Energy Information Administration

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# COUNTRY ANALYSIS BRIEFS

# Indonesia

Last Updated: January 2007

# **General Background**

Indonesia is the only Southeast Asian member of OPEC, although the country became a slight net oil importer in 2004. Indonesia has the largest population in Southeast Asia and the fourth largest population in the world (behind China, India, and the United States). In 1962, Indonesia joined the Organization of the Petroleum Exporting Countries (OPEC) and became a net importer of oil in 2004 (see the OPEC Fact Sheet for more information).



# Oil

Indonesia's oil production has declined in recent years.

According to Oil & Gas Journal (OGJ), Indonesia had 4.3 billion barrels of proven oil reserves as of January 2007. Oil production in Indonesia has decreased steadily during the last decade, owing to disappointing exploration efforts and declining production at Indonesia's large, mature oil fields.

## **Sector Organization**

In October 2001, Indonesia's oil sector experienced significant reforms with the passage of the new Oil and Gas Law No. 22/2001. The law forced state-owned oil company Pertamina to relinquish its role in granting new oil development licenses and limited the company's monopoly in upstream activities. Pertamina's regulatory and administrative functions were transferred to the new regulatory body, Badan Perlaksanaan Minyak Gas, or BP Migas. Pertamina was formed into the limited liability company PT Pertamina (Persero) by presidential decree in 2003, although it remains a state-owned entity. PT Pertamina is laying the groundwork for full privatization to take place at some point in the future.

Indonesia's oil sector is dominated by several international oil companies (IOCs). The single largest oil producer is Chevron, which controls Caltex Pacific and Unocal's former Indonesian assets. BP, ConocoPhillips, ExxonMobil, and Total are also significant oil producers in the country, with China's state-owned companies PetroChina and China National Offshore Oil Corporation (CNOOC) also having a considerable presence.

The liberalization of Indonesia's downstream oil and gas sector has been under discussion for several years. Pertamina maintained its retail and distribution monopoly for petroleum products until July 2004, when the first licenses for retail sale of petroleum products were granted to BP and Petronas of Malaysia. However, Pertamina maintains a dominant position in Indonesia's downstream sector, operating all eight of the country's refineries. The government is still promising to open the sector to full competition, although progress has been slow to date.

Indonesia historically has maintained consumption subsidies for domestic retail fuel consumers, with products being sold at a discount from world market prices. After a series of modest increases in petroleum prices over the past few years, President Yudhoyono announced a sharp rollback of subsidies in September 2005. Prices of retail gasoline and diesel rose by an average

of 125 percent as a result. Despite this one-time move, fuel consumption subsidies still take up a sizeable portion of government expenditures.

## **Exploration and Production**

Indonesia's largest oil producing fields are mature and declining in output. During 2006, Indonesian oil production averaged 1.1 million barrels per day (bbl/d), of which 81 percent, or 894,000 bbl/d, was crude oil. Indonesia's total oil production has dropped by 32 percent since 1996, as many of the country's largest oil fields continue to decline in output. Indonesia's current OPEC crude oil output quota is set at 1.45 million bbl/d, well above the country's production capacity. During 2006, Indonesia's oil consumption reached 1.2 million bbl/d, making it a slight net importer of oil for the year.



Source: EIA International Energy Annual; Short-Term Energy Outlook

Indonesia's two largest oil fields are Minas and Duri, which are operated by Chevron and located along the eastern coast in Sumatra. However, the Minas and Duri fields are mature and production at these locations has been on the decline. Various oil exploration projects are underway in Indonesia. However, to date, these projects have not brought sufficient new oil resources onstream to offset the declining production levels at older fields.

One of Indonesia's last undeveloped oil fields is the Cepu block, located in East and Central Java. ExxonMobil's local subsidiary discovered 250 million barrels of proven oil reserves in the Cepu Contract Area in 2001, and today the company estimates the area could hold up to 600 million barrels of recoverable oil reserves. ExxonMobil hesitated to develop the promising oil resource, however, because the company's contract for the area was set to expire in 2010. After several years of negotiations, in March 2006 ExxonMobil and PT Pertamina signed a joint operation agreement (JOA) for the Cepu field. Each company will have a 45 percent stake in the project, with the remaining 10 percent held by provincial governments in East and Central Java. The project is scheduled to begin production in 2008, with peak production expected to reach 180,000 bbl/d.

BP Migas and the Indonesian government have introduced policies aimed at increasing investment in the country's upstream sector. BP Migas set up various incentive programs for firms to develop marginal oil resources throughout the country that would not otherwise be attractive to international companies. In October 2006, the government waived import taxes on capital goods for oil and natural gas exploration and production. BP Migas has also held several competitive bidding rounds for new upstream projects throughout Indonesia. During 2006, BP Migas concluded its fifth round of acreage offerings in which it awarded dozens of new exploration and production licenses to companies. During the fifth bidding round, a handful of exploration blocks were awarded to international oil majors, such as ExxonMobil and ConocoPhillips, although the majority of tenders were won by smaller Indonesian firms.

## Downstream/Refining

According to *OGJ*, as of January 2007, Indonesia had 992,745 bbl/d of refining capacity at 8 facilities, all of which are operated by PT Pertamina. The largest refineries are the 348,000-bbl/d Cilicap facility in Central Java, the 241,000-bbl/d Balikpapan plant in Kalimantan, and the

125,000-bbl/d Balongan refinery in West Java. PT Pertamina announced in August 2006 that it plans to spend \$10 to \$11 billion on boosting Indonesia's downstream sector over the next 5 years. As part of this effort, there have been various proposals to upgrade existing refineries or build new facilities, as well as to expand the country's transmission, distribution, and marketing network. However, of the numerous proposals that have been offered, the only project that has moved forward significantly is the planned refinery at Pare-Pare. Local firm PT Intanjaya Agromegah Abadi, with financial backing from Saudi investors and U.S.-based Inter Global Technologies, began construction on the facility in February 2006, which is slated to be Indonesia's first privately-owned refinery. The facility will have a nameplate capacity of 300,000 bbl/d and is expected to be completed in 2010.

Various other refinery projects have also been proposed. In December 2006, PT Pertamina and China's Sinopec completed a feasibility study of a proposed 200,000-bbl/d refinery in Tuban, East Java. While a Memorandum of Understanding (MOU) was reached between the two companies in 2005, there are no firm plans to begin construction on the proposed project. PT Elnusa, a subsidiary of PT Pertamina, has studied the possibility of building a 300,000-bbl/d refinery in a consortium with Venezuela's Petroleos de Venezuela SA (PdVSA), Iran's National Iranian Oil Refinery and Distribution Company (NIORDC), and Japanese investors.

# **Natural Gas**

Natural gas production has increased in recent years in Indonesia, although the country is facing a declining global LNG market share. According to *OGJ*, Indonesia had 97.8 trillion cubic feet (Tcf) of proven natural gas reserves as of January 2007. Indonesia is the tenth largest holder of proven natural gas reserves in the world and the single largest in the Asia-Pacific region. According to the Indonesian government, more than 70 percent of the country's natural gas reserves are located offshore, with the largest reserves found off Natuna Island, East Kalimantan, South Sumatra, and West Papua (also known as Irian Jaya).

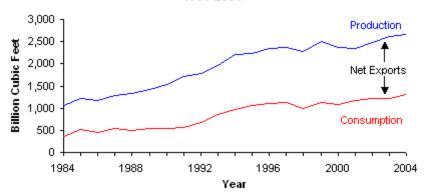
## **Sector Organization**

As with the oil sector, Indonesia's natural gas sector underwent reforms with the passage of the Oil and Gas Law No. 22/2001. State-owned Pertamina was forced to relinquish its monopoly status in upstream natural gas projects, and BP Migas now holds primary regulatory authority in the sector. PT Pertamina, the limited liability corporation that was formed from its predecessor, remains an important player in Indonesia's natural gas exploration and production activities. PT Pertamina and six major international companies dominate Indonesia's natural gas industry, accounting for more than 90 percent of the country's production. The six companies are: Total (estimated market share in 2004, 30 percent), ExxonMobil (17 percent), Vico (a BP-Eni joint venture, 11 percent), ConocoPhillips (11 percent), BP (6 percent), and Chevron (4 percent). Natural gas transmission and distribution activities are carried out by the state-owned utility Perusahaan Gas Negara (PGN).

## **Exploration and Production**

In 2004, Indonesia produced 2.6 Tcf of natural gas while consuming 1.3 Tcf. Also in 2004, Indonesia exported about 1.2 Tcf of liquefied natural gas (LNG) to Japan, South Korea, and Taiwan. Historically, Indonesian natural gas production has been geared toward export markets, but the country has made an effort to shift natural gas toward domestic uses in recent years as a substitute for the country's declining oil output. However, Indonesia's limited natural gas transmission and distribution network remains an obstacle to further domestic consumption.

## Indonesia's Natural Gas Production and Consumption, 1984-2004



Source: EIA International Energy Annual 2004

Indonesia's two major LNG production plants, Arun and Bontang, have experienced declining production in recent years. To help make up for this shortfall, Indonesia has vigorously engaged in natural gas exploration activities, as it strives to meet its long-term LNG contract obligations and also to satisfy increasing domestic demand. Several new projects are under development, the most high profile of which is the Tangguh LNG project in West Papua (see the LNG Section below for further details).

## **Pipelines**

## Domestic System

PGN operates more than 3,100 miles of natural gas distribution and transmission lines, comprising nine regional networks. The networks have limited interconnectivity, which has restrained further growth of domestic natural gas consumption. PGN has plans to build four additional domestic natural gas pipelines to improve the country's natural gas network connectivity, known as the Integrated Gas Transportation System (IGTS). The IGTS is designed to eventually link the islands of Sumatra, Java, and Kalimantan via a 2,600-mile pipeline. The World Bank, Asian Development Bank, and PGN are jointly financing the project. So far, the planned interconnection is partially complete, and is scheduled to be fully operational in 2010 with a capacity to transport 2.2 Bcf/d of natural gas.

## International Connections

Indonesia began exporting natural gas via pipeline in 2001, with the opening of the 400-mile, 325-million cubic feet per day (MMcf/d) subsea pipeline from West Natuna to Singapore. In August 2002, Indonesia began delivering 250 MMcf/d of piped natural gas to Malaysia's Duyong platform. And in August 2003, a second natural gas connection to Singapore was opened when the South Sumatra-Singapore pipeline was completed. This line reached 350-MMcf/d maximum capacity during 2006 and will deliver natural gas to Singapore over a 20-year contract (see the Singapore Country Analysis Brief for more information).

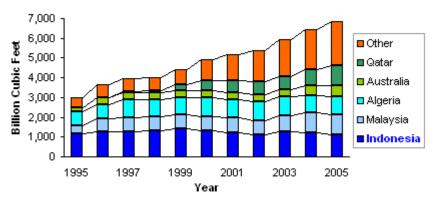
Indonesia has played a leading role in discussions of the proposed "Trans-ASEAN Gas Pipeline" (TAGP), which envisions the establishment of a transnational pipeline network linking the major natural gas producers and consumers in Southeast Asia. The TAGP concept was initially proposed in 1997 as part of ASEAN's "Vision 2020" initiative. In July 2002, energy ministers from the ASEAN countries signed a memorandum of understanding to study the viability of the project, although much work remains to be completed to fully realize the project's goals (for more information, see <u>ASEAN's Plan of Action for Energy Cooperation</u>, 2004-2009).

## **Liquefied Natural Gas**

Media reports suggest that Indonesia was surpassed by Qatar in 2006 as the single largest exporter of LNG.

Indonesia is a leading LNG exporter. Indonesia was the world's largest exporter of LNG in 2005, although some reports suggest that the country was surpassed by Qatar sometime in 2006. During 2005, Indonesia exported 23 million tons (MMt, or 1,123 Bcf) of LNG, or about 16 percent of the world total.

## Global LNG Exports by Origin, 1995-2005



Source: EIA Natural Gas Monthly (August 2006); IEA Natural Gas Information 2006

Indonesia produces LNG from two terminals: the Bontang facility in Badak, East Kalimantan and the Arun plant in North Sumatra. The Bontang LNG terminal was Indonesia's first to begin commercial operations, shipping its first LNG exports in 1977. The eight-train Bontang plant is the largest LNG facility in the world, with a capacity to produce 21.6 MMt/y (1.1 Tcf/y). However, production has stood below full capacity in recent years, with 2004 output estimated at 19.6 MMt (955 Bcf) of LNG. The Bontang terminal is operated by PT Badak NGL Company, 55 percent owned by PT Pertamina, 20 percent by Vico (a BP-Eni joint venture), 10 percent by Total, and 15 percent by the Japan Indonesia LNG Company (JILCO). Recently, the Bontang plant has faced underproduction for a variety of reasons, which forced the Indonesian government to divert some natural gas supplies to domestic fertilizer companies. In 2005, Bontang LNG supply contracts were renegotiated so that more of the project's output could supply domestic customers.

The Arun LNG facility is operated by PT Arun Natural Gas Liquefaction Company, which is 55 percent owned by PT Pertamina, 30 percent by ExxonMobil, and 15 percent by JILCO. Arun is a six-train facility with a total capacity to produce more than 10 MMt/y (487 Bcf/y) of LNG, although in 2004 production stood at 6.4 MMt (312 Bcf). ExxonMobil supplies LNG for the Arun plant from its nearby Aceh fields, although the company estimates that it has depleted 90 percent of the recoverable reserves. This shortfall also contributed to the government's effort to redirect some natural gas production designated for export to domestic users. In 2005, this forced the Indonesian government to turn to spot LNG markets to meet its contractual obligations to foreign buyers.

## Tangguh LNG Project

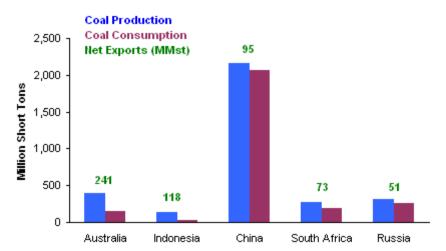
One project that holds promise for Indonesia's future in worldwide LNG markets is the BP-led Tangguh project in Papua province. The Tangguh fields contain 14.4 Tcf of proven natural gas reserves found onshore and offshore the Wiriagar and Berau blocks. The project received final approval from the government of Indonesia in March 2005, and is led by its operator BP (37.16 percent stake) and a consortium including the China National Offshore Oil Corporation (CNOOC, 16.96 percent), Mitsubishi (16.3 percent), Nippon Oil (12.23 percent), KG (10 percent), and LNG Japan (7.35 percent). The first LNG train is set to begin production in 2007, with the second due for completion by 2009. The project will initially supply 4.2 MMt/y (205 Bcf/y) of LNG, eventually reaching 8.4 MMt/y (410 Bcf/y) when both trains are producing. According to BP, the Tangguh LNG facility has already secured four long-term LNG sales contracts, including: the Fujian LNG project in China, K-Power in Korea, POSCO in Korea, and Sempra Energy in Mexico.

## Coal

Indonesia's coal production has increased in recent years, and today the country is one of the world's chief coal exporters.

According to EIA estimates, Indonesia has 5.5 billion short tons of recoverable coal reserves, of which 85 percent is lignite and sub-bituminous. Roughly two-thirds of the country's coal reserves are located in Sumatra, with the balance located in Kalimantan, West Java, and Sulawesi. In 2004, Indonesia produced 142 million short tons (MMst) of coal, up about 68 percent since 2000. Coal consumption has remained relatively flat in Indonesia, with 2004 consumption at 24 MMst. According to EIA statistics, Indonesia was the second largest net exporter of coal in the world in 2004, with 118 MMst of apparent net exports.

## World's Top Net Exporters of Coal, 2004



Source: EIA International Energy Annual 2004

Indonesia adopted a new National Coal Policy in January 2004, which seeks to promote the development of the country's coal resources to meet domestic requirements and to increase coal exports in the long-run. However, a recent report from the U.S. Embassy in Jakarta suggests that the growth in coal production in Indonesia has been export-oriented, owing to the higher international price fetched by coal producers. Therefore, Indonesian coal exports may be vulnerable to outside market factors. Domestic coal demand has remained rather flat, despite government efforts to substitute relatively cheaper coal for oil or natural gas.

# **Electricity**

Indonesia's power sector faces shortages on electricity due to underinvestment in new generating capacity.

In 2004, Indonesia had 25 gigawatts (GW) of installed electricity generating capacity. During 2004, Indonesia generated 112.6 billion kilowatthours (Bkwh) of electricity, of which 86 percent came from conventional thermal sources (oil, natural gas, and coal), 8 percent from hydroelectric sources, and 5 percent from geothermal and other renewable sources. In 2004, Indonesia consumed 104.7 Bkwh of electric power, showing net electricity exports during the year.

## **Sector Organization**

Indonesia's power generation sector is dominated by the state-owned electric utility PT PLN (Persero), formerly known as Perusahaan Listrik Negara. PT PLN operates 45 power plants, or roughly two-thirds of the country's generating capacity. Indonesia's electricity sector faces severe underinvestment, and the country's energy officials have set out on a program to expand generation capacity. The plan, known as the "10,000 MW Acceleration Program", aims to add 10,000 MW of new capacity by 2010.

In September 2002, the government passed new legislation aimed at strengthening regulatory guidance in the power sector and promoting new investment in power projects. According to the 2002 Electricity Law, certain markets for power generation will be open for competition from 2007. Retail market competition is scheduled for 2008, when power producers will be able to sell directly to their customers rather than through PT PLN. The 2002 legislation also established a new regulatory body, the Power Market Supervisory Agency, and created incentives for rural electrification programs. However, little progress has been made on these proposals, mostly because foreign and private companies have shown little interest in investing in Indonesia's electricity sector. Some of the previously-cancelled IPP projects have been revived, but many of them remain in a stalemate over payment disputes.

# Indonesia's Electricity Generation by Source, 1984-2004 Conventional Thermal Hydroelectric Geothermal/Other Renewables

Source: EIA International Energy Annual 2004

1988

1984

One of the major obstacles to increasing Indonesia's power generating capacity is pricing. The government sets the price at which PT PLN sells electricity in the country, and since the Asian Financial Crisis, it has often had to sell electricity at less than the cost of production. PT PLN's financial difficulties, coupled with its inability to increase power prices, have prevented the company from investing in new infrastructure projects to build up capacity.

1996

2000

2004

## **Conventional Thermal**

The Indonesian government has stated that it would like to promote natural gas-fired and coal-fired power stations so that the country can utilize its domestic resource base and shift away from oil-fired power generation. PT PLN has prepared numerous proposals for new power plant projects, which it will offer to investors as part of its 10,000 MW Acceleration Program. However, foreign investors have largely avoided the Indonesian power sector in recent years due to the poor financial condition of PT PLN and the uncertain regulatory climate in the electricity sector.

## **Hydroelectric**

In 2004, Indonesia generated 9.4 Bkwh of electricity from hydroelectric sources, representing about 8 percent of the country's total generation. Industry reports suggest that Indonesia holds vast hydropower potential, but that the country has yet to embark on the same sorts of large hydroelectric facilities as seen elsewhere in the region. Since hydropower plants require huge upfront capital investments, it is unlikely that PT PLN or other companies in Indonesia will have the incentive to invest in hydroelectric projects in the near term.

## **Geothermal and Other Renewables**

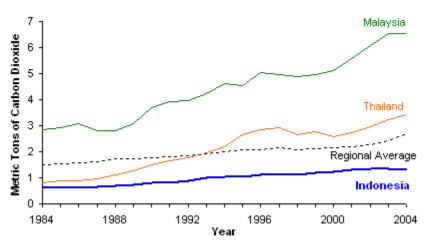
According to EIA data, Indonesia generated 6 Bkwh of electricity from geothermal and other renewable sources in 2004, making up about 5 percent of the country's total electricity supply. According to outside sources, Indonesia today has more than 800 MW of geothermal capacity, making it the fourth largest producer of geothermal power in the world behind the U.S., Philippines, and Mexico. The Indonesian government estimates that the country holds large untapped geothermal resources, with the potential to supply up to 21 GW of additional generating capacity. However, several plans for large-scale geothermal development projects were scrapped when Indonesia faced economic turmoil during the Asian Financial Crisis.

## **Environment**

Indonesia's per capita carbon emissions remain low by regional Indonesia's major environmental challenges involve supporting its large population. Air and water pollution have reached critical levels, especially on the most populated island of Java. Indonesia's per capita carbon dioxide emissions remain relatively low, but the large size of the country (it has

comparisons, but the country faces severe environmental challenges. the fourth largest population in the world) makes it a considerable emitter of carbon dioxide in the region. Indonesia recently completed its phase-out of leaded gasoline, with a complete ban having come into force in 2005.

## Regional Per Capita Carbon Emissions, 1984-2004



Source: EIA International Energy Annual 2004

Click <u>here</u> to view the full environmental report for Indonesia.

# **Profile**

# **Country Overview**

President	Susilo Bambang Yudhoyono (since 20 October 2004)
Location	Southeastern Asia, archipelago between the Indian Ocean and the Pacific Ocean
Independence	17 August 1945 (independence proclaimed); 27 December 1949 (Netherlands recognizes Indonesian independence)
Population (2006E)	245,452,739

## **Economic Overview**

Economic Overview	
Minister of Industry	H. Fahmi Idris
Currency/Exchange Rate (22 December 2006)	1 USD = 9,079.77 Indonesian Rupiahs (IDR)
Inflation Rate (2005E)	10.5%
Gross Domestic Product (GDP, 2005E)	\$281.1 billion
Real GDP Growth Rate (2005E)	5.6%
Unemployment Rate (2005E)	11.8%
External Debt (2005E)	\$135 billion
Exports (2005E)	\$86.2 billion
Exports - Commodities	oil and gas, electrical appliances, plywood, textiles, rubber
Exports - Partners (2005E)	Japan 21.1%, US 11.5%, Singapore 9.2%, South Korea 8.3%, China 7.8%, Malaysia 4%
Imports (2005E)	\$63.9 billion
Imports - Commodities	machinery and equipment, chemicals, fuels, foodstuffs
Imports - Partners (2005E)	Singapore 16.4%, Japan 12%, China 10.1%, US 6.7%, Thailand 6%, South Korea 5%, Saudi Arabia 4.7%, Australia 4.4%

	\$0.9 billion
Energy Overview	
Minister of Energy and Mineral Resources	Purnomo Yusgiantoro
Proven Oil Reserves (January 1, 2006E)	4.3 billion barrels
Oil Production (2006E)	1,105 thousand barrels per day, of which 81% was crude oil.
Oil Consumption (2006E)	1,150 thousand barrels per day
Crude Oil Distillation Capacity (2006E)	992,700 barrels per day
Proven Natural Gas Reserves (January 1, 2006E)	97.8 trillion cubic feet
Natural Gas Production (2004E)	2.7 trillion cubic feet
Natural Gas Consumption (2004E)	1.3 trillion cubic feet
Recoverable Coal Reserves (2003E)	5,476.3 million short tons
Coal Production (2004E)	142.3 million short tons
Coal Consumption (2004E)	23.9 million short tons
Electricity Installed Capacity (2004E)	25 gigawatts
Electricity Production (2004E)	112.6 billion kilowatt hours
Electricity Consumption (2004E)	104.7 billion kilowatt hours
Total Energy Consumption (2004E)	4.7 quadrillion Btus*, of which Oil (53%), Natural Gas (30%), Coal (12%), Othe Renewables (3%), Hydroelectricity (2%), Nuclear (0%)
Total Per Capita Energy Consumption ((Million Btu)E)	19.7 million Btus
Energy Intensity (2004E)	5,377.4 Btu per \$2000-PPP**
Environmental Overview	
Environmental Overview Energy-Related Carbon Dioxide Emissions (2004E)	307.7 million metric tons, of which Oil (56%), Natural Gas (24%), Coal (16%)
Energy-Related Carbon Dioxide	307.7 million metric tons, of which Oil (56%), Natural Gas (24%), Coal (16%)  1.3 metric tons
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Energy-Related Carbon Dioxide Emissions (2004E) Per-Capita, Energy-Related Carbon Dioxide Emissions ((Metric Tons of Carbon Dioxide)E) Carbon Dioxide Intensity (2004E) Environmental Issues Major Environmental Agreements  Oil and Gas Industry	1.3 metric tons  0.4 Metric tons per thousand \$2000-PPP**  deforestation; water pollution from industrial wastes, sewage; air pollution in urban areas; smoke and haze from forest fires  party to: Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94 Wetlands signed, but not ratified: Marine Life Conservation  Mixed. State-owned PT Pertamina maintains an important role in the oil and
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Energy-Related Carbon Dioxide Emissions (2004E)  Per-Capita, Energy-Related Carbon Dioxide Emissions ((Metric Tons of Carbon Dioxide)E)  Carbon Dioxide Intensity (2004E)  Environmental Issues  Major Environmental Agreements  Oil and Gas Industry  Organization  Foreign Company Involvement	1.3 metric tons  0.4 Metric tons per thousand \$2000-PPP**  deforestation; water pollution from industrial wastes, sewage; air pollution in urban areas; smoke and haze from forest fires  party to: Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94 Wetlands signed, but not ratified: Marine Life Conservation  Mixed. State-owned PT Pertamina maintains an important role in the oil and gas sectors, while production is dominated by international oil majors.  BP, Chevron, CNOOC, ConocoPhillips, ExxonMobil, Inpex, KG, Mitsubishi, Nippon Oil, PetroChina, Petronas, Total, Vico

\* 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 Environmental Brief on Indonesia

EIA - Country Information on Indonesia

## **U.S. Government**

CIA World Factbook - Indonesia

U.S. Embassy in Jakarta

U.S. Embassy - Petroleum Report Indonesia: 2005-2006

U.S. State Department Background Notes on Indonesia

## **Foreign Government Agencies**

**BP Migas** 

Indonesian Embassy in the United States

Indonesian Ministry of Energy and Mineral Resources

## **Associations and Institutions**

Asia-Pacific Economic Cooperation (APEC)

Asian Development Bank (ADB) Indonesia page

Association of Southeast Asian Nations (ASEAN)

Organization of the Petroleum Exporting Countries (OPEC)

World Bank Indonesia page

## Oil and Natural Gas

**BP Indonesia** 

BP's Tangguh LNG Project page

Chevron Indonesia

PT Pertamina

PT Pertamina-EP (Exploration and Production subsidiary)

PT

## **Electricity**

PT Perusahaan Listrik Negara (PLN)

## Sources

AFX Asia

Asia Pulse

Asia Times

**Associated Press** 

**CIA World Factbook** 

**Dow Jones Commodities Service** 

**Dow Jones Newswires** 

Energy Intelligence Group FACTS Global Energy

**Financial Times** 

Gas Matters Today

Global Insight

Hart's Global Refining and Fuels Reports

**IHS Energy** 

International Oil Daily

The Jakarta Post

NewsBase Asia Oil and Gas Monitor

Offshore

Oil & Gas Journal

Petroleum Economist

Petroleum Intelligence Weekly

Platts Commodity News

Platt s Oilgram News
Power in Asia
Reuters
The Straits Times
Upstream
U.S. Embassy in Jakarta
U.S. Energy Information Administrati on
Wall Street Journal Asia
World Gas Intelligence
Xinhua News Agency

# **Contact Info**

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