foreign-invested project to operate under a build-operate-transfer (BOT) model. It took 26 months to complete construction. The state-owned electricity generator and distributor, EVN, will purchase the plant's output under a 20-year power purchase agreement. The development of the natural gas-fired plants in the Phu My complex is helping to offset the country's heavy reliance on hydropower, which historically led to a vulnerable power-generating system, owing to

hydropower's dependence on weather conditions. The Phu My 4 power plant is scheduled to begin producing electricity in May 2004. When the Phu My complex is fully completed in 2005 it will provide an estimated 47% of the country's power.

Foreign companies are becoming involved in the growing Vietnamese power market. EVN and a consortium including Tokyo Electric Power (TEPCO), Sumitomo, and Electricite de France (EdF) plan to construct a 715-MW plant ("Phu My 2-2") in the Mekong Delta. Construction of the facility began in January 2003, and it is planned to begin commercial operation in 2004. The plant is intended to be fueled by gas from Nam Con Son Basin, which is planned to be tapped by the BP, Conoco, and ONGC consortium. BP also received approval for the 700-MW Phu My 3 project, located in the same area, in April 2001. Siemens will be undertaking the construction work for that facility.

Both of these projects are to be built as Build-Operate-Transfer (BOT) projects, where the foreign investors operate the plants for a set period of time. These projects were held up, though, by disagreements over pricing. The foreign investors considered the prices offered by EVN to be below the levels which would give them a sufficient rate of return on capital. The Vietnamese government eventually stepped in to resolve the issue, and the price was set at 4.09 cents per kilowatt hour (kWh).

Foreign governments and NGOs are also providing assistance so that Vietnam can expand its electricity generating capacity. In December 2002, the Dutch government approved a non-refundable aid package to help Vietnam optimize its electricity transmission system and to reduce electricity losses to 10%. The funds will be used towards the purchase of equipment that can identify and overcome breakdowns in electricity transmission.

A North-South power cable transmits electricity from Vietnam's largest generator, the Hoa Binh hydropower plant in the north, to large population centers in the south, linking the country into one electricity grid. The cable has helped to alleviate an electricity shortage in Ho Chi Minh City. Plans are underway to build an underground electric cable, an above-ground cable, and a transformer station in Tao Dan (in the Ho Chi Minh City area). Construction began in mid-2000 and the lines and transformer are set to be inaugurated in June of 2004. The \$56 million project is being funded by the World Bank. The World Bank also is funding a \$201 million project to extend distribution infrastructure into rural areas currently without electricity. The government currently is considering building more cables, including a 500-KV power line from Pleiku to Danang city. If built, the power line would be 188 miles long and cost an estimated \$130 million. EVN submitted a project feasibility study to the government in January 2003, which is under review.

In March of 2004 the Vietnamese government approved the construction of the 2.4 GW Son La hydroelectric generator project. One third of the \$2.3 billion investment will go to resettling tens of thousands of families from the 44,700 hectares to be flooded by the reservoir. Construction is planned to begin October of 2005, with the plant due to be operational in 2015.

Vietnam has entered into agreements to purchase power from China in order to fully meet demand. For 2004 Vietnam is expected to purchase 40 MW, rising to 70 MW in 2006 and 460 MW in 2008. Additionally, Vietnam has agreed to purchase power from Laos starting in 2008. The agreement with China has been undertaken to prevent power shortages in the North.

Renewable energy consumption is growing in Vietnam, and the country has great solar power potential. About 50% of Vietnamese in rural areas do not have access to electricity. A solar power

cooperation program installed a "Vietnamese-French Friendship Solar Station" in Ho Chi Minh City and aims to bring electricity to the southern provinces of Gia Lai, Quang Nam, and Binh Phuoc. The program plans to include other kinds of renewable energy, such as small hydroelectric plants and wind power. The program is operated by Solarlab and is funded by the French Ministry of Foreign Affairs, Electricite de France, and the European Union. The greatest demand for solar power is being seen in the Mekong Delta, Central Highlands and northern mountainous regions.

COUNTRY OVERVIEW

Chief of State: President Tran Duc Luong (since September 1997)

Head of Government: Prime Minister Phan Van Khai (since September 1997)

Independence: September 2, 1945 (from France)

Population (2003E): 81.6 million

Location/Size: Southeast Asia/127,545 square miles, slightly larger than New Mexico

Major Cities: Hanoi (capital), Ho Chi Minh City, Haiphong, Da Nang, Can Tho, Nha Trang, Hue, Nam Dinh, Vung Tau

Languages: Vietnamese, French, Chinese, English, Khmer, tribal languages

Ethnic Groups: Vietnamese (85-90%), Chinese, Hmong, Thai, Khmer, Cham, mountain groups

Religion: Buddhist, Confucian, Taoist, Roman Catholic, indigenous beliefs, Muslim, Protestant

ECONOMIC OVERVIEW

Currency: Dong

Official Exchange Rate (5/28/04): US\$1 = 15,715 Dong

Nominal Gross Domestic Product at Market Exchange Rate (2003E): \$39 billion

Real GDP Growth Rate (2003E): 7.2% **(2004F):** 7.0%

Inflation Rate (2003): 3.1% **(2004F):** 4.5%

Merchandise Exports (2003E): \$19.9 billion

Merchandise Imports (2003E): \$25 billion

Merchandise Trade Balance (2003E): -\$5.1 billion

Major Export Products: Crude oil, textiles and garments, fisheries products, footwear, rice, coffee, rubber, tea

Major Import Products: Petroleum products, machinery and equipment, tractors, tires, steel products, foodstuffs, fertilizer, cement, cotton, textiles, sugar

External Debt (2001E): \$12.9 billion

ENERGY OVERVIEW

Proven Oil Reserves (1/1/04E): 600 million barrels

Oil Production (2003E): 352,507 barrels per day (bbl/d)

Oil Consumption (2003E): 202,000 bbl/d

Net Oil Exports (2003E): 150,507 bbl/d

Natural Gas Reserves (1/1/04E): 6.8 trillion cubic feet (Tcf)

Natural Gas Production (2002E): 79.8 billion cubic feet (Bcf)

Natural Gas Consumption (2002E): 79.8 Bcf

Coal Reserves (2002E): 165 million short tons (Mmst)

Coal Production (2002E): 14.4 Mmst

Coal Consumption (2002E): 9.13 Mmst

Net Coal Exports (2002E): 5.27 Mmst

Electric Generation Capacity (1/1/02E): 8.3 gigawatts (GW)

Electricity Generation (2001E): 29.8 billion kilowatthours (39.9% thermal, 60% hydroelectric)

ENVIRONMENTAL OVERVIEW

Minister of Ministries of Science, Technology and Environment: Nha Tuan Chu

Total Energy Consumption (2001E): 0.76 quadrillion Btu* (0.19% of world total energy consumption)

Energy-Related Carbon Dioxide Emissions (2001E): 46.19 million metric tons (0.2% of world total)

Per Capita Energy Consumption (2001E): 9.6 million Btu (vs. U.S. value of 341.8 million Btu)

Per Capita Carbon Dioxide Emissions (2001E): 0.6 metric tons (vs. U.S. value of 20.2 metric tons)

Energy Intensity (2001E): 4,963 Btu/\$1995 (vs U.S. value of 10,810 Btu/\$1995)**

Carbon Dioxide Intensity (2001E): 0.3 metric tons/thousand \$1995 (vs U.S. value of 0.6 metric tons/thousand \$1995)**

Fuel Share of Energy Consumption (2001E): Oil (50%), Coal (19.7%), Natural Gas (6.6%)

Fuel Share of Carbon Dioxide Emissions (2001E): Oil (59.2%), Coal (33.7%), Natural Gas (6.8%)

Status in Climate Change Negotiations: Non-Annex I country under the United Nations Framework Convention on Climate Change (ratified November 16th, 1994). Signatory to the Kyoto Protocol (signed December 3rd, 1998 - not yet ratified).

Major Environmental Issues: logging and slash-and-burn agricultural practices contribute to deforestation and soil degradation; water pollution and over fishing threaten marine life populations; groundwater contamination limits potable water supply; growing urban industrialization and population migration are rapidly degrading environment in Hanoi and Ho Chi Minh City.

Major International Environmental Agreements: A party to Conventions on Biodiversity, Climate Change, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Ozone Layer Protection, Ship Pollution and Wetlands. Has signed, but not ratified, the Nuclear Test Ban.

* 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.

OIL AND GAS INDUSTRIES

Organization: State-owned PetroVietnam reports to the Industry Ministry after a May 2003 reorganization that removed PetroVietnam's independent ministerial ranking. The company was reorganized in 1990 and now oversees the activities of eight subsidiaries that control functions such as administration, exploration and production, marketing (PetroVietnam Processing and Distribution Company (PVPDC)), training, gas production and distribution (Vietgas), petrochemicals, and information collection.

Major Foreign Oil Company Involvement: BHP, BP, Conoco, Enterprise, Fina, Idemitsu, IPL, Japan National Oil, Mitsubishi, Mobil, Nexen, OMV, Occidental, Pedco, PetroCanada, Petronas Carigali, Statoil, Sumitomo, TotalFina

Sources for this report include: BBC Monitoring International Reports; CIA World Factbook; Economist Intelligence Unit; Global Insight; Petroleum Economist; Petroleum Intelligence Weekly; Saigon Times Daily; U.S. Department of State; U.S. Energy Information Administration;

Vietcombank.com; Vietnam Investment Review; Vietnam News Briefs; World Markets Analysis.

LINKS

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Links to other U.S. Government sites:

[CIA World Factbook - Vietnam](#)

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

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

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