

PETROCHEMICALS AND FERTILIZERS

Introduction

The Asian economic crisis has had an adverse impact on Indonesia's petrochemical industry. Petrochemical producers faced soaring prices for imported materials, shrinking domestic demand, and severe financial problems. According to the GOI, the petrochemical industry currently has some Rp 10 trillion in debt to the banking sector. As a result, Indonesia's plans to expand petrochemical production have been put on hold.

One company caught with massive debt obligations was Chandra Asri Petrochemical Center (CAPC), a producer of ethylene and propylene. CAPC's costs of producing ethylene are higher than competitors' in South Korea and Thailand. To keep CAPC afloat temporarily, the GOI has allowed one recapitalized bank to provide the company with a short-term credit facility to import basic materials. CAPC is seeking to restructure its debt but has not yet finalized any arrangements. The Indonesian Government signed a Memorandum of Understanding agreeing to convert US \$460 million of loans, held by the Indonesian Bank Restructuring Agency, into equity while the other investor, Marubeni Corporation of Japan, would convert \$100 million of its loans into a 20-percent equity share. This MOU is under reconsideration.

CAPC was established by former President Soeharto's second son Bambang Trihatmodjo's Bimantara Group, Prayogo Pangestu of the Barito Group, Henry Pribadi of the Napan Group and Sudwikatmono, a cousin of

former President Soeharto. In 1996, CAPC received protection in the form of a 40-percent duty on imports of olefin products, including ethylene and propylene. CAPC sells all of its propylene to Tri Polyta, in which the company's partners have a share.

Tariff Protection Reduced

In December 1998, the Government lowered import tariffs on petrochemical products (ethylene, propylene, styrene, polyethylene, polypropylene, polystyrene and polyvinyl chloride) and their derivatives from the previous rate of 25-35 percent to 10-20 percent effective January 1, 1999. Minister of Finance Decree No. 187 of May 2000 went a step further by reducing import tariffs for 708 items, including upstream and midstream petrochemical products. This decree lowered import duties on selected petrochemical products (ethylene, propylene, styrene, polyethylene, polypropylene, and their derivatives) as of June 1, 2000. Tariffs on ethylene are now zero percent and on propylene, five percent (CAPC produces both petrochemicals). Tariffs for polyethylene (produced by PT Petrokimia Nusantara Interindo and CAPC) and polypropylene (produced by PT Tri Polyta Indonesia and PT Polytama Propindo) have been reduced from 20 percent to 5 percent.

This is the fifth time the GOI has changed import tariffs for petrochemical products in the last three years. The Government also committed to reduce tariffs further in 2003 to comply with the Common Effective Preferential Tariff

(CEPT) and ASEAN Free Trade Agreement (AFTA) schemes.

Import Tariffs of Selected Petrochemical Products (%)

Products	Pre Jan 1 1999	Jan 1 1999	Jun 1 2000
Ethylene	25	10	0
Propylene	25	10	5
Polyethylene	35	20	5
Polypropylene	35	20	5
Polystyrene	25	20	10
Polyvinyl Chloride	35	20	10

Benzene & Paraxylene

Benzene and paraxylene are currently produced by Pertamina's Cilacap refinery with production capacity of 123,000 MT/Y and 270,000 MT/Y respectively. Production rates of the two products are insufficient to meet domestic demand. According to the Department of Industry and Trade, domestic demand of benzene and paraxylene will increase to 125,200 MT and 2.2 MMT, respectively, in 2003. Imports of paraxylene mainly for the purified terephthalic acid (PTA) industry increased rapidly to 984,286 MT valued at US \$338 million in 1999 from 706,324 MT in 1998 and 133,695 MT in 1994. Benzene imports declined sharply to 247,164 MT in 1999 from 618,662 MT in 1998.

PTA

The growth of Indonesia's textile industry and the demand for polyester raw materials provided the stimulus for Pertamina and private investors to enter into the production of purified terephthalic acid (PTA). Since 1998, five PTA plants have been in operation -

- Pertamina Plaju Aromatic, Bakrie Kasei PTA, Amoco Mitsui PTA Indonesia, Polysindo Eka Perkasa and Polyprima Karya Reksa, with a combined capacity of 1.8 MMT/Y. The bulk of production is sold to Indonesian polyester makers. In 1999, domestic demand of PTA declined to 889,100 MT from 931,400 MT in 1998 and 1.0 million MT in 1997, but exports rose significantly to 304,717 MT valued at US \$116 million in 1999 from 287,080 MT in 1998 and 124,853 MT in 1997. Thailand, Malaysia and Australia are the largest export markets for Indonesian PTA.

Three Japanese partners led by Mitsubishi Kasei Corp. own Bakrie Kasei, the largest PTA producer in Indonesia with a total capacity of 500,000 MT/Y. (PT Bakrie Brothers sold its 20 percent share in the company to its former partners in late 2000.) Bakrie Kasei's first PTA production unit commenced operation in 1994 and the second unit in 1996.

Amoco-Mitsui PTA Indonesia, a joint venture between Amoco Chemical, now incorporated into BP (50 percent), Mitsui Petrochemical Industries (45 percent) and Mitsui Company (5 percent), commissioned a PTA factory in Merak, West Java, in February 1998, with an annual production capacity of 350,000 MT/Y. PT Polysindo Eka Perkasa of the Texmaco Group started PTA plant operation in April 1997 with capacity of 360,000 MT/Y. PT Polyprima Karyareksa of the Napan group commenced commercial production in 1997 with annual capacity of 285,000 MT/Y.

The Capital Investment Coordinating Board (BKPM) licensed another six PTA projects with total projected capacity of 1.5 MMT and total investment of \$1.2 billion. Most of these projects are on hold because of financing difficulties.

Polypropylene

Affected by low international demand, particularly during the first half of 1999, polypropylene exports declined to 41,246 MT valued at \$21 million in 1999 from 108,000 MT in 1998. Domestic demand improved slightly to 450,000 MT in 1999 from 406,000 MT in 1998. Polypropylene, made from propylene, is produced at three plants with a total production capacity of 600,000 MT/Y: Pertamina's plant in Plaju, South Sumatra, with production capacity of 60,000 MT/Y; Tri Polyta's plant in Cilegon, West Java, with a capacity of 360,000 MT/Y; and Polytama Propindo, located near Pertamina's Balongan refinery in West Java, with a capacity of 180,000 MT/Y.

Majority-owned by the Tirtamas Group, the Polytama Propindo plant had plans to increase production and develop into a midstream petrochemical project. These plans are on hold.

Ethylene

Chandra Asri Petrochemical Center (CAPC), the only ethylene producer in Indonesia, produced 400,000 MT of ethylene in 1999, or 77 percent of its designed capacity. Statistics released by the Department of Industry and Trade indicated that domestic demand of ethylene increased 41 percent to 838,700 MT in 1999 because most downstream

industries were increasing production. Ethylene imports increased significantly in 1999 to 471,691 MT valued at \$209.2 million from only 44,610 MT in 1998 and 57,145 MT in 1997. Despite an increase in domestic demand, CAPC exported 37,449 MT of ethylene in 1999.

Polyethylene

Indonesia's first polyethylene plant, PT PENI in Merak, West Java, came on stream in 1993, with production capacity of 250,000 MT. PT PENI is majority owned and operationally managed by BP Chemicals. In August 1998, the company completed its expansion project and increased its annual capacity to 450,000 MT. In 1999, CAPC increased the country's total polyethylene production capacity to 750,000 MT. In 1999, polyethylene production rose to 520,000 MT from 393,611 MT in 1998 and domestic demand rose to 442,000 MT/Y in 1999 from 361,000 MT/Y in 1998.

Methanol

With the opening of PT Kaltim Methanol Industry in 1998, Indonesian methanol production and exports increased significantly. Exports rose to 694,058 MT valued at \$51 million in 1999 from 233,783 MT valued at \$22.8 million in 1998. Prior to 1998, methanol was produced only by Pertamina's Bunyu Refinery, now owned by Medco Energi.

PT Kaltim Methanol, Indonesia's first privately owned methanol plant, in Bontang, East Kalimantan, has plans to be a major methanol supplier to Asia. The first shipment of methanol to Japan was in March 1998. PT Kaltim, a

subsidiary of Humpuss Group, has production capacity of 660,000 MT. The natural gas feedstock comes from nearby gas fields operated by Pertamina, Total, Unocal and Vico. Recently, Humpuss announced that it had offered its majority share in the plant to Nissho Iwai and Daicel Corporation of Japan. Humpuss Group, controlled by former President Soeharto's son Hutomo (Tommy) Mandala Putra, currently holds a 70-percent share in PT Kaltim, followed by Nissho Iwai with 25 percent and Daicel Chemical Industries with 5 percent. Nissho Iwai is scheduled to take the bulk of the methanol for direct export to Japan, South Korea, Taiwan and other Asian countries.

Methanol is also produced at the Medco Energi plant on Bunyu Island, formerly run by Pertamina. In April 1997, operation of the Bunyu plant was turned over to PT Medco, which supplies additional natural gas to the plant from its gas field in Tarakan Island by an undersea pipeline. Medco aimed to restore plant productive capacity to 330,000 MT/Y from less than 200,000 MT/Y when Medco took over its operation.

The Projects

TUBAN PETROCHEMICAL COMPLEX: Construction of the \$2.3 billion Tuban Petrochemical Complex was suspended in December 1997 due to lack of financing. The project is controlled by Trans Pacific Petrochemical Indotama (TPPI), a Singapore-based company, headed by Indonesian businessman Hashim Djojohadikusumo. Currently, TPPI has a 60-percent share, Tuban Petrochemical Pte. Ltd 20-percent, Japan's Nissho Iwai

and Itochu Corp 5-percent each, and Tirtamas Majutama, also controlled by Hashim, 10-percent. The complex would have the capacity to produce 700,000 MT/Y of ethylene; 500,000 MT/Y of paraxylene; and 300,000 MT/Y of benzene.

TPPI is currently scouting for new foreign investment partners to inject the additional \$1.4 billion required to revive a world-scale naphtha cracker and aromatics project that was moth-balled half-way through construction. Potential partners would likely be major U.S. and European petrochemical producers, including BASF. BASF plans to significantly expand its petrochemical investments throughout Asia over the next five years. If the project is revived, it would have a short lead time compared to other expansion projects planned in Asia. It would likely affect the market relatively quickly once it is confirmed to be back on track.

OTHER PROJECTS: In 1996, the Capital Investment Coordinating Board (BKPM) approved several aromatic center new or expansion projects to meet domestic demand and reduce reliance on imports: PT Kresna Aromatic Persada; PT Nilaprima Aditama; PT Bakrie Petrochemical; PT Humpuss Aromatic; and an expansion program for PT Chandra Asri. All of these projects are currently on hold.

PT KRESNA AROMATIC PERSADA is a joint venture between Indonesian PT Kresna Tara Utama and Japanese Tomen. The plant was scheduled to be located in Cilacap, Central Java and to produce benzene, paraxylene, heavy aromatics and fuel products.

PT NILSPRIMA ADITAMA, planned for Serang, West Java, was to produce benzene and paraxylene. The project is jointly owned by PT Taniaraya Dutabuana (70 percent) and PT Trimitra Suburperdana (30 percent).

PT BAKRIE PETROCHEMICAL, also in Serang, West Java, was to produce paraxylene. Over 80 percent of the aromatic center's paraxylene was to be supplied to PT Kansei Bakrie, a Bakrie company producing PTA, with the rest for the export market.

PT HUMPUSS AROMATIC, located in Lhokseumawe in North Sumatra near the Arun gas fields, was scheduled to produce benzene and paraxylene, but currently only produces naphtha, kerosene, diesel oil and LPG. An indefinite delay has been imposed on the plant's plans for a paraxylene facility in Arun.

PT CHANDRA ASRI PETROCHEMICAL CENTER (CAPC), located in Cilegon, Java, began production in 1995 and produces a full range of olefins and aromatics. The planned expansion would add polybutene, MBTE, butene and butadiene to its product line.

Fertilizers

Given Indonesia's abundant supply of natural gas and strong domestic and export demand for fertilizer in Asia, the fertilizer industry presents a potential area for growth, provided the GOI loosens its tight control over the industry. Installed production capacity at Indonesia's 12 fertilizer plants operated by six companies (five state-owned companies and one ASEAN joint

venture) is 7.0 MMT of urea and 4.6 MMT of ammonia per year.

In 1999, urea production declined slightly to 6.0 MMT from 6.15 MMT in 1998 and 6.29 MMT in 1997 and ammonia production declined slightly to 4.2 MMT from 4.3 MMT in 1998 and 4.4 MMT in 1997. Fertilizer exports rose to 2.1 MMT valued at \$186.9 million in 1999 from 1.6 MMT valued at \$168.9 million in 1998, with main destinations Vietnam, Malaysia, the Philippines, Bangladesh and Thailand. Designated a strategic commodity, the government directs state-owned fertilizer companies to fulfill domestic demand first. The remainder can be exported.

Fertilizer Production and Exports in 1999

Volume: (1000 MT) Value: US\$million

Production	Urea	Ammonia
Pupuk Sriwijaya	1,997	1,342
Pupuk Kaltim	1,904	1,408
Pupuk Kujang	560	367
Asean Fertilizer	685	413
PIM	551	336
Petrokimia Gresik	271	332
Total	5,968	4,198
Exports: Volume	2,052	-
Value	184.8	-
Imports: Volume	137.7	226
Value	19.7	17.6

Source: Department of Industry and Trade

Domestic demand for fertilizers continues to increase at average of 2.5 percent per year. The government estimates domestic demand will reach 6 million MT for urea and 1.3 million MT for phosphate by 2005. Indonesia projects a fertilizer shortage, particularly ammonia, by 2003.

The largest Indonesian fertilizer import is potassium chloride, which is used as an additive to enhance performance of

other fertilizers. This particular additive is mainly imported for use in plantations that produce soybean, tobacco and tea. In 1999, Indonesia imported 530,000 MT of potassium chloride valued at \$72.8 million.

The fertilizer industry utilizes about 210 BSCF of natural gas per year and purchases gas in U.S. dollars at the government's subsidized price, ranging from \$1-\$2/MMBTU. Recently, a number of plants have had difficulty paying their dollar-denominated gas bills to Pertamina. Fertilizer is sold to farmers in rupiah at government-administered prices.

Due to the anticipated increase of domestic demand for fertilizers, five delayed fertilizer projects affected by financial crisis will be resumed. The five projects include the \$310 million Pupuk Iskandar Muda (PIM) II, \$304.6 million Kujang IB, \$359.7 million Pupuk Kaltim IV, \$26.2 million Petrokimia Gresik NPK fertilizer plant and \$34 million ASEAN Aceh Fertilizer's hydrogen peroxide plant.

The PIM II project is scheduled for completion in 2001. The plant will produce 570,000 MT of urea and 366,000 MT of ammonia per year and 50 percent of production will be exported. PT Kaltim Parna Industry (KPI) has officially started the construction of a US \$240 million ammonia plant in East Kalimantan. KPI is a joint venture between two Japanese companies (Mitsubishi 55 percent and Asahi Chemical Industry – 10 percent) and two Indonesian companies (PT. Parna Raja-25 percent and PT. Pupuk Kaltim-10 percent). The project, which had been postponed for three years due to the

economic crisis, is scheduled for completion in 2002, with an annual capacity of 500,000 MT/year. The project will consume 55 MMSCF/D from three gas fields operated by Total, Unocal and Vico. KPI signed a 20-year gas purchase agreement with Pertamina in July 1999.

PT ASEAN ACEH FERTILIZER: The ASEAN-sponsored urea fertilizer plant is located near the Arun gas fields at Lhokseumawe in North Sumatra and is 60-percent owned by Indonesia, 13-percent by Malaysia, 13-percent by the Philippines, 13-percent by Thailand and 1-percent by Singapore. The plant produced 685,000 MT of urea and 413,000 MT of ammonia in 1999.