

## China gateway

The overriding development in the global energy and petrochemical sectors over the past 20 years has been the emergence of China onto the world stage. The nation's headlong rush modernization and industrialization has sent energy demand soaring. Growing local production – and consumption – of petrochemical products continues to impact global trade flows.

While these trends have had a major influence on the geopolitical arena, at ground level they are continuing to generate opportunities. Service providers to the oil and chemicals sectors have flocked to China, keen to take a piece of the potentially massive marketplace.

Independent bulk liquids terminal operators have been part of this charge into China. All of the main global networks now have a presence there and continue to build new sites. Vopak, for instance, has one wholly owned and six joint – venture terminals in China, including one of the oldest 'western' investments in the country's terminal infrastructure, the Xiamen Paktank site. It also has another two under construction and expansions underway at four existing sites, other overseas operators already in China include Odfjell Terminals, Oiltanking and Stolthaven, as well as Singapore – based Eastern Tankstore.

### Structure of the sector

The structure of the oil and petrochemical sector in China is, however, very different from that in the mature markets of Europe and North America, State participation, through Sinopec, Sinochem, PetroChina and any number of subsidiaries and local authorities, retains a controlling hand over the industry.

Indeed, TankTerminals.com has collected data on more than 325 bulk liquids terminals in China, meaning that international independent firms account for less than 5% of the market (in terms of the number of sites).

The figures shown on the opposite page, which are drawn from the TankTerminal.com database, include nearly 70 company – owned sites that are not available for third – party use. These include PetroChina's major crude oil sites, a number of Sinopec refinery terminals, others operated by CNPC and CNOOC, and tied terminals for ExxonMobil and BASF.

The data also includes 33 new terminals currently under construction. These account for more than 20mn m<sup>3</sup> of capacity – the figure is not certain as some of these new developments have not been fully defined – and include at least one new strategic oil storage facilities, in Tianjin.

Also featured among the new construction list are tow Vopak facilities, in Yangpu and Dongguan, Shell Oil's new Tianjin terminal and another Tianjin terminal building for Odfjell. A focus of new construction can be seen in Qingdao, where there are three new facilities in various stages of completion that will add more than 3mn m<sup>3</sup> of new capacity.

As well as the new terminals, TankTerminals.com say expansion projects are underway at another 26 existing terminals, including three strategic reserve sites. With all these additions, China's national bulk storage capacity will be in excess of 160mn m<sup>3</sup>.

### 80/20 rule

The TankTerminals.com database lists storage terminals in 80 different towns and cities across the country. Some of those listed have only one small petroleum product terminal, are clearly depots handling fuel for the local market. More than half of all China's terminals are, though, located in 14 major cities.

Of these, seven are in the east of the country, in the Yangtze port cities of Jiangyin, Nanjing, Nantong, Shanghai and Zhangjiagang and the coastal cities of Ningbo and Zhoushan.

The other major terminal ports are Dalian, Qingdao and Tianjin in the north, Guangzhou and Zhuhai in the south (bordering Hong Kong and Macau, respectively), and Quanzhou and Xiamen in the south – east, facing the Taiwan Strait.

Another important feature of the terminal business in China is the role of the major waterways, and in particular the Yangtze River, in enabling the movement of goods in bulk, including liquid products. Upriver from Nanjing, several river terminals serve the need of need of local industry, either as fuel distribution points or as more extensive industrial hub terminals.

Industrial facilities can be found, for instance, in Zhenjiang, Yangzhou and Wuhan, although surprisingly not in Chongqing, the major city of the upper Yangtze. However, if the international operators are expecting to be able to invest in the region, they will be faced plenty of competition from local companies.

This overview of the Chinese terminals sector is part of a series running quarterly in Hazardous Cargo Bulletin, using data provided by TankTerminals.com.

Port	No of Terminals	Total Capacity (M <sup>3</sup> )	Products Handled
Anqing	1	210,000	Petroleum products
Behai	3	1,325,000	Crude, petroleum products, chemicals, vegoils
Beijing	2	310,000	Petroleum products
Changchun	1	50,000	Petroleum products
Changha	1	400,000	Petroleum products
Changshu	1	84,500	Chemicals, gas
Changzhou	4	3,308,000	Crude, chemicals, gas
Chengdu	1	1,600,000	Crude
Dalian	16	16,619,050	Crude, petroleum products, chemicals, gas
Danzhou	1	2,600,000	Crude, Petroleum products
Daqing	5	5,222,000	Crude, Petroleum products
Dongguan	9	2.132,400	Petroleum products, chemicals, gas
Dongying	7	450,000	Petroleum products, gas
Dushanzi	1	4,400,000	Crude
Fangchenggang	1	257,000	Petroleum products, chemicals

Fuzhou	4	865,000	Petroleum products, chemicals
Guangzhou	10	2,084,450	Petroleum products, chemicals
Gujiao	1	110,000	Petroleum products
Gulei	1		Crude, petroleum products, chemicals
Haerbin	2	35,300	Petroleum products, chemicals
Hangzhou	1	1,150,000	Petroleum products
Hefei	1	76,000	Petroleum products
Heze	1	420,000	Petroleum products, gas
Hong Kong	4	1,096,000	Petroleum products, chemicals, gas
Huizhou	4	2,010,150	Crude, petroleum products, chemicals, gas
Jiangyin	9	1,697,400	Petroleum products, chemicals, gas
Jaixing	2	2,494,200	Crude, petroleum products, chemicals
Jinan	1	1,520,000	Chemicals
Jingtang	1	47,000	Petroleum products, chemicals
Jinzhong	1	90,000	Petroleum products
Jinzhou	4	2,102,000	Crude, petroleum products, gas
Jiujiang	1	54,000	Petroleum products
Kunming	2	420,000	Petroleum products
Lanzhou	1	3,000,000	Crude
Lhasa	1	38,000	Petroleum products
Liangungang	2	70,600	Petroleum products, chemicals, gas
Longkou	1	60,000	Petroleum products
Macau	1	86,000	Petroleum products
Manzhouli	1	120,000	Petroleum products, chemicals
Maoming	2	3,837,000	Crude, chemicals
Nanjing	12	3,731,600	Petroleum products, chemicals, gas
Nantong	12	2,150,800	Crude, petroleum products, chemicals, gas
Ningbo	19	14,967,530	Crude, petroleum products, chemicals, gas, vegoils
Putian	4	348,000	Petroleum products, chemicals, gas
Qingdao	14	11,939,120	Crude, petroleum products, chemicals, gas
Qinhuangdao	4	607,000	Crude, petroleum products, chemicals
Qinzhou	3	4,568,000	Petroleum products, chemicals, gas, vegoils
Qiqihaer	1	11,200	Petroleum products
Quanzhou	8	3,325,800	Crude, petroleum products, chemicals, gas
Rizhao	6	4,978,800	Crude, petroleum products, chemicals
Shanghai	15	2,537,300	Petroleum products, chemicals, gas, vegoils
Shenzhen	5	777,500	Petroleum products, chemicals, vegoils
Taicang	1	336,000	Petroleum products, chemicals
Taiyuan	2	70,600	Petroleum products
Tangcang	1	352,000	Petroleum products, chemicals, gas
Tangshan	1	3,200,000	Crude

Tianjin	27	9,955,000	Crude, petroleum products, chemicals, gas, vegoils
Tongling	1	17,000	Petroleum products
Turpan	1	2,000,000	Crude
Urumqi	1	450,000	Crude
Waidiao	1		Petroleum products
Weihai	3	567,000	Petroleum products, chemicals, gas
Wenzhou	2	39,350	Petroleum products, chemicals
Wuhan	3	475,000	Petroleum products
Wuhu	1	74,000	Petroleum products
Xiamen	6	585,100	Petroleum products, chemicals, vegoils
Xingyuan	1	100,000	Petroleum products
Xuzhou	1	96,000	Petroleum products
Yangpu	2	2,080,000	Crude, petroleum products
Yangzhou	5	771,800	Crude, petroleum products, chemicals, biofuels
Yantai	5	3,110,500	Crude, petroleum products, chemicals
Yinchuan	1	100,000	Crude, petroleum products
Yingkou	3	3,584,000	Crude, petroleum products, chemicals, vegoils
Zhangjiagang	12	1,830,000	Petroleum products, chemicals, vegoils
Zhangzhou	1	27,100	Petroleum products
Zhanjiang	2	552,200	Crude, petroleum products, chemicals
Zhengzhou	1	80,300	Petroleum products
Zhenjiang	5	288,400	Petroleum products, chemicals
Zhoushan	13	15,049,300	Crude, petroleum products, chemicals
Zhuhai	6	2,698,900	Crude, petroleum products, chemicals, gas