

Energy & Petrochemical Parks

Creating Value Through Robust Land Leasing Approaches

By:
Dennis Tan
Director, Strategic Projects
(Oil & Gas)
SJ Infrastructure

Tan Cheong Chye
Senior Executive Associate
(Oil & Gas)
SJ Infrastructure



BP recently reported¹ that in 2017, global primary energy consumption recorded a robust 2.2% growth rate, outpacing the 10-year average of 1.7% per year. Oil, coal, and natural gas remained the dominant fuel sources, together accounting for over 80% of all energy consumed whilst renewable power hit a new high but still modest 3.6% by contribution. Prospects for the downstream petrochemical sector are even stronger. In May 2017, Independent Chemical Information Service (ICIS) forecasted that global petrochemical demand² would accelerate to an average annual growth rate of 4% between 2015 and 2025.

Energy & Petrochemicals – A Land-Intensive Sector

This sector is both energy and capital-intensive, and coupled with safety considerations, it is also characterised by its land-intensive nature as well. Europe hosts many of the world's most developed and mature petrochemical manufacturing parks. The land sizes of these parks range from a few hundred hectares to thousands of hectares. For example, Infracore's park in Frankfurt occupies nearly 500 hectares of land (equivalent to 610 football fields), on which sits a network of over 500 kilometres of pipelines carrying chemical liquids and gases.

Planning for investment in such specialised parks can be a painstaking process. And decisions are made on the assurance that pre-conditions, such as the ability to secure a plot of land, shall be met. Greenfield investments typically require several hectares of land, and the extent to which production processes and equipment can be re-designed to save

land is limited by codes of practice and regulatory consideration.

Therefore, in securing land for the investment, an investor's priorities would certainly include:

- Adequacy of land tenure – at a minimum, tenure must exceed the targeted Return on Investment time period, and generally the intention is to stretch the tenure for as long as possible;
- Securing contiguous land for expansion – a strong investment plan is one that anticipates a sales exceeding supply within a few years from start-up, thus justifying a de-bottlenecking of capacity in the near or mid-term; and
- Availability of land for long-term growth.

The land owner naturally desires to unlock potential and tap the maximum value of the land, and often

also look towards generating growth from a range of consequential economic activities.

This translates into the following priorities for industrial land owner:

- Sustainable economic activities – existence of sustained industrial manufacturing activities that generate economic benefits;
- Judicious use of the land – appropriate use of the land that coincides with original plans, and is not wasteful. It should also be compatible and synergistic with its neighbouring activities; and
- Preservation of its overall environmental climate – the environmental baseline of the piece of land should not go into deep deterioration due to industrial usage.

Robust Land Leasing Frameworks

The importance of the land lease process is often either overlooked or under-estimated. Rather than being considered a repetitive procedure, land lease management should be viewed as an effective, customisable tool to secure assurances for all parties and shape the manufacturing landscape.

How can a land owner meet an investor's expectations on land tenure, availability and flexibility, while at the same time, preserving his priorities on the sustainable use of his land?

Land tenure for the manufacturing sector varies across different territories. For example, in China, the government's land regulations³ stipulate a maximum tenure of 50 years for industrial land. While in Singapore, the tenure of industrial land issuance⁴ through Industrial Government Land Sales was halved to 30 years in 2012⁵. Typically, industrial land leases range between 20 or 30 years long⁶. In some other countries, industrial land is sold in perpetuity. For land tenure to be meaningful, it should be long enough and commensurate with the sector's life cycle, as well as consider the level of capital expenditure on fixed production assets. At the same time, the tenure should permit park rejuvenation or redevelopment. Therefore, it would be advisable to first understand such sectoral characteristics. Then, we can determine the standard tenure to be offered to investors in any specialised park.

To ensure that the land is put to good and proper use, the land owner can specify and build into the land lease, mechanisms to motivate the investor to invest

and build as planned, intensify land use, and even reinstate and return the land when it is no longer needed. Through the skilful crafting of the leasing process and the lease document itself, issues such as under-development or land contamination (SSI's site in the U.K.⁷) can be avoided. In certain situations, leasing mechanisms could be designed holistically with other levers, such as incentives, to achieve win-win outcomes.

Ensuring adequate availability of land, especially contiguous land for expansion, is partly an outcome of good master-planning, but also heavily dependent on how robust the land leasing processes are. The allocation of a land plot for future development does not have to be binary. Carefully customised land reservation programmes provide investors with sufficient assurance whilst retaining the land owner freedom to commit unused land to other suitable investors when the time comes.

The description of approaches above hopefully provides an insight into the importance and versatility of land lease management.

An Important Differentiating Factor for Land Owners

As Nobel Prize winner Elias James Corey once said, the impact of chemical synthesis "on our lives and society is all pervasive." Whether we like it or not, the energy and petrochemical sector is an integral contributor to the lifestyles that we've gotten used to. Energy and petrochemical parks are specialised and complex ecosystems that occupy enormous land masses for long periods of time. A best-in-class land leasing framework is an essential tool for any energy and petrochemical park to thrive, and is an important factor in differentiating a forward-looking land owner amongst others.

This article is co-created by Surbana Jurong Academy.

End

Connect with Us

Dennis Tan

dennis.tankm@surbanajurong.com

Tan Cheong Chye

cheongchye.tan@surbanajurong.com

References

¹ Report titled “BP Statistical Review of World Energy”, 67th Edition, dated June 2018.

² Made up of major categories Polyolefins, Polyesters and Polyurethanes, Key Elastomers, and Other Key Plastics. From slide 19 of ICIS’ presentation dated 18 May 2017 titled “Accelerated Changes: New Scenarios for the Global Refining and Petrochemical Industries, and the Role of China” at APIC 2017.

³ Regulations on the Land Use Rights and Transfer of State Land Use Rights in Urban Areas of the People’s Republic of China / 《中华人民共和国城镇国有土地使用权出让和转让暂行条例》 of May 1990.

⁴ In 1947, a ruling known as the Crown Lands Rules was passed, in which Rule 16 proclaimed that 99-year leases would be issued, in place of Statutory Land Grants (which were freehold).

⁵ Ministry of Trade and Industry’s press release titled “Launch of Second Half 2012 / Industrial Government Land Sales Programme” dated 11 June 2012.

⁶ Channel NewsAsia’s news article, “How Singapore’s 50-year-old land sales programme is evolving” dated 13 December 2017.

⁷ In Teeside, Sahaviriya Steel Industries (SSI) went into liquidation, marking the end of almost 170 years of iron and steel making. A 14-hectare portion of its former site is likely to be highly contaminated by heavy metals due its former industrial usage, and this would affect the future usability of the land. Source: South Tees Development Corporation, South Tees Regeneration Master Plan consultation draft, dated October 2017.