

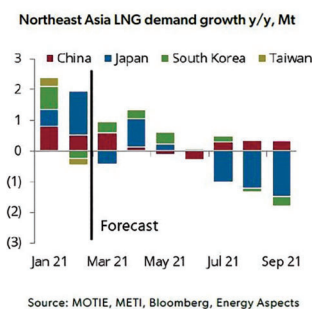
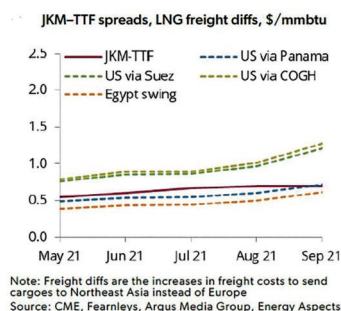
Asian LNG markets to tighten from early May

Though the Suez Canal Suez blockade has caused much of an uproar on global shipping markets, it only had a modest impact on LNG shipping and spot LNG prices in Asia where supply is forecast to tighten from the end of April. Come early May, the start of the maintenance season will see several Australian liquefaction plants go offline: Gorgon, North West Shelf, Ichthys, Queensland GLNG and APLNG – removing a combined 3.1 million tons of Pacific LNG supply in Q2-2021 which is likely to change the energy balance in China.

China, Asia's fastest growing natural gas market, has seen prices of imported LNG surge by nearly 200% in January 2021 when a period of unseasonably cold weather coincided with low volumes of LNG deliveries from the Atlantic Basin. State buyers in China are notoriously price-sensitive and most were reluctant to pay anything above \$15 per million British

thermal units (MMBtu) for imported LNG, so they turned to pipeline gas or domestic shale gas supplies instead.

Going into 2021, the Chinese government has been eager to avert a repeat for the winter 2020/21 gas shortage, so gas storages are already being replenished by pipeline gas imported from Russia, Turkmenistan and Azerbaijan.



LNG imports, in contrast, are forecast to remain on current low levels of around 16 million tons throughout April and June, analysts

at Energy Aspects noted, explaining that cheaper supplies from Russia and central Asia limit the need for spot LNG.

continued on page 2

China lacks investment for LNG-fired power due to cost issues

Electric utilities in China avoid investing in gas peaking plants due to cost issues. Fuel prices are bound to rise with the start of China's national emissions trading scheme (CETS) in mid-2021, and the latest winter cold period highlighted security of supply risks for imported LNG.

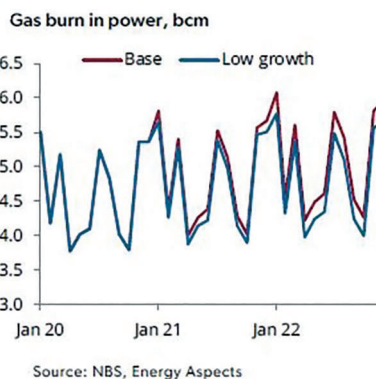
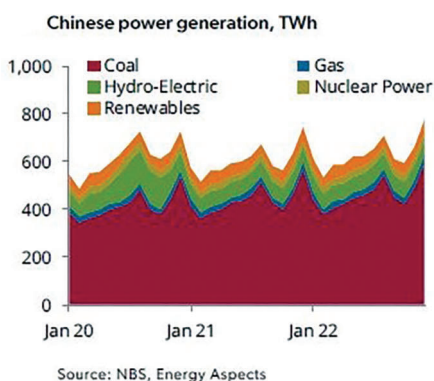
"China lacks enthusiasm for gas-fired power due to cost and security of supply issues. The start of CETS is unlikely to change that in the coming few years as power sector liberalisation," analysts at Energy Aspects wrote in their latest country analysis.

The first compliance cycle of China's national ETS is for the period from January 1 to December 31,

2021, covering the emissions of 2019 and 2020 for 2,225 utilities, transmission system operators and related firms in the power generation sector.

Emission prices to start low

Chinese emission unit prices are likely to start low given benchmarks that look largely in line



AGENDA

LEGAL MATTERS

CNOOC reacts to being kicked off New York Stock Exchange for Trump era action **2**

COMPANIES

PetroChina feels the pinch from oil price pressures and Covid-19 effect **3**
China's ENN Group post 2% rise in revenue **3**

SUPPLY

Qatar Petroleum signs SPA with Sinopec over 2 mtpa **5**

POWER GEN

Non-coal plants generate half of China's electricity supply **6**

LNG UNLIMITED DATA

8 - 12

continued page 7

continued from page 1

“Cross-basin US spot cargoes, shipped via the Panama Canal, will unlikely be needed in Asia in the second quarter,” Energy Aspects said in a research note, suggesting the arbitrage window for US LNG delivery to Asia only opens up above a \$0.52 per MMBtu price spread. “As such, we believe that JKM-TTF spreads should average \$0.42 per MMBtu between May-June, increasing from \$0.39 per MMBtu in May to \$0.44 per MMBtu in June on rising freight rates,” analysts noted.

Arbitrage window to open in September

Looking ahead to the autumn, Chinese buyers are expected to restock LNG inventories and underground gas inventories in China well ahead of the peak winter season to avoid having to buy LNG cargoes at levels anywhere this winter’s extreme highs of the

Japan-Korea-Marker (JKM), both in absolute prices and volatility.

Still, analysts reckon there will be some “punctual LNG cargo deliveries” in Q3-2021 given that the arbitrage window would need to open from an estimated \$0.55 per MMBtu in July to over \$0.72 per MMBtu in September to incentivise longer voyages in a tightening market. Typically, Chinese buyers tend to bargain and many wait until the early winter to refill what is missing in storage with comparatively expensive LNG imports.

Gas-burn in the power generator sector increasingly drives up China’s overall demand for natural gas, particularly because the Government implemented more stringent regulation to decarbonise the energy sector. But thermal coal still covers most of baseload electricity supply and the country’s energy-hungry industry wants and

needs available, affordable and secure energy supply.

According to Wood Mackenzie, energy market prices in China are “already far beyond their sustainable limit when gas is used in the power sector, or even in the industrial sector where alternative forms of furnace fuels are available.” Research director Robert Sims expects “substantial fuel switching to occur already at current prices.”

Upstream deals rise across Asia Pacific

China, and neighbouring economies in Asia Pacific, will likely become the backdrop of several high-profile upstream divestments. Cash-strapped international oil majors (IOCs), whose balance sheets have been weakened by the Covid-19 pandemic are trying to divest some upstream oil and gas assets in Asia to consol-

idate their businesses.

Estimating some \$12 billion of potential divestments are on the cards, Wood Mackenzie says LNG opportunities account for more than half of the 5.8 billion boe of these resources on offer. About a third of the assets up for grabs are oil and gas acreage or producing fields, with 2.7 billion boe located in Australia. A further \$26 billion of assets are deemed “speculative deals”, which may change hands at the right prices as IOCs need to deleverage their balance change.

As for the buyers, most of them will likely be Asian National Oil Companies (NOC) and regional independents but also infrastructure funds and private equity-backed entities such as Neptune, Trident and Chrysaor. Late-life asset specialists like Perenco, Jadestone and Hibiscus are seen to be active alongside ambitious regional players such as Medco Energi. ■

CNOOC reacts to being kicked off New York Stock Exchange for Trump era action

China National Offshore Oil Corp., one of China’s main LNG importers, has issued an advisory statement expressing “regret” at a decision by New York Stock Exchange to delist its shares under measures first enacted by the Trump Administration. CNOOC said its NYSE shares, which are American Depositary Shares (ADSs), could be exchanged for ordinary Hong Kong-listed shares.

Formal prohibitions on CNOOC took effect on March 9, 60 days after the company was added to the list that prohibits US investments, according to a guidance issued by the US Treasury Department on January 27. Advising ADS shareholders of ADS on how to react, CNOOC said each ADS can be cancelled for delivery of 100

ordinary shares of the company, which are listed for trading on the Hong Kong Stock Exchange.

Right to appeal

The NYSE said CNOOC had the right to appeal the delisting decision. The US exchange said it would include any appeal it receives in its application to the US Securities and Exchange Commission, which will be submitted on completion of all procedures.

“The company regrets the NYSE’s decision and actions,” said CNOOC. “The NYSE’s decision and actions may affect the trading prices and volumes of the company’s securities,” added the Chinese major. “The company will continue to closely monitor the development of this matter and make further announcements as appropriate,” it stated.



Traders at the New York Stock Exchange

LNG imports to rise in 2021

As one of China’s largest LNG importers, CNOOC has capacity at nine of the country’s 22 LNG import terminals and ports. The Trump Administration had in 2020 moved against certain Chinese companies that Washington that it claimed to be “owned or controlled by the Chinese military” in an effort to ramp up trade pressure on Beijing.

CNOOC’s LNG import capacity is held at most of the regasification terminals south of Shanghai,

the port city where it has capacity at one facility. It is additionally a foundation customer at the Royal Dutch Shell-operated Queensland Curtis export plant on Curtis Island in eastern Australia.

Analysts expect China’s natural gas imports including pipeline gas and LNG are forecast to rise by 18 percent to 163 billion cubic metres in 2021, given that Chinese state-owned gas companies two more regas and import terminals in 2021, Pinghu LNG and Wenzhou LNG, both located in the eastern Zhejiang province. ■

LNG China

Publisher
Stuart Fryer

Editor
Anja Karl
Tel: +44 7733 684682
anja@lngjournal.com

Layout
Vivian Chee
Tel: +44 (0) 20 8995 5540
chee@btconnect.com

Subscription included with
LNG Journal

PetroChina feels the pinch from oil price pressures and Covid-19 effect

PetroChina, the Chinese major listed in Hong Kong and with LNG and international assets, reported plunges in annual revenues and net profits of over 20 percent and 57 percent respectively as it was hit by the effects of Covid-19 and the economic slowdown.

The PetroChina earnings report showed a 23 percent decline in revenues to the equivalent of US\$269 billion from US\$350.8Bln in the previous year, according to international accounting standards.

It reported revenues of 1.93 trillion Chinese yuan versus 2.52Tln yuan in 2019.

“We increased imports of pipeline gas and LNG, and sold 172.59 billion cubic metres of nat-

ural gas domestically, which contributed to the optimization of China’s energy mix and the construction of a beautiful China,” CEO Wang Dongjin said in a statement, explaining the company’s oil and gas lifting costs amounted to US\$11.1 per barrel, representing a decrease of 8.3 percent year-on-year.

PetroChina’s parent company, China National Petroleum Corp (CNPC), imports pipeline natural gas from Central Asian countries and Russia as well LNG from projects such as Yamal LNG and from PetroChina LNG agreements. In addition, PetroChina is also part of Royal Dutch Shell’s LNG Canada project and has a stake in the Area 4 reserves in the Rovuma Basin offshore Mozambique together with Eni and ExxonMobil.

The Chinese National Development and Reform Commission enacted new oil and gas liberalization measures last year requiring facility operators to open up access to their oil and gas infrastructure to free up the flow of natural gas. In connection with this, PetroChina made a net loss of 14.16 billion yuan (\$2.16bn) on sales of imported gas, compared with a loss of 30.7Bln in 2019. It recorded a 98Bln yuan cash gain from its spin-off of pipeline assets to newly formed PipeChina. However, earnings from pipeline tariffs declined by 11Bln yuan after the agreement.

Putting a positive face on it, PetroChina said its financial position “remained stable” with its gearing ratio decreasing by 2.1 percentage points year-on-year. ■



Workers in front of a PetroChina LNG storage tank

China’s ENN Group post 2% rise in revenue

ENN Group, the leading non-state energy company in China with LNG and city-gas assets, has reported a 2 percent rise in annual revenues to 71.6 billion Chinese yuan (\$11Bln), mainly from natural gas operations. The company, whose shares are listed on the Hong Kong stock exchange, said profits for the year attributable to shareholders rose 10.7 percent to 6.27 billion yuan (\$964 million) from 5.67 billion yuan (\$870m) in 2019.

ENN owns the Zhoushan LNG import terminal in the Zhejiang Free Trade Zone in eastern China and is planning to launch an expansion in 2021 from 3 million tonnes per annum to 5 mtpa. Here, it will double its LNG storage by adding two more tanks, each with capacity of 160,000 cubic metres.

TPA at Zhoushan LNG

In line with energy industry liberalization in China during 2020, ENN gave third-party access (TPA) for the first time, allowing the provincial government-owned company, Zhejiang Energy, to receive its LNG cargoes at Zhoushan.

Total gas sales volumes grew by

9.7 percent year-on-year to 29.56 Bcm but ENN said that during the year, natural gas supply was adequate and upstream gas and city-gate prices were reduced.

“At the same time, the Group increased low-cost LNG imports through our own long-term contracts and from spot market utilization through the Zhoushan terminal, which effectively optimised the gas supply structure and reduced overall gas procurement costs during the year,” ENN explained.

Looking ahead, ENN said it will explore business opportunities in renewables and clean power and replace coal-fired boilers with natural gas. The company noted

the pipeline gas penetration rate increased 1.6 percent during the

year to 62 percent from 60.4 percent in 2019. ■



View of ENN’s Zhoushan LNG terminal



BRIGHTER FUTURE

COOLER BY DESIGN™

Did you know Chart's LNG power generation solutions provide natural gas to hundreds of thousands of homes? This is one way Chart facilitates LNG as a safe, clean-burning fuel for energy, transportation and industry.

*Learn more at www.ChartLNG.com
LNG@ChartIndustries.com*



Qatar Petroleum signs SPA with Sinopec over 2 mtpa

Qatar Petroleum has just signed a Sale and Purchase Agreement (SPA) with Sinopec for the supply of 2 million tonnes per annum to Chinese terminals. Under the agreement, LNG deliveries will commence in January 2022 and will be delivered to Sinopec's terminals network in China.

Commenting on the deal, the Qatari energy minister Saad Sherida Al-Kaabi said it would solidify the excellent bilateral relations between China and the State

of Qatar. "We are also proud of the fact that this agreement will be Sinopec's first long-term LNG SPA from Qatar, and we are hopeful that it will mark the start of a

long and fruitful partnership with Sinopec," he said.

Sinopec chairman Zhang Yuzhuo said the LNG supply deal would help the Chinese major

in its push for cleaner fuel for China.

"The signing of the long-term LNG SPA with Qatar Petroleum is a further step by Sinopec to deliver its commitment to sustainability while meeting the growing needs of the Chinese market," explained Zhang.

"We are proud to team up with Qatar Petroleum, one of the premier suppliers in the

industry, to supply cleaner energy to China. We are also excited to begin a new journey of more comprehensive cooperation with Qatar Petroleum in the years to come," declared the Sinopec chairman.

The shipping tender package, which was issued to a large group of LNG ship owners, aims to select world-class ships for long-term time charters. "Qatar Petroleum entered into agreements with major Korean and Chinese shipyards to reserve LNG ship construction capacity for building as many as 100 new LNG carriers to cater for the needs of North Field Expansion Project in what will be the largest LNG shipbuilding program in history," noted Qatargas CEO Khalid bin Khalifa Al-Thani,

He stated that the tender package was part of Qatar's efforts to secure the most qualified ship owners and operators for safe and secure LNG transportation. ■



The SPA was signed by Saad Sherida Al-Kaabi, Qatar's energy minister and CEO of Qatar Petroleum, and Zhang Yuzhuo, chairman of Sinopec Group during a virtual ceremony.

NEWS NUDGES

Cartagena bunkers LNG from China with emission offsets

Cartagena, the LNG import terminal in southeast Spain, has hosted the first LNG bunkering operation in the Mediterranean with emissions offsets. Repsol organised the fuelling of the LNG-powered vessel, the Swedish-flagged "Fure Vinga" with 420 cubic metres of LNG.

"The uniqueness of the operation is that this is the first time that Repsol, as a supplier of LNG, has guaranteed the compensation of the total CO2 emissions associated with the consumption of this LNG," said the company.

The re-fuelled ship, the "Fure Vinga", is owned by the shipping company Furetank Rederi, headquartered in Donsö in Sweden. This chemical tanker had arrived in Cartagena from China and was

scheduled to continue to its ultimate destination of Rotterdam in the Netherlands.

Pipeline gas gains attractiveness in China

Price-sensitive Chinese buyers increasingly prefer pipeline gas, sold on oil-indexed contracts, over spot LNG -- especially after the latest price spike for spot cargoes. Eager to limit domestic price rises, the National Development Reform Commission (NDRC) has set firm guidelines. Trucked LNG prices are not permitted to exceed 20% of the city gas price guideline, while several LNG import and regas terminals were notified that ex-factory trucked gas prices should not be higher than Yuan 5,500-6,000 per million ton.

State-controlled CNOOC, PetroChina, Guangzhou Gas and

Guangdong Energy have consequently left some high-priced LNG purchase tenders un-awarded. Instead, they turn to pipeline gas imported from Russia as well as the Central Asian republics of Turkmenistan, Kazakhstan and Uzbekistan.

China's gas imports jump

China's combined imports of pipeline gas and LNG imports have risen by 17.5% to 20.80 million tonnes in January and February when unseasonably cold weather pushed up gas demand for space heating. China's main LNG suppliers are Australia, Qatar, Malaysia, Indonesia, Russia and the US. According to China's General Administration of Customs, Asia's largest economy also achieved a trade surplus of

\$103.25 billion for the first two months of 2021.

Total strikes deal with Shenergy Group

French major Total and China's Shenergy Group, the leading energy player in the port of Shanghai, have signed binding agreements for the supply of up to 1.4 million tonnes per annum of LNG from Total, as well as the creation of a joint venture to expand LNG marketing in China. The joint venture, Total 49 percent and Shenergy 51 percent, will sell LNG supplied by Total to customers in Shanghai and throughout the neighbouring Yangtze River delta region.

Additionally, Total will supply LNG to Shanghai Gas, the natural gas distribution subsidiary of Shenergy. ■

The Atlas Copco logo is displayed in white text within a blue rectangular box in the top right corner of the image. The background of the entire advertisement is a photograph of a male worker wearing a white hard hat with the Atlas Copco logo, safety glasses, and a dark blue work shirt. He is focused on his work, looking down at a large, dark metal component. In the background, a large, white, curved industrial structure is visible. A blue triangular graphic with white technical drawings of machinery is overlaid on the bottom left of the image.

Atlas Copco

In LNG, experience matters.

Atlas Copco Gas and Process continuously innovates for the LNG industry. For over 50 years we've engineered advanced process equipment with intelligent aero design and a smaller footprint to maximize efficiency. We partner with you from day one, designing custom solutions including cryogenic high- or low-pressure BOG, SMR compressors, cryogenic expanders and Companders™ for liquefaction. Our mission is to help you to design process equipment that will protect your LNG value chain. With about 8,000 running reference machines in various industries, LNG professionals around the globe trust the proven industry-leading efficiency and reliability of Atlas Copco Gas and Process machinery.

Find out how Atlas Copco Gas and Process can help perfect the way you work at atlascopco-gap.com

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% of China's entire electricity consumed in 2020. Analysts noted "this has led to lower average tariffs for leading coal-fired power genscos. Though price pressure has been somewhat alleviated 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 genscos 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% year-on-year the fourth quarter, while commercial sector demand was up by 8.4%, pushing up

full-year demand growth to 3.1%. 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's power mix tilts towards renewables

Projections from the U.S. Energy Information Administration's (EIA) indicate that in China electricity produced from natural gas will grow by 6.5% between 2015 and

2040, with an addition of 70 GW of natural gas capacity.

Renewables in China are currently dominated by hydropower, which is the country's second-largest source of generation after coal. Wind and solar currently account for 2.7% and 0.5% of the energy mix, respectively. However, EIA analysts expect "substantial growth" over the coming decades, given that China pledged as part of the Paris Climate Agreement to increase the share of energy consumption from non-fossil sources

to 20% by 2030.

Coal power, meanwhile, is in continuous decline. As part of China's 13th Five-Year Plan, a total of 150 gigawatts (GW) of new coal capacity has been cancelled or postponed until at least 2020. Increasingly strict controls on total coal capacity and power plant emissions are expected to prompt the retirement of up to 20 GW of older plants and spur technological upgrades to China's remaining 1,000 GW of coal power. ■



Panda-shaped 50 MW solar PV project in Datong, China, built by UNDP and Panda Green Energy.

continued from page 1

with plant requirements. While power plants can also use Chinese-generated offsets for compliance, initial supply is likely to be limited.

While the start of CETS is meant to shift energy investment from fossil towards renewable energy, the power sector liberalization in China remains patchy, given that allocation benchmarks for cost-free emission levels look "generous for the generators,"

analysts noted.

"Even if China were to maximize coal-to-gas switching, this would deliver just under 300 million tons (Mt) of emissions reductions against the baseline—only offsetting one year of emissions growth," Energy Aspects said, concluding: "We see power sector demand growth for gas of some 1-3 billion cubic meter (bcm) per year, but this is predicted on gas maintaining its

share of thermal."

Economic recovery pushes up power demand

Since the early autumn of 2020, the Chinese economy has staged a V-shaped recovery from the pandemic and electricity demand continues to rebound.

The International Energy Agency (IEA) sees China's electricity demand increase 5.2%, or 350 TWh, in 2021 – way larger than by

India's 3.6%, or 40 TWh, demand growth.

Globally, electricity demand is projected to grow by 3% this year, or around 700 TWh, this is slower than the projected 5.2% real GDP growth. Most of the energy demand growth is concentrated in China and India, but also South-east Asia which is forecast to return to previous growth rates and add 5.4% of demand in 2021 compared to 2020. ■

Chinese LNG Demand Outlook

1.62mmt on the water with a delivery horizon of 29th April and c. 24 percent due in the North China region, according to our market visibility. At the time of writing, there was also a Sabine Pass LNG cargo of 0.08mmt at sea with an unconfirmed destination in China.

The majority of LNG cargoes still in transit at the time of writing and with scheduled arrivals in China were due to arrive in East China led by Zhejiang LNG. This was followed by the South China region and its major Guangdong Dapeng LNG terminal south of Shenzhen. In contrast to previous outlooks, however, the North China region was not looking to lead Chinese LNG imports for the foreseeable future.

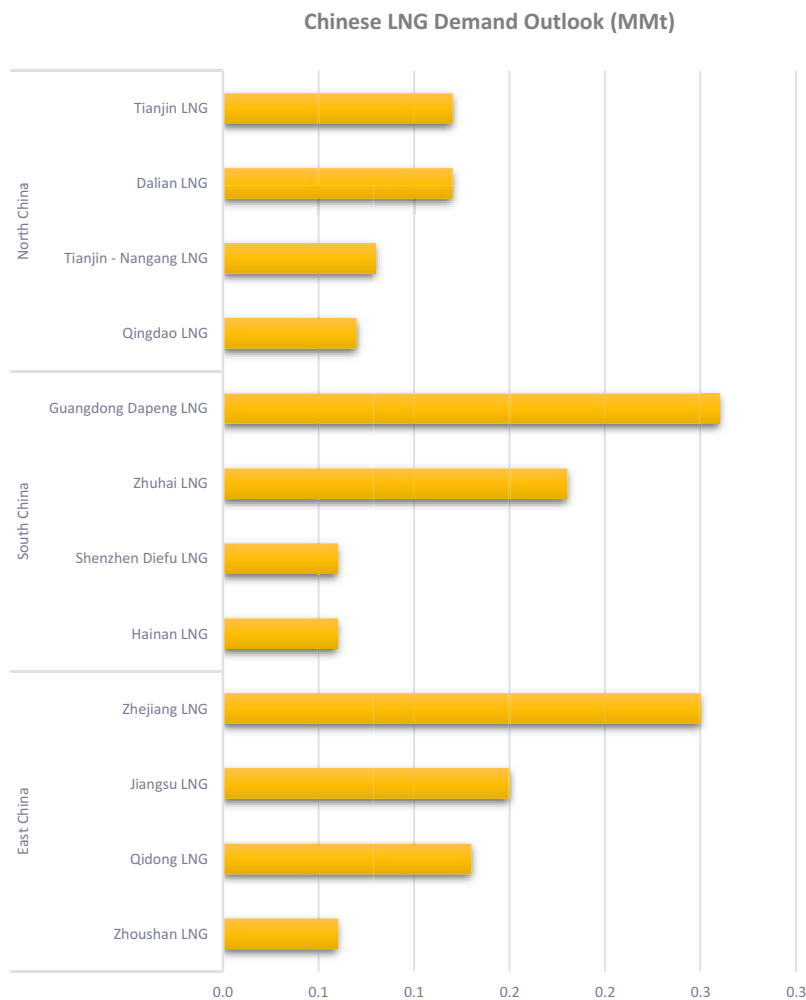
At the time of writing, our market visibility indicated only one US LNG cargo – the Sabine Pass-derived Woodside Charles Allen – was en route to China with a scheduled arrival of 16th April. The vessel had ended up being delayed by c. three days by the recent Suez Canal blockage and still had to indicate its eventual destination in China at the time of writing. However, a further 45 cargoes amounting to 1.42mmt of loaded LNG were still making their way to the Far East and the Pacific without specifying their destinations. Close to half of these cargoes had sailed from the United States. Although we do not anticipate all of these cargoes to make landfall in China, we nonetheless highlight that Chinese LNG imports are very likely to come in above what available schedule visibility indicated at the time of writing. We therefore suggest take these as a baseline.

North China

Of total LNG currently en route to China, we are anticipating 0.39mmt to be delivered to North China – comprising the wider Beijing area and China's industrial north – with a delivery horizon of 29th April.

Among the roster of northern Chinese terminals, Sinopec's Tianjin LNG is looking to receive 0.12mmt via two cargoes aboard the LNG Megrez and the GasLog Sydney by 29th April. The cargoes were exported by Russia's Yamal LNG via a transshipment at Murmansk and Gladstone LNG in Australia, respectively.

Current market visibility further indicates at least 0.12mmt are destined for PetroChina's Dalian LNG by 9th April, comprising a cargo from Australia's Queensland Curtis LNG via the Murex and another Yamal LNG shipment aboard the Lena River. Meanwhile, at the North China region's southernmost border,



Source: LNG Journal

expected deliveries to Qingdao LNG also comprise a PNG LNG cargo of 0.07mmt via the Papua, which we expect to arrive by 1st April. The vessel departed Papua New Guinea on 22nd March.

Completing the demand outlook for northern China, Tianjin - Nangang LNG is also looking to receive a cargo by 1st February. The shipment aboard the LNG Merak is a Zeebrugge re-export that departed Belgium on 4th March.

East China

We currently see the East China region – comprising the wider Shanghai area and Zhejiang province – to receive 0.59mmt by 13th April. Zhejiang LNG is scheduled to receive

0.25mmt by that date, comprising two Qatari cargoes amounting to 0.18mmt as well as a 0.07mmt shipment from Tangguh LNG in Indonesia via the Tangguh Palung. Moreover, we are anticipating two Australian cargoes – one from Gorgon LNG and one from Wheatstone LNG – totalling 0.15mmt to arrive via the Prachi (0.07mmt) and the BW Pavilion Aramhera (0.08mmt) at Jiangsu LNG by 6th April. Additionally, we are seeing an Australia Pacific LNG cargo travelling to Qidong LNG via the Grace Acacia (0.05mmt) as well as another PNG LNG shipment via the Spirit of Hela (0.08mmt). At the time of writing the vessels were indicating arrival by 7th April. Finally, our data indicated Zhejiang LNG was due to receive a cargo from Australia's Gorgon LNG via the Asia Vision (0.09mmt) by 6th April.

South China

In the south of the country, we are currently expecting 0.56mmt to be delivered by 8th April. LNG imports in the South China are scheduled to be led by Guangdong Dapeng LNG, which at the time of writing was expecting four Australian cargoes. These shipments comprised three NWS LNG cargoes totalling 0.18mmt aboard the Pacific Enlighten

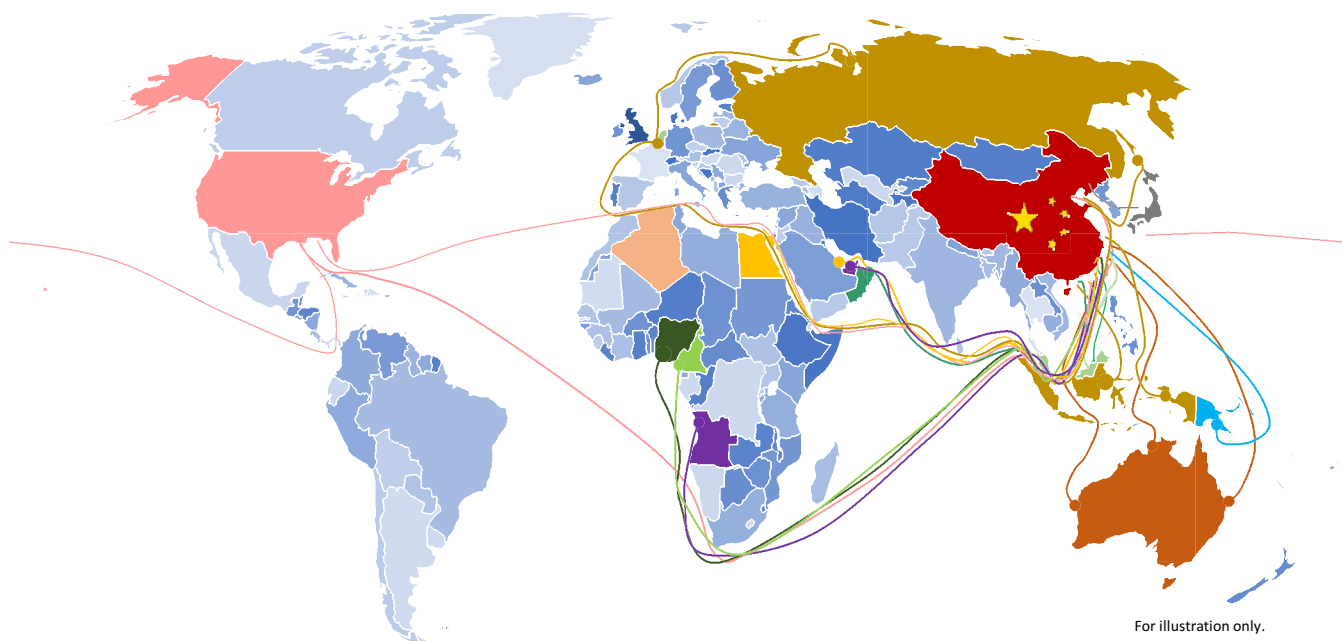
(0.06mmt), the Grace Cosmos (0.06mmt) and the Dapeng Star (0.06mmt). In addition to the APLNG-derived CESI Lianyungang (0.08mmt), we expect these vessels to arrive by 8th April.

Two further Australian cargoes aboard the APLNG-derived LNG Jurojin (0.06mmt) and CESI Tianjin (0.07mmt) were headed for Zhuhai LNG. The cargo was scheduled to be delivered by 4th April, our data indicated. Zhuhai LNG was also expecting a third delivery via the Das

Island-derived Mraweh (0.05mmt) by early April.

Malaysia also had one cargo at sea to the South China region, which we expect to arrive at Shenzhen Diefu LNG via the Puteri Zamrud Satu (0.06mmt) on 1st April. Australia's Gorgon LNG facility, meanwhile, had shipped a cargo via the GasLog Houston (0.06mmt) with an expected arrival at Hainan LNG on 6th April.

Chinese LNG Demand: February & March 2021



China's month-on-month LNG offtake grew by 1.72mmt in March, increasing robustly by 33 percent to 6.91mmt. Monthly Chinese offtakes had decreased by 3.24mmt (-38 percent) in February, meaning that the country returned to the demand growth trajectory it had embarked on in November.

Prices

Domestic gas prices are trending down whilst landed LNG is becoming more expensive

Chinese domestic LNG prices saw an extended rally between the end of May last year and the middle of January this year. However, privately quoted prices began to slide quickly from a peak of c. \$16.87/mmBtu on 5th January to as low as \$8.66/mmBtu on 3rd March, according to our data and calculations. Meanwhile, the average domestic price indicated by the National Bureau of Statistics (CNBS) stood at \$20.09/mmBtu on 31st December but had decreased to c. \$10.91/mmBtu as of 19th

March, the latest available data point. Concurrently, we highlight that landed LNG saw an average price of \$16.20/mmBtu during the period of 1st February to 21 March, according to Chinese customs data. This represents a notable increase of \$2.73/mmBtu (20 percent) from the average of \$13.47/mmBtu recorded for December and January. In our view, that rally was likely supported by maintenance at Russia's Sakhalin-2 LNG and Australia's QCLNG.

North China

LNG demand saw significant negative monthly growth in the north of China, decreasing by 0.35mmt from 2.01mmt in February to 1.66mmt in March. March thereby continued the month-on-month decrease seen in February, when offtakes were down 1.17mmt (-37 percent) from the 3.18mmt recorded in January. Moreover, LNG imports in northern China for the period of February-March were

also down 0.14mmt (-4 percent) year-on-year from the 3.81mmt recorded in 2020.

China's North led by Qingdao LNG

Leading the roster of northern terminals by volumes imported, Qingdao LNG took in 1.11mmt during the report period of February-March. Imports consisted predominantly of seven Australian cargoes amounting to 0.48mmt. Australia Pacific LNG delivered five of these shipments, supplying 0.35mmt. The remaining two Australian shipments were delivered from Gorgon LNG and Queensland Curtis LNG and via the Minerva Kalymnos (0.08mmt) and the Maran Gas Hydra (0.05mmt). Papua New Guinea's PNG LNG was the second largest source of supply to the Qingdao terminal via five shipments aboard the Papua, the Golar Tundra, the Maran Gas Leto and the Kumul. In terms of Atlantic Basin supply, the United States shipped two cargoes from Freeport and Sabine Pass LNG whilst Russia also delivered a Yamal LNG cargo via the

Clean Horizon. Qingdao's remaining supply comprised an Egyptian LNG cargo via the Damietta-derived Energy Atlantic.

Tianjin - Nangang LNG

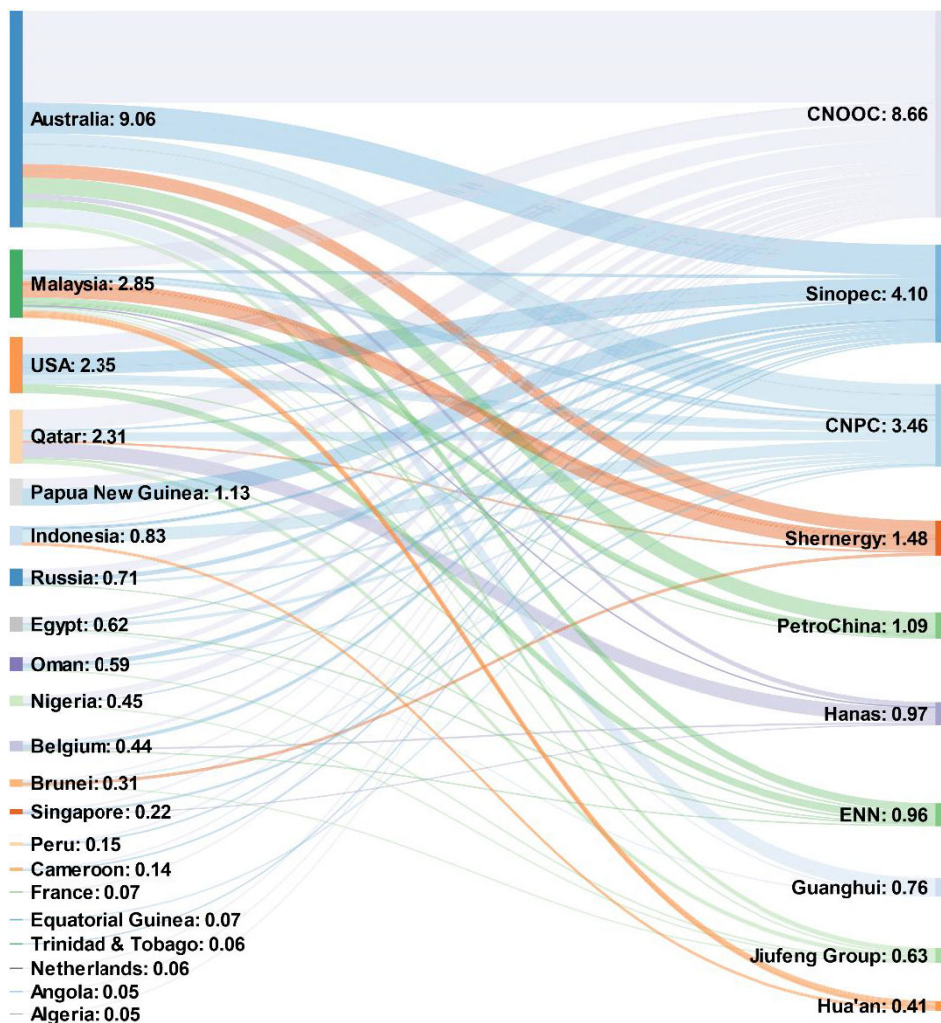
Tianjin - Nangang LNG, meanwhile, had offtakes amounting to 1.07mmt over the report period. The terminal saw robust offtake activity from the Pacific Basin, which at 0.73mmt was the origin of almost two thirds of LNG shipped to the terminal. Australia exported 0.64mmt to Tianjin - Nangang LNG between February-March-January, inter alia via the Yari LNG, the Seishu Maru and the CESI Wenzhou. Leading Australian shipments to Tianjin was Australia Pacific LNG with 0.31mmt delivered.

Atlantic Basin shipments of 0.26mmt to the terminal were thus more conservative, with the United States directing 0.14mmt to Tianjin - Nangang LNG. The remaining two Atlantic shipments came from Angola and Russia's Yamal LNG. In comparison, Tianjin LNG's imports from the Middle East were minor at only 0.11mmt, comprising one cargo from Oman and one from Egypt's Idku LNG.

Tianjin LNG

China's imports at Tianjin LNG were also strong, pegging the terminal among the country's top five import sites between February and March. Whilst the facility only imported one Middle Eastern cargo, it took in 0.60mmt from Pacific suppliers. Pacific supply was facilitated by Australia's Queensland Curtis LNG with 0.41mmt delivered, followed by

Chinese LNG Buyers (MMT)



Source: LNG Journal

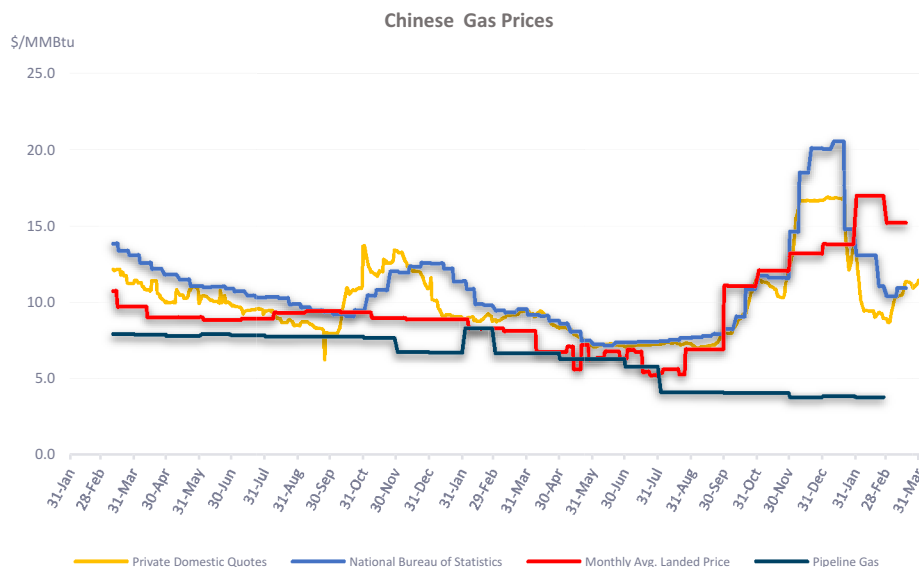
Sakhalin-2 LNG in Russia with 0.12mmt and one 0.07mmt shipment from Malaysia LNG. Atlantic cargoes amounted to 0.14mmt via two

United States cargoes from Sabine Pass LNG and Freeport LNG.

Caofeidian and Dalian LNG

The remaining two northern terminals – Caofeidian and Dalian LNG – imported 0.40 and 0.27mmt over the report period, respectively, which in the case of Dalian LNG stemmed predominantly from Australian LNG supply (0.23mmt). The United States, meanwhile, shipped one cargo of 0.04mmt from Sabine Pass LNG. Middle Eastern suppliers did not export LNG to Dalian LNG.

In contrast, most of February-March supply to the Caofeidian terminal came from the Middle East, constituting offtakes of 0.20mmt from two cargoes out of Ras Laffan in Qatar via the Q-Flex Al Ruwais and the Q-Max Al Mafyar. Caofeidian LNG offtakes were completed by one Australian and one Brunei cargo Malaysian cargoes and one from the United States' Corpus Christi LNG plant.



Source: LNG Journal, CNBS, GACC, Domestic Traders

East China

Demand in East China was dominated by the wider Shanghai area, where Jiangsu LNG imported 0.82mmt during the report period. This placed the terminal at number five among China's leading terminals in February-March. Accordingly, the terminal operated at above nameplate capacity. However, overall LNG demand in East China had plummeted by 3.95mmt (-57 percent) from 6.89mmt recorded for December-January.

Wider Shanghai area sees capacity utilisation decrease

Meanwhile, the remaining wider Shanghai area – comprising Qidong LNG, Shanghai LNG and the metropolis' peak-shaving facility – imported a total of 1.23mmt over the report period, down 1.07mmt from the 2.30mmt recorded in December-January. The sub-region's imports were led by Shanghai LNG, which took in 0.67mmt. Qidong LNG, meanwhile, saw offtakes of 0.34mmt whilst the city's peak-shaving facility kept imports broadly steady at 0.22mmt.

Zhoushan & Zhejiang LNG

At neighbouring terminals Zhoushan and Zhejiang LNG, LNG imports amounted to 0.30mmt and 0.59mmt, respectively. Together the two terminals thereby slashed imports by 1.53mmt (-63 percent) from 2.42mmt seen in December-January. LNG was mainly supplied by the United States and Qatar. 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 comparatively high demand levels in February-March. Nevertheless, the region's imports had only amounted to 4.07mmt over the report period, which meant imports were still down by 2.73mmt (-40 percent) from the 6.80mmt recorded in December-January.

Imports led by 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 1.18mmt, placing it at the top of China's terminals. Accordingly, its average capacity utilisation stood at 113 percent over the report period whilst neighbouring Shenzhen Diefu LNG imported 0.41mmt, pushing its terminal utilisation to 62 percent. Shenzhen Diefu typically only takes in cargoes when GDLNG is at capacity or unavailable. Finally, Dongguan LNG and the Shenzhen Peak-shaving terminal imported 0.11mmt and 0.07mmt, respectively.

Zhuhai LNG

Zhuhai LNG also saw significantly curtailed demand of 0.43mmt over the report period, thereby pegging overall capacity utilisation at 77 percent. In contrast, Zhuhai LNG's imports in December-January had amounted to 1.21mmt. Roughly half of Zhuhai's imports derived from the Pacific Basin, led by Australia's Gorgon LNG on Barrow Island. Atlantic Basin supply was comparatively

minor, amounting to only one cargo of 0.07mmt from Nigeria's Bonny Island plant. The remaining imports stemmed from two Middle Eastern shipments totalling 0.15mmt, which were exported by Egypt Idku LNG.

In similar vein, Jieyang LNG cut imports, albeit less drastically by 0.10mmt (-27 percent) from 0.37mmt during December-January to 0.27mmt in February-March. Having suffered from frequent periods of inactivity since its commissioning in 2017, Jieyang LNG saw average utilisation at c. 47 percent over the report period.

Lower imports at Fujian and Beihai LNG

Broadly in line with the rest of China, Fujian LNG and Beihai LNG also saw monthly offtakes decrease considerably. Fujian LNG took in only 0.67mmt over the report period. In comparison, the terminal had imported 0.80mmt during December-January. Similarly, Beihai LNG curtailed offtakes after seeing high demand during the previous report period. Imports were down 0.26mmt (-32 percent) from 0.82mmt during the December-January period.

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), its larger counterpart on the island – Hainan LNG – decreased imports by 0.16mmt to 0.34mmt from 0.50mmt in December-January. LNG capacity utilisation on Hainan Island thus average 66 percent compared to 88 percent over the previous report period.

Region	Terminal	Export Basin			March 2021	February 2021	% Change	March Utilisation
		Atlantic	Middle East	Pacific				
North	Dalian LNG	-	-	-	-	0.27	-	-
	Tianjin - Nangang LNG	0.15	0.05	0.48	0.68	0.39	74.4%	136%
	Qingdao LNG	0.20	0.07	0.26	0.53	0.58	-8.6%	212%
	Tianjin LNG	-	-	0.28	0.28	0.54	-48.1%	31%
	Caofeidian LNG	-	0.11	0.06	0.17	0.23	-26.1%	28%
East	Zhejiang LNG	-	0.17	0.28	0.45	0.14	221%	154%
	Shanghai (Yangshan)	-	0.17	0.16	0.33	0.34	-3%	330%
	Jiangsu LNG	0.11	0.14	0.06	0.31	0.51	-39%	124%
	Qidong LNG	0.05	0.06	0.18	0.29	0.05	480%	58%
	Zhoushan LNG	-	0.11	0.13	0.24	0.06	300%	96%
	Shanghai Peak-Shaving	-	-	0.10	0.10	0.12	-17%	40%
South	Guangdong Dapeng LNG	0.06	0.14	0.56	0.76	0.42	81%	304%
	Fujian LNG	-	0.05	0.24	0.29	0.38	-24%	483%
	Beihai LNG	0.05	-	0.23	0.28	0.28	0%	53%
	Zhuhai LNG	0.07	0.08	0.13	0.28	0.15	87%	49%
	Hainan LNG	-	-	0.16	0.16	0.18	-11%	64%
	Jieyang LNG	-	-	0.15	0.15	0.12	25%	600%
	Dongguan LNG	-	0.06	0.01	0.07	0.04	75%	42%
	Shenzhen Diefu LNG	-	-	0.06	0.06	0.35	-83%	18%
	Hainan Transfer Station	-	-	0.02	0.02	0.01	141%	4%
	Shenzhen Peak-Shaving	-	0.02	-	0.02	0.05	-60%	4%
Total		0.69	1.23	3.55	5.47	5.21	5%	79%

LNG Journal Subscription Package

LNG Journal is a ten-in-one subscription product with end-to-end insight into liquefied natural gas. The LNG Journal platform includes:

LNG JOURNAL	Monthly Online + optional print magazine
LNG UNLIMITED	Online every Tuesday
GAS TO POWER JOURNAL	Online every Friday
LNG MARKET TRACKER	Online every Wednesday
LNG SHIPPING NEWS	Online every second Thursday
LNG MONTHLY MARKETS	Online Monthly
LNG CHINA	Online every second month
LNG NORTH AMERICA	Online every second month
LNG FUELLING	Online every quarter
DAILY UPDATES and Newsletters	

Sign up now for an Online Subscription from only US\$1095; €835 or £755

Discount options are available for multi-users

Contact us for more information or to arrange a free trial



Subscription Contacts

For new subscriptions or general subscription queries please contact:

Stephan Venter
+44 207 017 3407
venter@lngjournal.com

To renew an existing subscription or to upgrade your package, please contact:

Gabi Weck
gabi@lngjournal.com

Produced By:

dmgevents



7TH CHINA LNG & GAS INTERNATIONAL EXHIBITION & SUMMIT

23 - 25 JUNE 2021
NECC, SHANGHAI, CHINA

Distinguished Speakers Include:



Jin Shuping
Vice President
CNOOC
Gas & Power Group



Martin Houston
Vice Chairman
Tellurian



Thomas Maurisse
Senior Vice
President LNG
Total



Andrew Walker
VP Strategy
Cheniere



Zhang Chunjun
President
**Shanghai Petroleum
& Natural Gas
Exchange
(SHPGX)**



Wen Feng
Managing Director
**Shell Energy
(China)**



Zhu Xingshan
Senior Director,
Planning Department
CNPC



Liu Jingbo
President
**Guangzhou
Gas Group**

Gold Sponsors

VENTURE GLOBAL **LNG**

TELLURIAN

CHENIERE

Silver Sponsor



Bronze Sponsors

