

Chemicals

Factsheet 2011

Singapore ~ A Global Chemical Hub

At a Glance

The energy and chemical industry is a key pillar of Singapore's economy being the largest contributor to the country's manufacturing output since 2006. As one of the world's leading chemical hubs, Singapore has attracted a plethora of global industry players to set up operations here.

In 2008, output from the energy and chemical industry grew to S\$97 billion*. Together, the petrochemicals and specialties sectors contributed close to S\$35 billion* of the manufacturing output which translated to S\$4.4 billion* in terms of value-added.

As Asia becomes an increasingly important consumer of chemical products, Singapore remains a strategic base for companies looking to invest in Asia for the long run.

Key Figures

- Jurong Island is among the world's top 10 petrochemical hubs

- Together, the energy and chemical industry is the largest contributor to Singapore's manufacturing output, accounting for 38.6%* of the overall manufacturing output in 2008
- In terms of value-add, the energy and chemical industry contributed S\$4.9 billion*

**Refers to Preliminary Estimates*

Jurong Island - World-Class Infrastructure

As the centerpiece of the energy and chemical industry, Jurong Island is home to more than 95 leading petroleum, petrochemicals and specialty chemicals companies from all over the world. With its "plug-and-play" infrastructure and industry integration, Jurong Island is a competitive location that has attracted investments of over S\$30 billion.

Moving the Industry up the Value Chain

Singapore aims to stay at the forefront of the industry's advancement with the focus to enhance infrastructure development, create competitive feedstock for petrochemicals, and move up the value chain with advanced materials as well as specialty chemicals.

Building Critical Mass

Two new crackers from ExxonMobil Chemical and Shell Chemicals will increase Singapore's total ethylene output from 2 million tonnes per annum (tpa) to 4 million tonnes per annum by 2012. This critical mass of ethylene output will allow the industry to capture value from new chemical chains and produce specialty and higher value chemicals.

Focusing on High-Value Specialty Chemicals

Leveraging our strengths as a leading market player in other areas such as marine & offshore engineering, oil additives and lubricants, Singapore is well positioned to further grow the chemical industry by focusing on high value-added specialty chemicals. This move from commodities to specialties is crucial in supporting other high-growth industries such as the solar industry.

Investing in R&D

At the same time, Singapore is investing heavily in R&D to move beyond being a fast implementer of technologies to become a choice location where technologies and products are first created. Coupled with Singapore's reputation for successful project implementation and strong intellectual property protection, these attributes form a compelling case for locating high value-added activities in Singapore. For instance, Shell is implementing its proprietary OMEGA technology in its new MEG plant established here.

Leading Industry Players

3M (US), a diversified technology company known for innovation, breaks ground for its new facility in Singapore to produce coatings for film based products used in commercial, electronic and automotive applications. Construction on the new facility, which will be located in the Tuas

Industrial Park, is expected to be completed in 2009.

BASF SE (Germany) sets up second competence centre in Singapore, the Competence Centre for Organic Electronics. Building on the successful launch of the Competence Centre for Nanostructured Surfaces, the Centre for Organic Electronics will focus on upstream research and development in Energy Management, one of the five emerging growth clusters identified by the company. This includes research in organic light emitting devices (OLEDs), organic photovoltaics and biosensors.

DuPont™ (US) opens its newest Vespel® plant at Tuas to boost production of its high growth DuPont™ Vespel® parts. The plant which incorporates the latest advances in process technology and lean manufacturing techniques will enhance DuPont™ capacity in supporting global market needs.

ExxonMobil Chemical (US) starts construction of its second petrochemical project in Singapore, comprising a world-scale steam cracker and associated derivative units. Scheduled to start up in early 2011, the project will be fully integrated with the company's existing Singapore site, providing feedstock, operating and investment synergies with both the chemical plant and refinery.

Kanto Kagaku (Japan) opens its first manufacturing facility in South East Asia here. The plant has the capability to produce highly functional and pure chemicals for industries such as the semiconductor, hard disk drive and solar panel.

LANXESS (Germany) has announced the building of a butyl rubber production plant in Singapore with an annual capacity of up to 100,000 metric tonnes. Due to be commissioned in 2012, this production plant is worth €400 million, making it the largest investment in the history of LANXESS.

Lucite (UK) sets up its US\$150 million Methylmethacrylate plant on Jurong Island, the first world-scale plant globally producing MMA through the new proprietary process route (termed the Alpha Technology).

Mitsui Chemicals Inc (Japan) breaks ground for its second elastomers plant which will double the production capacity of TAFMER™.

TAFMER™ is a flexible and light resin modifier that improves impact resistance for moulding materials such as automobile bumpers and the seal ability for packaging materials, when blended with thermoplastic resins. Mitsui Chemicals also set up its first overseas R&D centre here, focusing on catalysis and asymmetric synthesis – two areas which Mitsui Chemicals and ICES have joint research on.

RohMax Additives GmbH (Germany), part of specialty chemicals leader Evonik extends its presence in Singapore with the opening of its first facility in the region to manufacture high performance lubricant additives. The facility is expected to produce most of the VISCOPLEX® - the company's brand of high performance lubricant additives for use in automotive and industrial applications – that would cater to the needs of the Asia-Pacific, Middle East and African markets.

Shell Chemicals (The Netherlands) announced its decision to construct a world-scale ethylene cracker and a Mono-Ethylene Glycol (MEG) plant, on Bukom Island. The ethylene cracker is due to start-up by 2010.

Sumitomo Chemical (Japan) expands its MMA and pMMA plant in Singapore, making it Sumitomo's largest integrated site for MMA and MMA derivatives.

Wacker Chemie AG (Germany) opens new technical centre in Singapore. The facility serves as a regional Centre of Excellence for construction polymers, silicone emulsions, silicone resins and antifoam agents. Its other functions include the development of applications in the construction, textiles, pulp- and paper-processing sectors, and in the process industry.

Sustainable Growth

As Singapore positions itself for the next phase of growth in its energy and chemical industry, we aim to be a model of sustainable development. To address climate change concerns, Singapore is taking the lead in raising the bar in energy efficiency, emissions management as well as accelerating the development of new, sustainable feedstock and technologies for the industry. We actively promote and support companies in their plans to improve energy efficiencies in their production and to reduce their carbon footprint.

About the Singapore Economic Development Board

The Singapore Economic Development Board (EDB) is the lead government agency for planning and executing strategies to enhance Singapore's position as a global business centre. EDB dreams, designs and delivers solutions that create value for investors and companies in Singapore. Our mission is to create for Singapore, sustainable economic growth with vibrant business and good job opportunities.

EDB's 'Host to Home' strategy articulates how we are positioning Singapore for the future. It is about extending Singapore's value proposition to businesses not just to help them improve their bottom line, but also to help them grow their top line through establishing and deepening strategic activities in Singapore to drive their business, innovation and talent objectives in Asia and globally.

For more information on how EDB can help in your business and investment, please visit www.sedb.com

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