

Refining, Supply & Trading



The Refining, Supply and Trading BU's primary role is to ensure the proper, safe and optimum performance of the Group's refining facility, SRC on Jurong Island. The BU is also involved in the sourcing of crudes and feedstocks for the refinery, the sales of jet fuel to airline customers, sales and trading of residue and distillate refined products, oil price risk management and the operations of the Group's storage and terminalling facility.

Refinery Performance

Global crude and refining capacity additions had continued to lag behind the robust growth in demand for refined products in the last few years. Global petroleum product demand was estimated to be 83.7 million barrels per day (bpd) in 2005 with the highest demand of 85.6 million bpd recorded in the fourth quarter. The shortage of refining capacity had been identified as the key bottleneck in satisfying the world's growing demand for refined products.

The Asia Pacific region had continued to witness demand growth above the global average despite the withdrawal of fuel subsidies in certain countries. China and India registered impressive economic growth of more than

nine and seven percent respectively. With the steady recoveries in Japan and Korea and the Southeast Asian economies, the region's appetite for petroleum products to fuel economic growth had continued unabated.

In 2005, geopolitical tensions in the Middle East and fears of interruptions to the supply of both crudes and refined products provided strong support for oil prices and refining margins. The Asia Pacific product prices continued to be heavily influenced by demand spikes in the US, as well as events in the Middle East. Historically, demand spikes in the US had mostly been the result of weather patterns and the summer driving season. In 2005, however, the hurricanes that battered the US Gulf Coast caused oil prices and refining margins to spike up sharply in the third quarter. The benchmark WTI crude surged to a record US\$70.85 per barrel in August.

In tandem with the surge in crude prices, gasoline and distillate fuel prices also rose to a record high relative to the underlying crude prices. Regional refining margins peaked above US\$11.00 per barrel in early September when it became clear that several refineries in the US Gulf Coast would be shutdown for several months as a result of the hurricanes.



Left : The residue catalytic cracker complex at SRC. Right : SPC refuelling the Airbus A380 maiden test flight at Singapore Changi Airport.

Against the backdrop of the structural tight balance between supply and demand, geopolitical events and the US Gulf Coast hurricanes, SPC was able to record another remarkable year in refining performance and profitability. The Group realised refining margins above US\$4.00 per barrel for 2005.

The additional refining capacity coupled with the robust demand enabled the Group to process more than 50 million barrels of crude and feedstocks through the refinery. Refinery utilisation was maximised at close to the nameplate capacity of 285,000 bpd. This was achieved by optimising the runs in the upgrading units as well. The average crude throughput achieved was 276,000 bpd, about 6.2 percent higher than in 2004. Due to the complexity and sophistication of the refining assets, SPC was able to capitalise on the widening sweet-sour crude differentials to process heavier sour crudes to increase the margin spreads.

To be able to capture margins at the opportune time, the refining assets need to be run reliably and safely. SRC had in the past year maintained an enviable reliability and safety record. As of December 2005, SRC had achieved a significant milestone of working close to six million manhours without lost time injury. At SPC, ensuring a safe and secure working environment across all its facilities will continue to be a core value driver.

Going forward with regard to the refining assets, SPC and SRC are focused on a clean fuels upgrading programme that will deliver further value creation and enhancement. This project which is currently undergoing management review would entail upgrading the SRC secondary processing facilities to meet Euro IV clean fuel specifications for motor gasoline with lower benzene and sulphur levels and Ultra-Low Sulphur Diesel (ULSD)

production. When the clean fuels project is implemented, the Group would then be able to move up the value chain and meet the tighter product specifications in the region, when these are introduced.

Aviation Sales

SPC has more than 30 years of aviation sales marketing experience and has established a reputation as a reliable supplier of aviation fuel in the Asia Pacific region. The Aviation Sales unit markets and supplies aviation fuel to airlines at four international airports, namely in Singapore, Bangkok, Hong Kong and Taipei.

The air transportation sector in Singapore grew strongly in 2005. Passenger arrival at Singapore Changi Airport reached a record 32 million passengers, an increase of 6.8 percent over 2004. Air cargo grew to 1.8 million tonnes, a 3.3 percent increase over 2004. Four new airlines commenced operations at Singapore Changi Airport in 2005. As a result of the air traffic growth, the total jet fuel volume throughput at Singapore Changi Airport grew to 80,600 bpd. This was 6.2 percent higher compared to 2004.

The unit's activities are concentrated mainly at Singapore Changi Airport where it provides aviation refuelling services to 27 major airline companies. Jet fuel volume lifting for 2005 was 15,500 bpd, a 4.8 percent increase over 2004 for the Company. Singapore made history when it became the first airport in Asia to receive the Airbus A380 carrier. The largest commercial carrier on its maiden test flight landed at Singapore Changi Airport on 11 November 2005. SPC and another jet refueller jointly refuelled the aircraft before its departure for other Asian airports.

Amid stiff competition at Taipei's Chiang Kai Shek International Airport, SPC managed to maintain its jet fuel volume of 1,600 bpd. This represents about 16.9 percent of the jet fuel market.

At Hong Kong International Airport, SPC achieved a jet fuel volume of 3,500 bpd. Air traffic continues to grow strongly at Hong Kong International Airport due to increase in air passengers and air cargo demand. Currently, SPC services four airlines at this location and higher fuel lifting by its air cargo customers enabled SPC to register a modest three percent growth in volume in 2005 over the previous year.

In its second year of operation at Bangkok International Airport, SPC continued to strengthen its ground co-ordination and logistics set-up to enhance its into-plane refuelling services. SPC achieved a slightly higher market share in this highly competitive market and presently services five airlines at this location.

2006 will be another challenging year for the aviation industry as major carriers continue to streamline their operations through efficiency gains, cost-saving measures and consolidation in order to cope with high fuel prices.

Distillates

The Distillates unit is responsible for the sale and trading of distillate products. Distillate products represent the lighter end of the refining process and include chemical naphtha, motor gasoline, jet fuel and gas oil. Besides trading the products from SRC, the Distillate unit also sourced such products from third parties including other refineries and oil traders.

With the Group's increased refining capacity since mid-2004, the volume of distillate products available to the unit had increased. The Distillate unit was also able to capitalise on trading opportunities and hence registered an increase in trading volume. The unit was thus able to capture a larger share of the demand for distillate products. Demand for distillates reached historic highs during the third quarter of 2005 due to the hurricanes in the US Gulf Coast.

Despite the robust global demand for refined products, distillate trading remained a challenging activity given the continued price volatility. The unit had to trade and compete aggressively to capture profitable sales. In 2005, the Distillate unit achieved a turnover volume of 35 million barrels, a growth of 35 percent over the previous year.

To sustain the unit's performance, continued emphasis will be placed on prudent management of inventories. Traders in the unit monitor the market closely to capture opportunities whenever they arise.

The tight global refining capacity is expected to persist over the next two to three years. Growth momentum in the demand for distillate products is likely to be maintained as well. The expected growth in air travel would also result in higher consumption of jet fuel and will provide opportunities for the unit to increase its jet fuel trading. The unit will therefore continue to play a key role in the Company's downstream activities and profitability in 2006.

Residue

SPC has been in the bunkering business since 1972 and is a leading and reliable supplier in Singapore. The Residue unit handles the sale of bunker fuels and the trading of fuel oil for the Group.

Singapore has maintained its status as one of the world's top bunkering port with more than 3,200 ships registered under the Singapore flag. The maritime sector in Singapore achieved an excellent growth rate in 2005. Singapore set new records for shipping tonnage, container and cargo throughput and bunker sales. For the second time in Singapore's maritime history, total vessel arrivals in terms of shipping tonnage crossed the one billion mark with 1.2 billion gross tonnes (GT) in 2005, outstripping 2004's 1.04 billion GT. Container traffic increased by 8.7 percent to 23.2 million twenty-foot equivalent units (TEUs) in 2005 from 21.3 million in 2004, setting a new record for the Singapore port. A healthy growth rate of 7.6 percent was also recorded for cargo throughput which topped 423 million tonnes in 2005. Given the growth in shipping tonnage, sales of bunker fuels crossed 25 million tonnes in 2005, surpassing the 2004's record of 23.6 million tonnes.

Average fuel oil prices had risen almost 60 percent in 2005 as compared to 2004. Fears of supply disruption brought about by the hurricanes in end August hiked fuel prices to record highs, affecting demand especially from China. 2005 also witnessed irregular import volumes into Singapore due to volatile prices and freight costs. In the face of these uncertainties, the unit adopted a cautious approach especially in its fuel oil trading activities.

A higher growth rate in the maritime sector in Singapore provided sustained business opportunities for the Residue unit in 2005. However, sustained high prices and demand-supply imbalances continued to challenge the marine fuel traders and suppliers. The Residue unit was able to effectively manage these challenges to meet its delivery commitments during the year.

In May 2005, the International Maritime Organisation mandated higher quality standards for marine fuels. The unit worked closely with SRC to ensure that its fuel oil products met the quality standards of MARPOL (Marine Pollution) 73/78 Annex VI.



Left : SPC has been in the bunkering business since 1972 and is a leading and reliable supplier in Singapore.
Right : VLCC (Very Large Crude Carrier) discharging crude oil at TMS's (Tanker Mooring Services Company Pte Ltd) fixed jetty for SRC at Jurong Island.

SPC also successfully renewed its QMBS (Quality Management for Bunker Supply Chain) and remained as an accredited bunker supplier under the Maritime Port Authority Accreditation Scheme.

For 2006, with more environmental pressure for improved product specifications, higher operational costs relating to higher utilisation of double-hulled barges are expected. The unit will continue to leverage on its strengths and resources to effectively manage barges turnaround, inventory, quality and other operational and logistic matters.

Operations and Logistics

The Company owns a storage terminal at Pulau Sebarok for storage of petroleum products to support its marine bunker, products trading and marketing activities. The offshore 220,000-cubic metre storage terminal with 13 storage tanks is equipped with a deepwater jetty for tankers up to 160,000-tonne displacement. It also has a smaller jetty for barges up to 10,000-tonne displacement. The terminal is equipped with a comprehensive laboratory and is highly automated to provide a quick turnaround for tanker and barge operations.

In 2005, the terminal handled a product throughput of 2.8 million tonnes.

Risk Management and Derivatives

The Risk Management and Derivatives unit is responsible for the management of the Company's oil inventory and refining margin price risks.

The unit applies a Value-at-Risk (VAR) methodology to identify the Group's risk parameters and risks appetite. In 2005, the unit hedged against volatile price risks for its crude oil inventory and the refined products by entering into crude oil and refined products swaps and options contracts. These contracts are executed through the OTC (over the counter) market. These transactions are normally of a short term tenor ranging from three to 12 months.

A rigorous process is undertaken to ensure that counterparties' risks are evaluated and constantly updated. Regular meetings are conducted to monitor and review the Group's crude oil and product risks and price exposures and to ensure that these risks are well managed.

Through active management of the Company's positions, the unit managed to contain the Group's exposure to the extreme volatilities in the market to acceptable levels.

In 2005, the unit implemented a Trading and Risk Management System (TRMS). This system enables the automated recording and capture of both physical and paper transactions. It also provides an instantaneous helicopter view of the Group's consolidated positions in both the physical as well as the derivatives market. More critically, the system provides an automated and updated Mark-to-Market positions for decision making.

The trading environment is expected to be challenging in 2006. The unit will continue to proactively fine tune its hedging strategies and further enhance the TRMS to better manage the Company's oil inventory and refining margin price risks.