PETROLEUM PRODUCT CONSUMPTION AND REFINING

Overview

In 2000, Indonesia's production of petroleum-based fuels and non-fuels rose slightly to 1,022.3 B/D (162.5 million liters/day), largely due to increased fuel production. Most of the petroleum products refined in Indonesia are destined for domestic consumption. Consumption increased in 2000 to 54.8 million kiloliters (KL), up from 50.8 million KL in 1999 and 48.1 million KL in 1999. Consumption increased in nearly all categories of fuel, with the strong likelihood that a significant part of the increase resulted from smuggling of Indonesian fuel products to neighboring countries. In 2000, fuel product imports rose to 90.0 million barrels, at a cost of $3.0 billion and up sharply from 1999's 79.9 million barrels.

Domestic Consumption

According to the Ministry of Energy and Mineral Resources, domestic demand for oil products rose eight percent to 54.8 million KL in 2000 from 50.8 million KL in 1999. The Government has predicted domestic demand will increase to 58.8 million KL in 2001, due to more positive GDP growth projections. Domestic sales of fuel products during the first half of 2001 reached 30.0 million KL. The majority of domestic consumption is for transportation (47 percent), industry (22 percent), household use (23 percent) and electric power (8 percent). The transportation sector uses largely automotive diesel oil (ADO), while households are the largest consumers of kerosene.

Pertamina's Downstream Directorate is responsible for the distribution of fuel products to end-users from 166 storage depots throughout Indonesia. The Directorate has established eight regional representative offices to market the products. Fuel products are transported via an elaborate pipeline network and by tank trucks, rail tank wagons, tank vessels and barges. Pertamina controls the sale of gasoline and automotive diesel by direct ownership and franchise of close to 3,000 gasoline stations nationwide. The private sector is also involved in selling kerosene. The selling price of fuel oil on the domestic market is determined by the government, which applies a uniform tariff for each type of fuel throughout Indonesia.

Domestic Fuel Consumption
(Million Liters)

Products	1998	1999	2000
Automotive Diesel Oil	19,674.0	19,835.9	21,734.7
Gasoline	10,971.7	11,515.4	12,421.8
Kerosene	10,144.5	11,926.7	12,455.2
Fuel Oil	5,229.3	5,429.1	6,013.1
Industrial Diesel Oil	1,271.8	1,518.4	1,451.2
Avtur	796.9	545.2	744.1
Avgas	5.7	5.6	4.6
Total	**48,099.7**	**50,776.3**	**54,824.7**

Refining Capacity

Indonesia has nine oil refineries, all owned and operated by state oil and gas company Pertamina, with a combined installed capacity of 1.06 million B/D. The nine refineries are located in Sumatra, Java, East Kalimantan and Irian Jaya. They produce a mix of oil fuels (diesel, fuel oil and kerosene), liquefied natural gas, secondary fuels (such as naptha) and non-fuels (such as asphalt and lubricants).

Pertamina is operating its refineries at a combined rate of 99.9% of total capacity of 1.057 million b/d. There are no refinery shutdowns planned at any of the Indonesian refineries for the remainder of 2001.

Oil Refining Plants

Refinery	Installed Capacity (1000b/d)	Crude Processed 2000
Pangkalan Brandan	5.0	3.4
Dumai	120.0	123.6
Sungai Pakning	50.0	46.2
Musi	135.2	122.2
Cilacap	348.0	323.9
Balikpapan	260.0	273.6
Balongan	125.0	119.9
Kasim	10.0	7.0
Cepu	3.8	2.5
TOTAL	**1,057.0**	**1,022.4**

Fuel Imports

Indonesia remained a net exporter of crude oil and products in 2000, although industry analysts predict that barring any new major discoveries of oil, Indonesia will become a net importer early in this century. Although the gross output of Indonesia's nine refineries is greater than domestic consumption, refined fuel products for which there is a shortfall in Indonesian production, and crude oil for blending, must still be imported.

In 2000, fuel product imports rose to 90.0 million barrels, at a cost of $3.0 billion and up sharply from 1999's 79.9 million barrels. This level of fuel product consumption approached 1997's pre-crisis level of 95 million barrels. While the largest import product category was automotive diesel oil, imports of industrial diesel oil, fuel oil, and High Octane Mogas Component rose significantly and kerosene imports increased by 400 percent in 1999 and 6.9 percent in 2000.

A number of factors converged to cause a shortage of gasoline in Jakarta and elsewhere on Java-Bali during the month of July 2000, including the resurgence of demand described above. The Balongan refinery was shut down from June 22-July 25 due to a breakdown in the main blower unit and associated problems. As a result of an oil spill from the tanker King Fisher on April 1, the Cilacap refinery was unable to receive its normal level of supplies until the spill was fully cleaned up on May 9. These problems were further compounded by an accidental explosion at the Balikpapan refinery on August 7. World market constraints meant that Pertamina had difficulties purchasing additional supplies of gasoline. Various parts of Java also saw spot shortages of gasoline, automotive diesel, and kerosene in mid-2001.

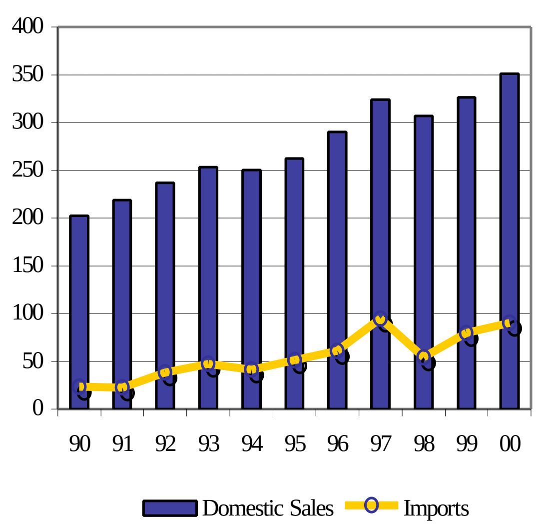
Pertamina adopted a four-pronged approach to source adequate supplies of fuel for Indonesia's domestic market:

- production from Pertamina refineries;
- time-limited contracts for fuel imports from the Middle East;
- spot product purchases from Singapore; and
- overseas crude processing deals (CPD).

Pertamina resorted to overseas crude processing in late 2000 for the first time in more than a decade. In its first CPD with Shell Singapore, Pertamina delivered domestic Minas crude and diverted imported Arabian Light to Shell's 436,000 b/d Pulau Bukom refinery in Singapore. Pertamina processed a combined average of about 50,000 b/d of domestic and imported crude from October to December 2000 and then again from January to March 2001. The deal was not subsequently renewed.

Pertamina is now negotiating another CPD with Caltex Singapore with a target fee of $1.70-$1.80 per barrel. The figures are based on a calculation of Pertamina's own cost basis at its most economical refinery. Different from the earlier Shell deal, Caltex would procure the crude and charge Pertamina on a crude plus freight plus fee basis.

Domestic Sales and Imports of Fuel Products (In Million Barrels)



Pricing

Petroleum product prices are government-administered and remain a matter of great sensitivity in Indonesia. Kerosene, diesel and fuel oil prices remain heavily subsidized and continue to be cross-subsidized by premium gasoline to minimize the impact on lower income groups.
After postponement of an increase originally planned for April 1, the Indonesian Government raised fuel prices by an average of 12 percent on October 1, 2000. (The new prices were still substantially below world prices.) This was the first general fuel price increase since 1993. Pertamina, which has the authority to set prices on premium gasoline, had earlier raised the prices of "Premix," an automotive fuel with additives, and "Super TT," unleaded gasoline, effective April 8. The price of Premix was increased 15.3 percent to Rp 1,500/liter (US 16.6 cents at Rp 9000/US$) and Super TT by 14.3 percent to Rp 1,600/liter (US 17.8 cents).

The Indonesian government instituted a second, selective price increase on April 1, 2001. According to Presidential Decree no. 45/2001, dated March 29, 2001, fuel consumers would pay different prices based on membership in three groups.

- Group I prices applied to all fuel products consumed by household and small business entities. The prices also applied to gasoline, automotive diesel oil (ADO), industrial diesel oil (IDO), and fuel oil used by local transportation companies and Indonesia's state electricity company PLN. These prices remained unchanged from October 2000, and represent about 77 percent of Indonesia's fuel consumption.

- Group II prices were set at international levels and apply to petroleum production sharing contractors, mining contracts of work (excluding coal), and international shipping lines. Group II fuel consumption is negligible.

- Group III prices applied to the industrial sector, service sector, and the fishing industry (both fishing vessels and barges or tankers carrying fuel for the fishing industry). Prices were set at 50 percent of the international market price and represent 23 percent of Indonesian fuel consumption.

The Indonesian Government instituted a third round of price increases, averaging 30 percent, on June 15, 2001, for Group I consumers. The price increase included a 26.1 percent increase in the price of premium gasoline, 14.3 percent for kerosene, 50 percent for automotive diesel oil (ADO), 82 percent for industrial diesel oil (IDO) and 125 percent for marine fuel oil (FO). With an assumption of domestic fuel consumption at 52.7 million kiloliters, the fuel price hike was projected to cut the government's fuel subsidy from Rp 66.8 trillion to Rp 53.7 trillion. Fuel subsidy costs for the first six months of 2001 had already reached Rp 35.17 trillion.

For budgetary purposes, the GOI assumes an estimated annual crude oil price and an exchange rate for the year. Any deviation in the actual world price of crude oil and/or a change in the rupiah exchange rate vis-à-vis the dollar affects the budget's net oil profit or oil product subsidy. In its 2002 budget, the GOI calculated a $22.00/barrel crude oil price and an exchange rate of Rp 9,000 to the U.S. dollar. The budget assumes a domestic oil production level of 1.232 million barrels per day and incorporates a 30-percent average fuel price increase in January. If implemented, the price increase would reduce the Indonesian Government's fuel subsidy burden from Rp 53.7 trillion in 2001 (21 percent of central government spending) to Rp 32.3 trillion (13 percent).

Domestic Fuel Products Prices
(Rp/Liter)

Product	May 5 1998	May 16 1999	Oct 1 2000	June 15* 2001
IDO	500	500	550	1,000
Fuel Oil	350	350	400	900
Kerosene	350	280	350	400
Gasoline	1,200	1,000	1,150	1,450
ADO	600	550	600	900

*)Prices applied to households and small business entities. Prices at Pertamina's pump stations including 10% Value Added Tax

Unleaded Gasoline

In one of his last decisions in October 1999, the outgoing Minister of Mines and Energy signed a ministerial decree stipulating an increase in unleaded gasoline use by 2003. To meet this goal, the government will need to increase unleaded gasoline production capacity. Due to financial difficulties, however, the government delayed the construction of three catalytic reformer units (CRU) needed to produce unleaded gasoline. The originally planned CRU projects, at an estimated cost of $225.2 million, were to be installed at the Musi refinery (13,500 B/D capacity), the Balikpapan refinery (8,000 B/D) and the Cilacap refinery (20,000 B/D). Despite the delay, the government remains committed to implementing its “Blue Sky” program to eliminate leaded fuel.

Pertamina and the Indonesian Government took the first step toward this goal with the July 2001 phase-out of leaded gasoline sales in the greater Jakarta area. Pertamina adopted a transitional arrangement, increasing imports of High Octane Mogas Component (HOMC) to substitute for the use of tetraethyl lead used to boost gasoline octane levels. Pertamina also revamped its Blue Sky strategy eventually to expand unleaded gasoline production by dropping the Musi refinery project and focusing on new facilities and upgrades at the Balongan and Cilacap refineries.

U.S. company UOP LLC. will complete the Front End Engineering Design study by mid-December 2001 for the installation of a grassroots naphtha complex at the Balongan refinery. The 52,000 barrels per stream day (BPSD) complex will cost an estimated US $163 million. Pertamina is also conducting a technical evaluation of two projects for a total estimated cost of US $82 million at Cilacap: a revamp and upgrade of existing reformers to add processing capacity of 7,000 BPSD of heavy naphtha and installation of a new 21,000 BPSD light naphtha isomerization unit.

Public Refineries

Pertamina foresees requiring the refineries to buy crude oil at market prices and also to sell fuel products to the government at market prices. The newly passed oil and gas law, once fully implemented, will permit foreign investors to produce, import and distribute oil-based lubricants and thus end Pertamina’s monopoly.

Balongan

Indonesia’s newest state-owned refinery at Balongan in West Java has the capacity to process 125,000 B/D of domestic crude. It two production units: the crude distillation unit (CDU) and the residue catalytic cracking unit (RCCU). The CDU processes crude oil into naphtha, kerosene, automotive diesel and residue; the RCCU turns the residue from CDU into LPG and Premium, Super TT and Premix gasoline. The RCCU, one of the world’s largest, has processing capacity of 83,000 B/D, but has experienced problems since its commissioning in 1994. The refinery was initially designed to supply export markets, which is why it is also called the Exor (export oriented) I refinery.

Cilacap

Pertamina extended a term purchase contract with Saudi Aramco to buy about 120,000 b/d of Arabian Light crude for processing at the sour train of its 348,000 b/d Cilacap refinery. The agreement is valid over the period July 1, 2001, to June 30, 2002. Pertamina first signed the term purchase contract in 1998, making this the third renewal of the annual contract. Over this period, Pertamina has also continued examining the relatively cheaper option of purchasing Iranian Light or Iraq's Basrah Light for processing at Cilacap's 118,000 b/d CDU.

Balikpapan

An accidental fire shut down the 20,000 b/d platformer at Pertamina's

Balikpapan refinery in August 2001, necessitating more gasoline imports.

Deregulating Domestic Refining

Prior to the economic crisis, Pertamina estimated that Indonesia would need to double refining capacity from 1.0 million to 2.0 million B/D of oil by 2003 to keep pace with growing domestic demand. In the early 1990's, the GOI determined that Pertamina did not have the funds to build additional refining capacity and undertook a series of measures to attract private investment in the refining sector. Until the issuance of Presidential Decree (PD) No. 31/1997, the major stumbling block to private investment in refining was Pertamina's inability to guarantee a crude oil supply or to commit to purchasing the fuel produced by the refineries.

Under PD No. 31/1997, the GOI loosened Pertamina's hold on refining by allowing private refineries to market their products domestically through Pertamina.

Highlights of PD 31:

- Private refineries can be set up by Indonesian companies in partnership with foreign firms or with Pertamina;

- Pertamina buys oil fuels and other refinery products from private companies on a long-term trade contract basis in line with Pertamina's needs and absorption capability and considering the economics of the private corporation's refinery products;

- Pertamina's buying price for fuel from those private refineries is based on the international market price;

- Oil products produced by private refineries which are not needed by Pertamina can be sold by the private companies on the international markets;

- Pertamina will remain the sole distributor of fuel in the domestic market.

Private refineries are permitted to market domestically products, such as lubricants, not otherwise prohibited by Pertamina.

Further Reforms

PD 31 was only one step toward rationalizing Indonesia's petroleum and energy supply industry. Indonesia faces a number of challenges, such as shortages of capital for infrastructure development, in its efforts to upgrade and expand its refining capacity. The new oil and gas law, if implemented well, will further advance the reforms begun with PD 31 by:

- Eliminating Pertamina's monopoly position;

- Ensuring that investors and participants are given equal regulatory and legal treatment;

- Establishing a transparent pricing regime based on market prices;

- Rationalizing, simplifying and streamlining downstream administration;

- Allowing private companies to import oil products; and
- Permitting private companies to construct, own and operate filling stations.

Indonesia remains committed to opening its downstream sector by 2003 under the ASEAN Free Trade Area scheme.

Private Refinery Projects

In 2000, the Directorate General of Oil and Gas recommended that the Investment Coordinating Board (BKPM) issue foreign investment approvals to five oil refinery projects located in Aceh, West Nusa Tenggara, East Java, Riau and South Sulawesi, with total investment of US $10 billion. The Government expects the 1.1 million B/D capacity will help meet the increasing domestic demand for petroleum-based fuel.

PT Mayhill International Trading & Services (MITS) Ltd. of the U.K and Gehad Dairwan of the United Arab Emirates, will develop the first two projects (the Sumbawa and Sabang oil refineries) at a cost of US $2.8 billion. The refineries will process Iran Light Crude to produce LPG, naphtha, gasoline and kerosene for export.

HiTech International Group of Saudi Arabia will build a third refinery. The company signed a Heads of Agreement with Pertamina in June 2001 for a US $2 billion investment in an oil refinery in Tuban, East Java. Scheduled for completion in 2005, the refinery is designed to process 150,000 to 200,000 B/D, of which 50,000 B/D will be Aramco light crude, to produce mainly gasoline, kerosene and diesel oil.

Saudi Arabian and American investors will construct the fourth and fifth refineries, at a capital investment of US $6 billion, in Pare-Pare, South Sulawesi and in Rempang Island, Riau. Both refineries will have a processing capacity of 300,000 B/D. The planned facilities will produce LPG, petrochemical, naphtha, gasoline, jet fuel, kerosene, asphalt, diesel fuel and sulfur.

Lube Oil

Pertamina has not been able to prevent smuggling of lower-priced imported lubricants, despite its monopoly on lubricant supply, leading to a glut in the market. According to Indonesian law, In addition, according to Pertamina, Kuwait investors plan to build a 125,000 B/D refinery plant in Gresik, East Java, but they have yet implemented any measures to start the project.
Pertamina is the only sanctioned importer of lubricants with greater than 70% mineral oil content, with general importers allowed to bring in products that do not meet this threshold. Indonesian lubricant plants are permitted to operate legally only in the recycling of lubricants. Pertamina itself operates 3 lube oil blending plants, located in Jakarta, Cilacap and Surabaya, with a combined capacity of 413,030 liters.

Production capacity of lube oil
Kiloliter/Year

	Company	Capacity
1	Pertamina	413,040
2	Dirga Buana Sarana	1,701
3	Wiraswasra Gemilang	75,000
4	Agip Lubrindo Pratama	6,000
5	Castrol Indonesia	86,000
	Total	582,601