

Qatar courts China for funding and LNG offtake from North Field expansion

Qatar Petroleum is in talks with PetroChina and Sinopec for equity stakes in North Field East, the world's largest single LNG project. PetroChina might take a 5 percent stake and CNOOC's chief financial officer Xie Weizhi said the firm was "very interested" in firm LNG offtake.

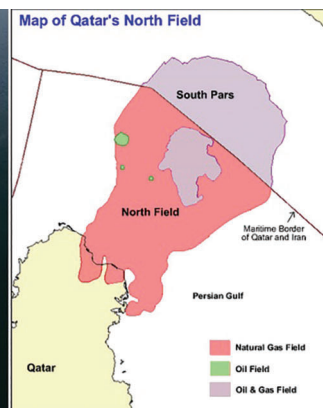
Financial investment decision (FID) on the \$28.75 billion North Field expansion was taken in February, with the project slated to add 33 million tons per annum (mtpa) to Qatar's current 77 mtpa of LNG export capacity from the fourth quarter of 2025, a staggering 40 percent increase. Now Qatar Petroleum is looking for partners to help finance the giant project.

Apart from China's three state-dominated oil and gas companies,

Qatar has also approached Western majors including Exxon-Mobil, ConocoPhillips, Total, Chevron, Eni and Royal Dutch Shell.

Over \$12 billion raised in bond market

The quest for funding from Western IOCs remains high although Qatar Petroleum on June 29 grabbed a staggering \$12.5 billion



in a jumbo bond sale. This large US dollar fixed-rate oil and gas bond was highly oversubscribed, having received order of more than \$40 billion from global insurers, asset managers, pension funds and bank treasuries.

Equity finance is next. Western oil majors have been invited

in a transparent tender to bid for a share for the North Field expansion, while talks with the Chinese NOCs are clouded in more secrecy.

ConocoPhillips, the third largest US oil company, confirmed it is preparing a bid for a stake while Italy's state-dominated oil

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China's LNG imports slow in the autumn after 28% surge in H1-2021

High prices and a slowing of China's economic recovery will lead to a drop in the country's LNG imports in the second half of this year. After a 28% year-on-year growth in the first half of 2021, LNG shipments are forecast to rise just 13% from a year earlier, said Ricki Wang, an analyst at Chinese commodities consultancy JLC.

During the heating season from October through March, LNG imports to China are expected to remain flat, a trader with a Chinese oil major told Reuters with reference to the high spot prices and also infrastructure constraints.

"China's capacity to handle shipments rather than demand will be the key driver for winter imports. Barely any new terminals have come online this year," he said. A Singapore-based trader added: "There is little (Chinese) demand for October (delivery) given such prices. It seems they have contracted enough for winter."

Counter-seasonal demand spike

Unlike most years, China's LNG demand surged much earlier in 2021 on the back of the country's sharp economy rebound from the Covid-19 pandemic. Spot LNG prices did not drop below \$5.50 per MMBtu, while in 2020, prices remained in the low single digits for several months.

China's strong economic rebound and power crunches amid extreme summer weather led to



LNG carrier berthing at Tianjin regas terminal, operated by Sinopec

a counter-seasonal spike in LNG imports this summer. But soaring spot prices began to deter purchases in July, with imports falling to the lowest since March.

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and gas company Eni is considering joining the competition. ExxonMobil, meanwhile, strives to extend and potentially enlarge its existing joint ventures in Qatar.

Shell to ship 1 mtpa of Qatari LNG to China

Eager to secure firm offtake of the North Field expansion, Qatar Petroleum just signed a 10-year contract with Shell to ship another 1 mtpa of LNG to China. Deliveries will start in January 2022, whereby the LNG cargoes will be shipped to various regasification and import terminals on the Chinese mainland. Once in full swing, the Shell deliveries will boost Qatari LNG supply to China to 12 mtpa.

Shell's LNG deliveries to China will be sourced from the Qatargas 1 project. The 10 mtpa upstream and liquefaction facility is currently operated by Qatar

Petroleum as a joint venture with ExxonMobil, Total as well as Marubeni and Mitsui. The JV will expire in January 2022 but ExxonMobil affiliates are keen to negotiate an extension. An Exxon spokesman said the US oil major was actively working with Qatar Petroleum to ensure "continuing success" in future LNG project in the Middle Eastern state. Exxon already has access to 15.4 million tons of Qatari gas through various JV deals, and getting a foothold on the North Field East project would give the US major secure access to comparatively cheap LNG for sale into high-priced markets in Asia.

Foreign equity funding used to be the main trigger for Qatar Petroleum to partner with Western oil and gas companies. But things have changed. "International partners, especially the majors, re-

main key to helping Qatargas secure LNG off-take and global market access," Valery Chow from Wood Mackenzie said, but "Qatar Petroleum does not necessarily need foreign balance sheet funding for new projects."

Qatar ready to bid in spot tenders

China will surpass Japan this year as the world's largest LNG importer, according to ship-tracking data, and nearly two-thirds of Qatar's LNG supplies are already going to Asian's fastest growing economy. Catering to China's gas market reform which creates dozens of new, small and risk-affine importers, Qatar's state incumbent exporter has to reconsider its export strategy. Long-term contracts, often with a lack of destination flexibility, are no longer attractive as a growing

portion of China's LNG demand is being met by short-term or spot supplies.

China is keen on Qatari gas as it is offered at the lowest price at slopes of 10% Brent, and state-owned Chinese buyers are looking to diversify supply.

At least five Chinese companies, including Beijing Gas, ENN, Guangdong Energy but also state-run CNNOC, are understood to have purchased around 80-90 LNG cargoes in strip tenders for delivery up to March 2022. In addition, China's Guangdong Energy in mid-August closed a tender for 13 cargoes for delivery between June, 2022 and December, 2023, traders said. To tap this growing short term market, Qatar needs to change tack.

Qatargas and Qatar Petroleum are recognizing their internal structures and plan to start their own gas trading desks. ■

Exxon eyes investment in Huizhou LNG terminal in Guangdong

US major ExxonMobil is considering investing in a new LNG import terminal and industrial complex at Huizhou. China's Guangdong Energy has started building the \$1 billion Huizhou LNG import terminal and the US oil major is seeking to get a stake in the venture.

Works on the regas terminal in Guangdong province are being fast-tracked to cater to a large petrochemicals complex nearby. Official Chinese media reported that construction activities had started at the Huizhou site and with LNG imports set to start around the end of 2023.

"ExxonMobil is progressing project discussions with potential partners," the US major said, having signed a preliminary agree-

ment back in 2018 with the Guangdong provincial authorities to look at investing in projects in the South China manufacturing hub. The US oil major said at the time that its decision to proceed with the project would be based on a number of factors, including receipt of permits and project competitiveness.

TGE Shanghai was awarded an EPC to deliver three 200,000 cubic metres pre-stressed full contain-

ment LNG tanks.

The overall EPC project encompasses a first-phase design capacity of the Huizhou terminal of 4 million tonnes per annum (mtpa) of LNG, which will cost around 6.63 billion Chinese Yuan (\$1.02bn) to construct. The terminal will be able to handle



View of Huizhou LNG terminal

Q-Max LNG carriers at 266,000 cubic metres capacity, while storage will be provided by three tanks of 200,000 cubic metres. ■

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Once the northern hemisphere summer kicked in, spot LNG spot

prices had soared to an eight-year seasonal high, almost touching \$18 per MMBtu last week. For example, the S&P Global Platts JKM for October was assessed at \$17.460 per MMBtu on 25th August. Forward prices remain on fairly high levels. JKM LNG futures on ICE peaked at nearly \$20 per MMBtu last week for cargo deliveries during the forthcoming winter period through to January, reflecting the broad-market expectations of tight market conditions persisting

until the end of this year.

NOCs may buy more in October

Currently, smaller LNG buyers are hesitant in the face of high prices on the front end of the curve. Most Chinese national oil companies have already covered their winter positions, such as state-run Unipet's procurement of around 40-50 cargoes for delivery in the second half of 2021 and February, 2022, through a strip tender in

April, traders said. "The Chinese will have to buy more to inject for winter. I doubt they have fully prepared for winter, due to higher demand throughout this year. They will likely buy October, the cheapest part of the winter period," one trader suggested. But overall demand will continue to grow this winter, albeit at a slower pace compared to last year, due to an expansion in gas-fired power capacity and higher industrial gas use. ■

LNG China

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Coal-to-gas switching policies push up China's LNG imports

Only Asia has seen LNG imports rise despite the pandemic, largely due to the Chinese government's coal-to-gas switching policies which pushed up imports by 1.0 billion cubic feet per day (Bcf/d) in 2020. India's LNG imports increased 0.4 Bcf/d amid low prices for spot cargoes in spring and summer.

China remains the second largest LNG importer globally, with 68.9 million tons or a 19.3 percent market share – up by almost 2 percent from its 2019 market share, and bound to expand further, according to figures in the newly released Annual Report 2021 by the International Group of Liquefied Natural Gas Importers (GIIGNL).

In India, import grew 2.7 million tons or 11 percent underpinned by the operational start of the Mudra LNG regas terminal and higher utilization rate of the Kochi LNG terminal. Comparatively cheap spot LNG prices in the shoulder seasons prompted many Indian utility buyers to dispatch gas-fired rather than coal-fired plants for power generation.

In contrast, LNG import to Japan eased of 0.3 Bcf/d over the course of last year to average 9.8 Bcf/d, largely due to the greater utilization of nuclear reactors for baseload power generation.

Carbon price “too low” to make a difference

Coal-to-gas switching is, so far, still largely policy-driven given that the price on carbon emissions

in Asia is far too low to make a fuel switch economically viable. Boston Consulting Group finds that levying a price of \$40 per ton on carbon emissions in China would render gas-burn 30 percent cheaper than coal.

More generally in Asia, a carbon price of \$20 to \$50 per ton would bring gas to achieve cost equivalence with coal. However, these are all still “well below what is required to get the world onto a trajectory compatible with the Paris Agreement 2° Celsius

pathway – about \$125 per ton,” analysts pointed out.

Assuming such carbon pricing was in place, for new combined-cycle gas turbine generator (CCGT) built now, there would be a positive cash-flow through 2040.

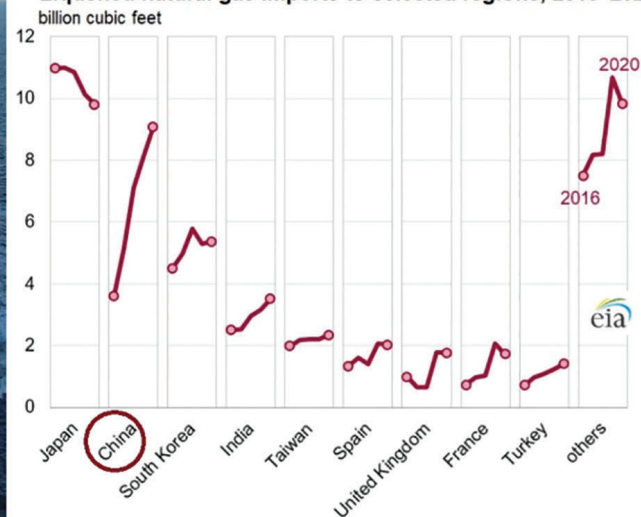
Today, the median price of carbon across 46 national jurisdictions is roughly \$13 US/ton but just about a third of national prices are above the \$20 mark. Analysts see carbon pricing as an essential policy instrument to promote investment in small-scale

LNG regas and integrated gas-fired power projects, often situated in remote areas.

Policy makers are urged to steer new investment by increasing the price of carbon, controlling pollution and rewarding efficiency. “The adoption of natural gas technologies has already proved to be a highly cost-effective solution for improving air quality and reducing emissions, through fuel switching away from coal and oil,” analysts concluded.



Liquefied natural gas imports to selected regions, 2016–2020



Source: Graph created by the U.S. Energy Information Administration, based on data from the International Group of Liquefied Natural Gas Importers (GIIGNL)'s *The LNG Industry* annual reports (2017–2021)

Non-coal plants generate half of China's electricity supply

Strong growth in renewables has reduced the share of coal in China's power generation mix to less than 50% – for the first time. Fitch Ratings expects the contribution of coal will fall by a further 3% in 2021 as the government pushes for a coal-to-gas switch to reach carbon neutrality.

Traded volumes of wholesale power keep growing and reached 42 percent of China's entire electricity consumed in 2020. Analysts noted “this has led to lower average tariffs for leading coal-fired power gencos. Though price pressure has been somewhat allevi-

ated by narrowing discounts due to more rational market competition throughout the year, and the robust power demand rebound and coal price hike in the fourth quarter of 2020.”

State-owned power gencos with large amounts of natural gas-

fired or renewables capacity in their fuel mix tend to have higher electricity prices, despite the expanded power trading. “This is because the price pressure from trading is offset by a higher share of generation from wind and solar power, which charges higher tariffs than coal-fired power,” analysts explained.

China has been one of the first countries to emerge from the Covid-19 crisis, and industrial energy demand rebounded strongly

starting from the autumn of 2020. As a consequence, power consumption from industry soared by 7.6 percent year-on-year the fourth quarter, while commercial sector demand was up by 8.4 percent, pushing up full-year demand growth to 3.1 percent.

Growth accelerated throughout the winter 2021/21, supported by a robust economic recovery and the unusually cold conditions that boosted thermal coal and gas demand for heating.

“China has been one of the first countries to emerge from the Covid-19 crisis...”

”

- Fitch Ratings



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China moves closer to World No. 1 importer as demand stays high

Chinese LNG show no signs of slowing amid a gas infrastructure build-out. Shipments to China during the first six months of 2021 jumped to 39.78 million tons from 31.18 million tons in the prior-year period, an increase of around 27.6 percent, according to data from the General Administration of Customs.

China's main LNG suppliers are Australia, Qatar, Malaysia, Indonesia, Russia and the US.

If the current 2021 Chinese import trend continues the annual total would be just under 80 million, surpassing the current global No. 1 importer Japan, analysts suggested. Japanese imports of LNG are forecast for 2021 to be under the 75 million ton level.

Third party access emboldens smaller players

The Chinese energy majors still import most of the nation's LNG and own and operate almost the whole network terminals, though under market reforms third-party access should be available at most facilities, observers noted.

City-gas distributors in China are seen to benefit from timelier fuel-cost pass-through under the national gas market reform. With pipeline access now open to all, those with access to cheap LNG enjoy lower gas procurement costs which will be passed on to end-customers.

PipeChina, the new centralized pipeline company, aims to stimulate gas consumption in line with China's goal to increase the use of



Binhai Port, where CNOOC builds new LNG storage tanks

clean energy. Gas usage cost will be lowered by strictly regulating distribution and transmission charges. At the same time, selling prices of upstream companies as well as retail prices will be deregulated to reflect demand and supply dynamics.

CNOOC expands storage at Binhai Port

In moves to cope with rising LNG demand at the heart of Chinese clean-energy policies and industrial development the import network is being expanded. The leading Chinese LNG importer, China National Offshore Oil Corp (CNOOC), recently increased the planned storage capacity from six tanks to 10 tanks for the Yancheng-Binhai Port import ter-

minal now under construction in the eastern province of Jiangsu.

CNOOC said that the cost of the first six tanks would be around 6.1 billion yuan (\$953 million) and the Binhai venture would have two gas-fired power plants adjacent. The full project is scheduled to come on line by the end of 2023 with the 10 tanks operating, including six ultra-large tanks, each with a total volume of 270,000 cubic meters.

Jiangsu's Binhai terminal will have an annual LNG regasification capacity of 6 million tons a year, though will also have the largest LNG storage base in China with the 10 tanks. CNOOC has described the Binhai project as an important asset in the industrial upgrade of the Yangtze River Economic Zone. ■

Petronas signs 10-year supply deals with CNOOC

Petronas LNG has signed a 10-year term deal to supply LNG to CNOOC Gas and Power Trading & Marketing Limited, a subsidiary of China National Offshore Oil Corp (CNOOC). This agreement also includes gas from LNG Canada when the facility commences its operations by middle of this decade.

Around 2.2 mtpa of LNG will be supplied over a 10-year period, indexed to a combination of the Brent and Alberta Energy Company (AECO) indices. The deal is valued at about \$7 billion over the period.

The AECO index, part of the ICE NGX commodity exchange platform, is one of the most liquid

spot and forward energy markets in North America, the company



claimed. It is the leading price marker for natural gas in Canada,

similar to US' Henry Hub. Petronas introduced this index in May of this year following the sale of a spot cargo from Bintulu, Malaysia, to a Far East buyer. ■

NEWS NUDGES

Chinese gas flows from Russia to rise

Russia's daily piped natural gas deliveries to China are set to rise by more than 50 percent by the end of 2021, China's official Xinhua news agency reported. The current daily rate of 28 mill cubic metres will rise to 43 mill cubic metres by year-end, ensuring supply for the winter and spring of 2022, including the Beijing Winter Olympics in February next year, Xinhua quoted a PipeChina official as saying.

The East Route pipeline scheme has carried more than 10 bill cubic metres of Russian gas to China since it started operations in December, 2019, Xinhua said. In China, the northern and middle sections of the scheme have already been completed, while the southern section is due to be complete by 2025, allowing the project to reach its planned capacity of 38 bill cubic metres per year.

China to build Kamchatka terminal

China Communications Construction Company (CCCC) has won the contract to build Novatek's Kamchatka LNG transshipment terminal. The trans-shipment hub is intended to handle LNG loaded in the Arctic for discharge in Asia. It had earlier been reported that Japanese companies had expressed interest in participating in the Kamchatka transshipment terminal. It will be used to transship Yamal LNG from Arc7 type LNG carriers to conventional LNGCs for onward transits to Asian destinations. ■



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Chinese shipyard Wison to deliver modules for first Train at Arctic LNG II

Chinese shipyard Wison Offshore and Marine has completed four modules to make up the first liquefaction Train at the Arctic LNG II export plant being developed on the Gydan Peninsula in northern Siberia and the equipment was scheduled to be shipped during September.

Shanghai-based Wison said the modules for the first Train weigh a combined 50,000 tons and took two years to build at the Zhoushan yard in the eastern Chinese province of Zhejiang for the Arctic project owned by Russian natural gas company Novatek and investors from Europe and Asia.

Wison noted that each of the three production Trains ordered will have annual nameplate production capacity of 6.6 million tonnes for a combined 19.8 mtpa. The Chinese company said the equipment within the three Trains includes about 150,000 tons of pipe rack modules and in total 21 modules will be shipped under the design, procurement, construction and commissioning contract.

"Construction of the Arctic LNG II Trains began at the Zhoushan yard in September 2019 and the company overcame multiple challenges and difficulties posed by the Covid-19 pandemic and extreme weather to execute this project," said Wison. "Against stringent requirements on material selection and construction quality for polar equipment, Wison has fulfilled its task to the satisfaction of its client and the smooth delivery of this project is

more proof that 'Made in China' is the most reliable part of the global supply chain."

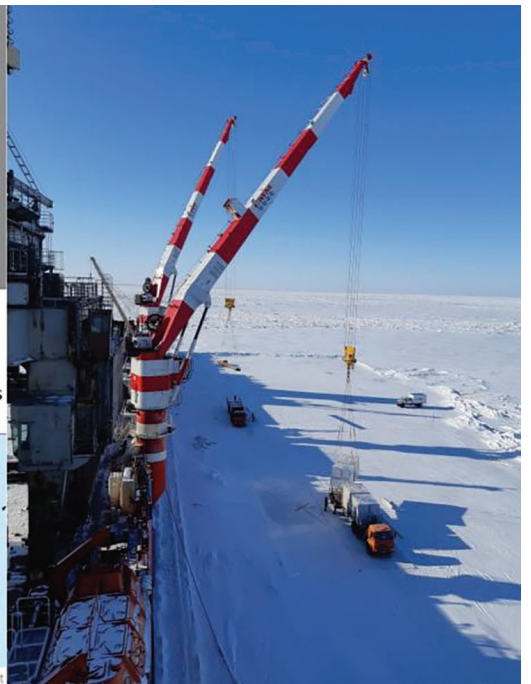
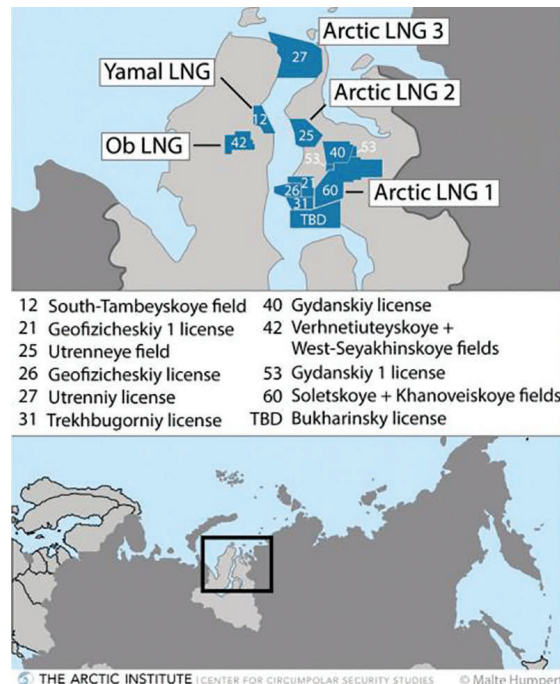
The main engineering, procurement and construction company on the site is TechnipEnergies, formerly part of the TechnipFMC group before the completion of this year's spin-off. The project is utilizing the construction concept of gravity-based structure platforms to reduce overall capital cost and reduce the environmen-

tal footprint in the Arctic zone of Russia.

The Utenneye gas field underpinning the LNG project has reserves totalling 1,434 billion cubic metres of natural gas and 90 million tons of liquids.

The engineering plan is to drop the GBS platforms into the Gulf of Ob and other infrastructure will include LNG storage facilities of a combined 687,000 cubic metres capacity.

Novatek holds 60 percent of the Arctic LNG II project and four other 10 percent stakes are shared between various shareholder, including TotalEnergies of France. The others are the Chinese energy majors, China National Petroleum Corp. and China National Offshore Oil Corp., as well as a Japanese shareholding split between trading house Mitsui & Co and the state body, Japan Oil, Gas and Metals National Corp.



GTT bags first order for LNG carrier tanks from Jiangnan Shipyard

French liquefied natural gas storage technology firm Gaztransport

and Technigaz (GTT) has expanded business in China by receiving a first storage system order for an LNG carrier from Jiangnan Shipyard in Shanghai. The vessel is scheduled to be delivered to the Jovo Group in the fourth

quarter of 2023.

The order is for the cargo-handling storage system for an LNG carrier being built for Chinese energy company, the Jovo Group. "This is GTT's first order for a membrane LNG carrier from Jiangnan, making the shipyard the second Chinese yard to construct a vessel with GTT technology," said the Paris-based company.

GTT's orders for storage systems for LNG carriers are normally from Hudong-Zhonghua

Shipbuilding, also based in Shanghai.

The order is also for a mid-sized LNG carrier to be added to the global fleet. GTT said it would design the tanks of the vessel with a cargo capacity 79,800 cubic metres. The mid-sized carrier would be fitted with the GTT's Mark III Flex membrane containment system and would be the first LNG carrier built in China with the Mark III technology family.



View into Shanghai's historic Jiangnan Shipyard

Chinese LNG Demand Outlook

There were 2.75mmt of LNG on the water with destinations in China according to market visibility at the time of writing on 2nd September. These cargoes had an estimated delivery horizon of 1st October. A single 0.06mmt cargo was broadly headed for China but still had to declare its destination terminal. A total of 0.58mmt of inbound cargoes were derived from the United States led by Sabine Pass LNG, Cameron LNG and Freeport LNG.

Most LNG cargoes still in transit at the time of writing and with scheduled arrivals at specified ports in China were due to arrive in North China led by Dalian LNG. This was followed by the Tianjin-Nangang LNG terminal in the greater Beijing/Tianjin area. Concurrently, the East China region was looking to receive roughly 0.67mmt, led by 0.31mmt headed for the Zhejiang LNG terminal and 0.22mmt to Shanghai's Yangshan facility. LNG demand in South China, however, was lagging the other two regions with only 0.54mmt currently expected to arrive.

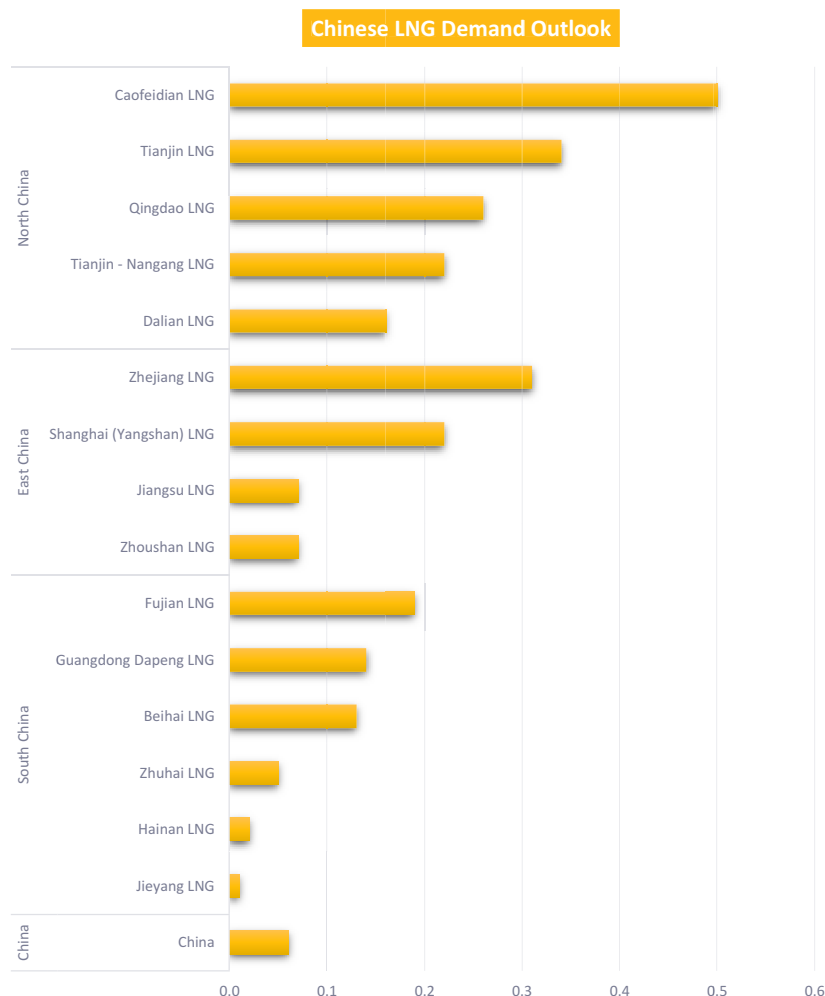
At the time of writing, our market visibility indicated there were eight US LNG cargoes en route to China with scheduled arrivals between 2nd September and 1st October. These cargoes amounted to 0.58mmt, 0.45mmt of which had been loaded at Sabine Pass LNG, Cameron LNG and Freeport LNG at 0.15mmt, respectively. The remaining 0.13mmt had been shipped from Cove Point LNG via the Grace Dahlia and Corpus Christi LNG via the Castillo de Caldelas.

A single cargo of 0.06mmt of loaded LNG was also headed towards China but without specifying the arrival port. This shipment had sailed from Gorgon LNG in Australia via the Asia Energy. Beyond this Australian cargo, we were also tracking 29 shipments amounting to 2.12mmt that were broadly en route to the Far East with a preliminary delivery horizon of 9th October. It was unclear at the time of writing to what extent these would arrive in China.

North China

Of total LNG currently en route to China, we are anticipating 1.48mmt to be delivered to North China – comprising the wider Beijing area and China's industrial north – with a delivery horizon of 1st October.

Among the roster of northern Chinese terminals, CNPC's Caofeidian LNG was expected to receive 0.50mmt via seven cargoes by 27th September. These cargoes were exported by the United States, Russia, Malaysia and Australia. The Russian cargo was a Yamal LNG shipment aboard the Yakov Gakkel via the Northern Sea Route instead of the Suez Canal or South Africa's Cape of Good Hope. The Yakov Gakkel belongs to Yamal LNG's ice-breaking Arc-7 LNGC fleet, which can traverse the Arctic without the help of dedicated ice breakers during the summer months.



Source: LNG Journal

Current market visibility further indicated 0.34mmt were destined for Sinopec's Tianjin LNG by 1st October, comprising three cargoes from the United States via the LNGShips Athena, the Castillo de Caldelas and the BW Helios from Sabine Pass, Corpus Christi and Freeport LNG, respectively. There was also a Wheatstone LNG shipment aboard the Asia Venture as well as a Nigerian export from Bonny Island via the LNG Oyo.

East China

At the time of writing, we expected the East China region – comprising the wider Shanghai area and Zhejiang province – to receive 0.67mmt by 17th September. Zhejiang LNG is scheduled to receive 0.31mmt by 14th September, comprising three Australian Queensland Curtis LNG shipments and one Qatari cargo via the Maran Gas Spetses, the Maran Gas Olympias, the Maran Gas Hydra

and the Al Bahiya, respectively. Moreover, we were anticipating Shanghai's Yangshan terminal to receive three cargoes by 12th September – comprising one each from Australia's Gladstone LNG, Malaysia's Bintulu plant and Qatar's Ras Laffan complex – via the Seri Bijaksana, the Polar Spirit and the Q-Max Al Mayeda, respectively. Additionally, we were seeing a 0.07mmt Gorgon LNG-derived cargo travelling to Zhoushan LNG via the Asia Endeavour as well as a Yamal LNG shipment of 0.07mmt via the Arc-7 carrier Boris Vilkitsky en route to Jiangsu LNG via the Northern Sea Route.

South China

In the south of the country, we were expecting 0.54mmt to be delivered by 24th September. Expected LNG imports in the South China region were led by Fujian LNG, which at the time of writing was expecting three cargoes

amounting to 0.19mmt. These shipments comprised a shipment each from Indonesia, Australia and Russia. These Fujian LNG-bound cargoes had a delivery horizon of 9th September at the time of writing.

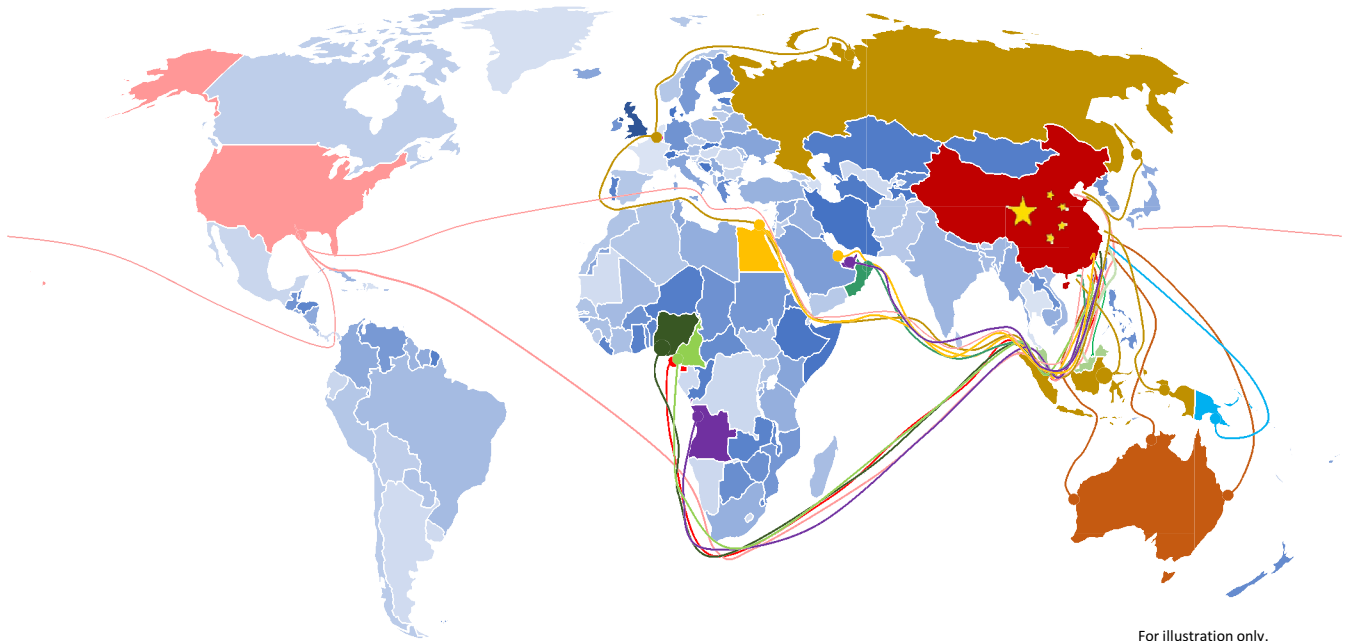
Two further cargoes totalling 0.14mmt aboard the Cameron LNG-derived Marvel Eagle as well as the Energy Universe carrying an Australian Gorgon LNG cargo were headed for Guangdong Dapeng LNG. AIS data at the time of writing indicated these cargoes would be delivered by 10th September.

Beihai LNG and Zhuhai LNG, meanwhile, were expected to receive a total of three cargoes amounting to 0.18mmt by 24th September. Beihai LNG was looking to take in 0.13mmt via an Australian cargo from Gladstone LNG via the Seri Camar as well as an Angolan cargo via the Sonangol Etosha. Concurrently, our market visibility indicated Zhuhai LNG was looking to receive 0.05mmt via the Gladstone LNG-derived Seri Begawan 5th September.

The remaining two cargoes headed to South China at the time of writing were destined for

the Hainan and Jieyang terminals. Hainan LNG was due to receive a Beihai LNG re-export of 0.02mmt via the coastal vessel Hai Yang Shi You 301 whilst Jieyang LNG was expecting the Lucia Ambition to deliver a Malaysian cargo of 0.01mmt by 2nd September, according to our data.

Chinese LNG Demand: June-August 2021



China's monthly LNG offtake grew by 0.41mmt in August, increasing robustly by 7 percent to 6.20mmt. This constituted a rebound following a string of month-on-month reductions in July and June. Monthly Chinese LNG imports had decreased by 0.73mmt (-11 percent) to 5.79mmt in July from 6.52mmt in June. Monthly Chinese LNG imports had thus also decreased by 0.61mmt (-9 percent) in June from imports of 7.13mmt recorded in May. Consequently, there was a slight reduction in the report period of June-August from the previous three-month period of March-May, decreasing by 0.63mmt (-3 percent) from 19.14mmt to 18.51mmt. Nevertheless, the 18.51mmt imported during the report period still constituted a net increase of 2.19mmt (14 percent) year-on-year. China's annualised LNG import capacity, meanwhile, stood at an average of 82 percent for the report period, up

10pp from 72 percent for the equivalent period in 2020 but down 3pp from the 85 percent recorded for March-May.

Prices

Domestic gas prices saw a strong recovery whilst landed LNG prices over the report period climbed equally quickly

The domestic LNG price increase we reported on in our previous report continued in June and July and rallied further in August. Privately quoted domestic prices had climbed from a low of US\$8.66/mmBtu on 3rd March to US\$12.41/mmBtu on 14th May before falling back to US\$11.45/mmBtu on 31st May. Thereafter, domestic prices found their two-month peak at US\$16.17/mmBtu on 31st July. In August, however, prices rallied to a peak of US\$19.09/mmBtu on 31st August. Our initial

price data for September suggests the increase is set to continue. Meanwhile, the average domestic price indicated by the National Bureau of Statistics (CNBS) stood at US\$17.47/mmBtu on 20th August – the latest available data point – which represents growth of US\$ 5.72/mmBtu (49 percent) from the US\$11.75/mmBtu on 20th May, the last available data point in our previous report. Landed LNG prices saw a similar price rally over the report period, peaking at US\$21.31/mmBtu in mid-August. This represented an increase of US\$3.43/mmBtu (19 percent) from the peak of US\$17.88/mmBtu during the previous three-month period of March, April and May, according to our calculations based on Chinese customs data. However, landed prices have begun to ease off a little since their August peak, arriving at around US\$19/mmBtu towards the end of the month.

North China

LNG demand saw a notable monthly reduction in the north of China, decreasing by 0.34mmt (-6 percent) from 5.68mmt in the three months of March-May to 5.34mmt for the report period June-August. Mainly responsible for that reduction was the Tianjin-Nangang terminal. The North China region thereby discontinued the month-on-month growth of previous months. The sum of LNG imports of 5.34mmt in northern China for the period of June-August was thus also considerably lagging its year-on-year equivalent of 6.20mmt, down 0.86mmt (-14 percent).

China's North led by Qingdao LNG

Leading the roster of northern terminals by volumes imported, Qingdao LNG took in 1.75mmt during the report period of June-August. This constituted steady offtakes period-on-period. Imports consisted predominantly of 11 Australian cargoes amounting to 0.84mmt. Australia Pacific LNG delivered nine of these shipments, supplying 0.69mmt. In addition, Papua New Guinea's PNG LNG delivered seven cargoes totalling 0.51mmt. The remaining six shipments were delivered mainly from the United States and Russia, comprising Sabine Pass LNG, Yamal and Sakhalin-2 LNG. The UAE and Cameroon also delivered a shipment each from Das Island and the Kribi FLNG plant.

Tianjin LNG

Tianjin LNG, meanwhile, had offtakes amounting to 1.11mmt over the report period compared to 1.09mmt over March-May. The terminal thus saw an uptick in imports by

0.02mmt (2 percent). Cargoes from the Pacific Basin totalled 0.59mmt and thereby represented more than half of LNG shipped to the terminal. Australia exported 0.48mmt to Tianjin LNG during the report period, inter alia via the Shell-controlled newbuild LNGships

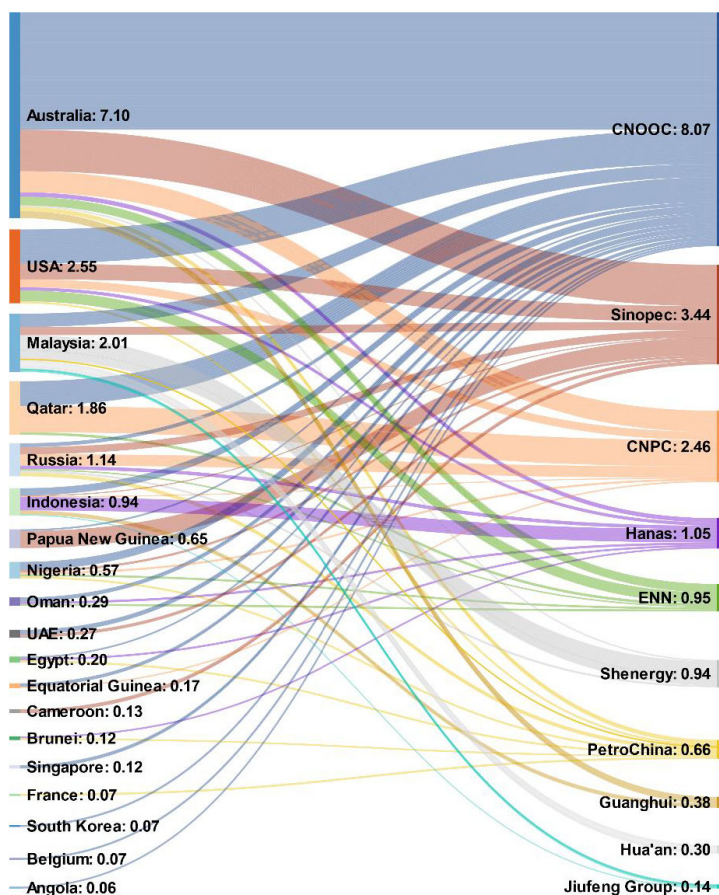
Athena, the Flex Freedom and the CESI Qingdao. Leading Australian shipments to Tianjin were Darwin LNG and NWS LNG with 0.16mmt delivered each. Australia Pacific LNG and Pluto LNG shipped 0.08mmt each. Papua New Guinea and Indonesia delivered a total of 0.11mmt over the report period.

Atlantic Basin shipments of 0.46mmt to Tianjin LNG were led by the United States directing 0.34mmt to the terminal via four cargoes. The remaining two Atlantic shipments came from Cameroon and Russia's Yamal LNG. In comparison, Tianjin LNG's imports from the Middle East were relatively minor at 0.06mmt, comprising one cargo from the UAE's Das Island plant via the Ghasha.

Tianjin - Nangang LNG

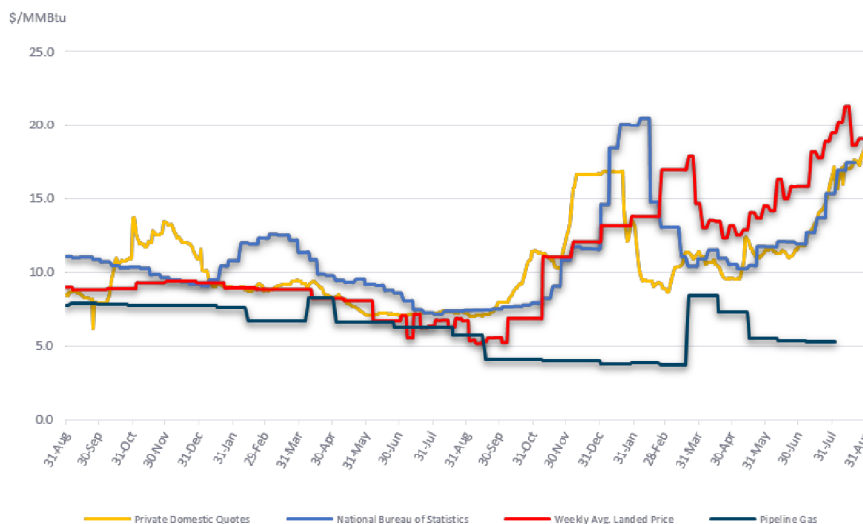
Although still in the top-three for North China, imports at Tianjin LNG had dropped significantly by 0.78mmt (-44 percent) in June-August compared to March-May. The facility did not import a Middle Eastern cargo but took in 0.71mmt from Pacific suppliers. Pacific supply was led by Australia with 0.43mmt delivered, followed by Tangguh LNG in Indonesia and Malaysia's PFLNG Satu facility with 0.14mmt each. Atlantic cargoes

Chinese LNG Buyers (MMt)



Source: LNG Journal

Chinese Gas Prices



Source: LNG Journal, CNBS, GACC, Domestic Traders

comprised three cargoes from the United States (0.21mmt) as well as one shipment of 0.06mmt from Angola.

Caofeidian and Dalian LNG

The remaining two northern terminals – Caofeidian and Dalian LNG – imported 0.88 and 0.62mmt over the report period, respectively, which in the case of Caofeidian LNG stemmed predominantly from Russia's Yamal LNG with 0.28mmt. The United States' Cameron LNG, Nigeria's Bonny Island LNG and Equatorial Guinea's EG LNG completed Atlantic Basin supply with 0.19mmt. Australia, meanwhile, also supplied 0.19mmt to Caofeidian, 0.13mmt of which came from Gorgon LNG. Among Middle Eastern suppliers, Qatar exported 0.22mmt via the Q-Max vessels Bu Samra and Al Samriya.

June-August supply to the Dalian terminal was almost evenly split between the Pacific and Atlantic Basins, with only one shipment of 0.07mmt coming from the Middle East through Egypt's Damietta plant. Dalian LNG's Pacific supply of 0.27mmt came via one delivery each from Australia's Queensland Curtis LNG and Australia Pacific LNG as well as one each from Brunei LNG and Sakhalin-2 LNG. Meanwhile, the four imports from the Atlantic Basin totalling 0.28mmt comprised a Nigerian shipment in addition to one from Yamal LNG, Sabine Pass and a re-export from Dunkerque Le Clifton in France via the Pskov.

East China

Demand in East China was dominated by the wider Shanghai area, where Jiangsu LNG imported 1.58mmt during the report period. This placed the terminal at number three among China's leading terminals in June-August. Accordingly, the terminal operated at above-nameplate capacity. Nevertheless, overall LNG demand in East China had decreased noticeably by 0.36mmt (-6 percent) to 5.47mmt from the 5.83mmt recorded in March-May.

Wider Shanghai area

Meanwhile, the remaining wider Shanghai area – comprising Qidong LNG, Shanghai LNG and the metropolis' peak-shaving facility – imported a total of 1.62mmt over the report period, down 0.37mmt (-19 percent) from the 1.99mmt recorded in March-May. The sub-region's imports were led by the Shanghai (Yangshan) LNG terminal, which took in 0.94mmt. Qidong LNG, meanwhile, had offtakes of 0.38mmt whilst the city's peak-shaving facility kept imports broadly steady at 0.30mmt.

Zhoushan and Zhejiang LNG

At neighbouring terminals Zhoushan and Zhejiang LNG, LNG imports amounted to 0.95mmt and 1.32mmt, respectively. Together, the two terminals thereby decreased imports by 0.16mmt (-6 percent) to 2.27mmt from the 2.43mmt recorded in March-May. LNG was mainly supplied by Australia via 18 cargoes totalling 1.12mmt and the United States through six shipments totalling 0.45mmt. Zhoushan LNG is one of the few LNG import terminals not controlled by one of the state-owned petrochemical giants PetroChina, Sinopec and CNOOC.

South China

Regional imports in South China – where LNG demand is primarily determined by the southern industrial centre of Shenzhen – saw continued high demand levels in June-August, although this growth did not extend to all terminals. The region's imports had amounted to 7.70mmt over the report period, which meant imports were up slightly by 0.15mmt (2 percent) from the 7.55mmt recorded in March-May.

Shenzhen terminals

South China's imports were led by Shenzhen's four terminals – Guangdong Dapeng, Shenzhen Diefu, Dongguan LNG and the adjacent peak-shaving facility. The region's most prominent terminal – Guangdong Dapeng LNG (GDLNG) – saw offtakes of 2.55mmt, placing it at the top of China's terminals. The terminal thus grew its June-August imports by 0.27mmt (12 percent) from 2.28mmt over the previous three-month period. Accordingly, its average capacity utilisation stood at 150 percent over the report period so that neighbouring Shenzhen Diefu LNG imported 0.71mmt, pegging its terminal utilisation to 71 percent. Shenzhen Diefu usually steps in when GDLNG is stretched beyond capacity. Finally, Dongguan LNG imported 0.14mmt, down 0.04mmt (-5 percent) period-on-period. The Shenzhen Peak-shaving terminal did not import LNG over the report period, compared to 0.06mmt in March-May.

Zhuhai and Jieyang LNG

Zhuhai LNG saw a significant increase in demand by 0.18mmt to 1.35mmt over the report period from 1.17mmt the previous period, thereby pegging overall capacity utilisation at 160 percent. Roughly two-thirds of Zhuhai's imports derived from the Pacific Basin, led by Australia's Queensland Curtis LNG

with 0.40mmt. Atlantic Basin supply amounted to 0.29mmt, which was mostly supplied by 0.22mmt from Sabine Pass LNG in the United States as well as one Elba Island shipment of 0.07mmt. The remaining imports stemmed from two Middle Eastern shipments totalling 0.18mmt derived from Qatar's Ras Laffan LNG complex.

Similarly, Jieyang LNG saw robust import growth, increasing offtakes by 0.08mmt (10 percent) in June-August from 0.79mmt in March-May. Accordingly, Jieyang LNG saw high capacity utilisation of 83 percent over the report period. In April-May, the terminal had seen explosive growth of 0.37mmt to 0.64mmt from 0.27mmt in February-March. As we reported earlier in the year, China's state-owned China Oil and Gas Pipeline Network (also known as PipeChina) inaugurated a new pipeline connection in March. This linked the Jieyang terminal to Guangdong Province's existing pipeline network and further to China's massive West-East II and III trunklines. The increased connectivity boosted the terminal's throughput capacity and made it a prominent delivery node in China's LNG terminal network. Since commissioning in 2017, the terminal had gone through frequent periods without shipments arriving because its send-out options were mostly limited to truck loadings.

Fujian and Beihai LNG

Fujian LNG saw steep demand growth in June-August compared to the previous report period of March-May. At 1.05mmt, imports were up 0.21mmt (25 percent) from the 0.84mmt recorded during the previous period. Meanwhile, Beihai LNG saw lower demand over the report period by reducing offtakes by 0.32mmt (-6 percent) to 0.58mmt June-August from 0.90mmt in March-May. The terminals' annualised capacity utilisations, therefore, stood at 67 and 77 percent, respectively.

Hainan Island

The remaining two regional LNG terminals on Hainan Island – Hainan LNG and the Hainan Transfer Station – also saw a significant demand decrease. Whilst the Transfer Station continued to receive its regular cargoes via the Lucia Ambition (0.01mmt) – which, however, only amounted to 0.04mmt over the report period compared to 0.05mmt over the previous period – Hainan LNG decreased imports faster by 0.11mmt to 0.41mmt from 0.52mmt in March-May. LNG capacity utilisation on Hainan Island over the report period was thus 54 percent, down 14pp from 68 percent during the March-May period.

Region	Terminal	Export Basin			August 2021	July 2021	June 2021	Rep. Period Utilisation
		Atlantic	Middle East	Pacific				
North	Dalian LNG	0.21	-	0.07	0.28	0.20	0.14	41%
	Tianjin - Nangang LNG	-	-	0.28	0.28	0.14	0.56	36%
	Qingdao LNG	0.15	-	0.46	0.61	0.46	0.68	117%
	Tianjin LNG	0.20	-	0.08	0.28	0.37	0.46	61%
	Caofeidian LNG	0.21	-	0.06	0.27	0.47	0.14	54%
East	Zhejiang LNG	-	0.09	0.39	0.48	0.45	0.39	176%
	Shanghai (Yangshan)	0.07	-	0.28	0.35	0.26	0.33	125%
	Jiangsu LNG	0.14	0.31	0.21	0.66	0.46	0.46	181%
	Qidong LNG	-	-	0.06	0.06	0.20	0.12	53%
	Zhoushan LNG	0.15	0.09	0.06	0.30	0.30	0.35	127%
	Shanghai Peak-Shaving	-	-	0.08	0.08	0.12	0.1	20%
South	Guangdong Dapeng LNG	0.14	0.14	0.55	0.83	0.73	0.99	150%
	Fujian LNG	0.12	-	0.23	0.35	0.35	0.35	67%
	Beihai LNG	-	-	0.21	0.21	0.26	0.11	77%
	Zhuhai LNG	0.07	-	0.41	0.48	0.38	0.49	160%
	Hainan LNG	-	-	0.10	0.10	0.11	0.2	55%
	Jieyang LNG	0.14	0.05	0.05	0.24	0.26	0.37	83%
	Dongguan LNG	-	-	0.07	0.07	0.03	0.04	78%
	Shenzhen Diefu LNG	-	-	0.27	0.27	0.21	0.23	71%
	Hainan Transfer Station	-	-	-	0.00	0.03	0.01	44%
	Shenzhen Peak-Shaving	-	-	-	0.00	0.00	0.00	0%
Total		1.60	0.68	3.92	6.20	5.79	6.52	82%

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