Includes: Market Tracker Data

LNG North America

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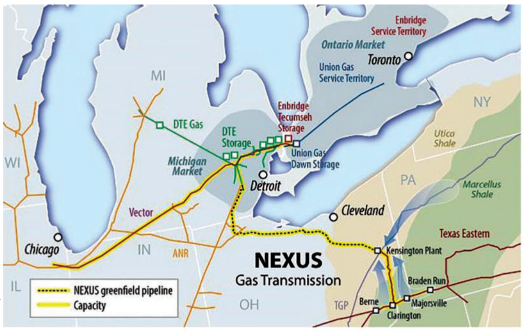
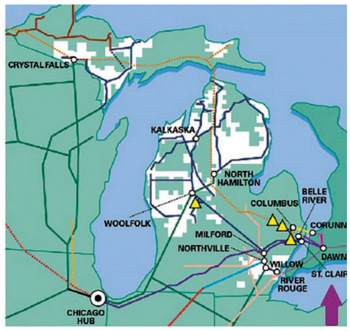
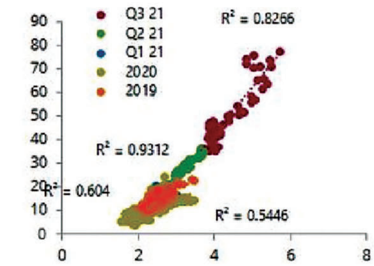
Henry Hub and TTF gas prices face further ‘bull run’ as winter approaches

US and European markets face a further “bull run” in natural gas prices. According to Energy Aspects, markets have “nearly maximized their gas-to-coal switching potential,” and considering low storage inventories and a shortfall of US LNG deliveries from Freeport terminal, prices at US Henry Hub and the Dutch TTF could surge substantially with the onset of the winter season.



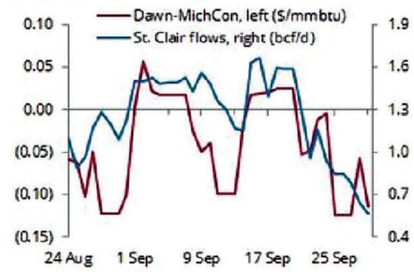


TTF-Henry Hub price correlation, €/MWh, $/mmbtu



Source: CME, Refinitiv, Energy Aspects

US exports via St. Clair vs. Dawn- MichCon prices, bcf/d, $/mmbtu



Source: Refinitiv, Ventyx, Energy Aspects

Volatility is here to stay for winter trading, with Henry Hub “now appearing largely untethered from short-term fundamentals-based pricing,” analysts commented. Several weeks of mild weather at the start of the 2021/22 winter heating season seem to have provided enough of a cushion to shield against acute storage adequacy concerns.

Looking at the drivers for the latest price surge, analysts say the European market has at least had “more fundamentals behind its bull run” — notably limited bookings of capacity through Poland and “even a minor potential shortfall of cargoes from Freeport.” But analysts stressed the TTF also has “no clear price anchor.”

High price volatility amid low stocks

“That leaves Henry Hub exposed to an even higher degree of volatility than it otherwise would be in a winter when gas stocks have the risk of falling short,” Energy Aspects said, explaining: The open interest heat map still shows a high concentration of calls clustered at US$7 per million British thermal units (MMBtu) for the prompt contract, signalling the remaining upside risk to prices before realised winter weather can upend balances.

“A cold start to winter could

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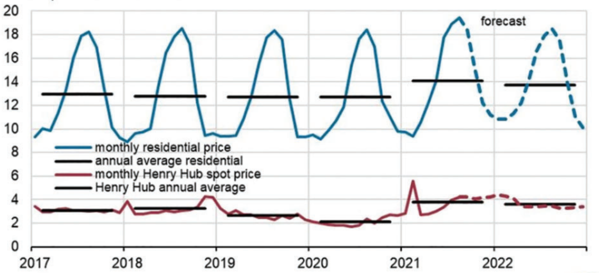
Henry Hub spot prices may top $4/MMBtu this winter

Fourth-quarter spot gas prices at the US gas trading benchmark Henry Hub will average $4.00 per million British thermal units (MMBtu), or above — a 16% rise from levels forecast in August by the US Energy Information Administration (EIA). The price increase reflects lost production from Hurricane Ida combined with growing gas-burn for power generation.

U.S. natural gas prices
dollars per thousand cubic feet



Sources: U.S. Energy Information Administration, Short-Term Energy Outlook, September 2021, and Refinitiv an LSEG Business

“Hurricane Ida affected natural gas production at a time when the United States was already experiencing higher natural gas prices due to growth in exports, strong domestic natural gas consumption, and relatively flat natural gas production,” said EIA Acting Administrator Steve Nalley. “Lost production from the storm combined with these current market conditions has limited our ability to build up natural gas inventories,” he explained.

In the days when Hurricane Ida approached, US upstream companies had to close more than 90% of natural gas and crude oil production capacity in the Gulf of Mexico. Even today, a significant share of oil, condensate and natural gas production and refining

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AGENDA

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induce gas rationing pricing early as market participants seek to preserve fuel for peak heating days. However, if winter weather (or lack thereof) mimics last November in the first month of the new heating season, then the market would have some 150 billion cubic feet (Bcf) more in end-March inventories to bring them to 1.7 trillion cubic feet (Tcf), given November 2020's heating-degree-days shortfall was a whopping 17% below the 10-year normal," analysts explained.

Risk of knee-jerk reaction

For now, markets are still comparatively calm as there has not been a single day of cold weather, or even a 15-day weather map covering the start of the season. However, any shift in fundamentals is anticipated to induce a "knee-jerk reaction" Energy Aspects noted, adding for now, Henry Hub will continue its recent correlation to TTF while the risk of gas rationing pricing remains on the table.

"As gas has now largely exhausted potential price-driven switching into coal, the next levers are being sought, from reducing pipeline gas exports from the US to Mexico as well as much more expensive oil-fired generation," analysts explained.

Since September 30, the beginning of the winter heating season, Energy Aspects' six-week forward balances have added some 50 Bcf to bring projected end-October carryout to 3.52 Tcf. This represents a 240–250 Bcf October monthly injection.

LNG demand unlikely to fall

As for future LNG demand this winter, analysts say "there is unlikely to be any structural reduction in LNG demand and shipments due to high prices, with the TTF breaking new records seemingly every week." LNG feedgas is down week-on-week, largely due to continuing annual three-week maintenance outage at Cove Point that began on 20 September. Freeport train one suffered a trip that cut flows by 0.5 bcf per day for two days in late September.

There is unlikely to be any major change to feedgas demand until Cove Point comes back on 10 October and Sabine Pass train six intake steps up, likely in the second half of October. "We currently only forecast one triple-digit injection this shoulder season."

"If not for our expectation of gas burn averaging just over 30 Bcf per day through the week ending 8 October, there would likely have been two consecutive triple-digit builds," they noted, pointing out: "That 30+ Bcf/d figure underscores the lack of movement from gas to coal in the power sector, despite $5.50+ cash prices this week – a story we have repeated all summer."

Canadian imports set to rise in Q4

On the supply side, Canadian imports have yet to budge amid the price volatility, despite near-record WCSB production for the third quarter, according to recent flow data.

Energy Aspects hence forecasts further growth in the fourth quarter of 2021 growth as "producers pull forward completions to take advantage of $3.50+ local prices, something that cannot be said for their Lower 48 counterparts. "For now, Canadian imports remain "stubbornly range-bound" between 7.3-7.7 Bcf/d, similar levels as seen throughout September.

Lower exports via Vector Pipeline

Net imports from Canada overall are, however, up by 0.5 Bcf/d week-on-week due to a lower northbound exports of US gas per pipeline, notably via the St. Clair border point in Michigan – the so-called Vector Pipeline. "This is due to regional price dynamics and not directly because of Henry Hub's wild ride," analysts explained.

US exports at St. Clair have dropped to just 0.9 Bcf per day since 20 September, according to flow data, as Dawn fell to a more than $0.10 per MMBtu discount to MichCon to disincentivise flows to Ontario. During the month to date leading up to that, Michigan flows averaged 1.5 Bcf/d amid flat Dawn–MichCon pricing.

"Any large increase in Canadian inflows would have to come from points west of Michigan, which we maintain there is little scope for over the course of the winter. Given Alberta's own need to conserve molecules for storage, we believe that cold weather would likely only induce 50 bcf more in net trade at most over the course of the heating season," Energy Aspects commented.

Latest rise in output deemed unsustainable

While Lower 48 US production is on track for a 0.3 Bcf/d week-on-week gain for the week ending 1 October, Energy Aspects attributes most of the recent supply surge to the Haynesville and Permian basins. But the London-based consultancy does not believe the rise is sustainable organic growth, at least in the near term.

The Haynesville and Permian gains were likely caused by US upstream companies trying to complete their recent drilling programs early as they strive to maximize their quarter-end production targets. ■

Shell exits Permian Basin with $9.5 billion asset sale to ConocoPhilips

Royal Dutch Shell, whose LNG sales tops 60 million tonnes per annum (mtpa), has agreed to divest its interests in the US Permian Basin to ConocoPhillips for $9.5 billion in cash. Shell's assets in the Permian include around 225,000 net acres with current production of around 175,000 barrels per day equivalent.

Cash proceeds from this Permian transaction will be used to fund $7 billion in additional shareholder distributions after closing, Shell said, with the remainder used for further strengthening of the balance sheet. Permian business recorded a before-tax operating loss of $491 million in 2020 and the transaction was expected to result in an after-tax gain of $2.4 billion to $2.6 billion, subject to adjustments.

"After reviewing multiple strategies and portfolio options for our Permian assets, this transaction with ConocoPhillips emerged as a very compelling value proposition," said Wael Sawan, Shell's Upstream Director. "This decision once again reflects our focus on value over volumes as well as disciplined stewardship of capital," he commented.

Spanning West Texas and southeast New Mexico, the Permian Shale is one of the main sources of associated feed gas from oil for LNG export plants and projects under development on the US Gulf Coast. Shell's main activities in the Permian Shale are in exploring and producing light tight oil (LTO), and it is one of several shale basins in the Americas where the company is present. In North America, Shell's shale gas and oil projects also include the Delaware Basin portion of the Permian and Canadian assets in the Duvernay and Montney plays in Alberta along with the Montney gas play in British Columbia.

Shell's US portfolio of operated companies and interests consists of oil, natural gas, petrochemicals, gasoline, lubricants, and other refined products along with renewables such as wind and solar. ■

LNG North America

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NFE charters 'Höegh Gallant' FSRU to fuel power plant in Jamaica

New Fortress Energy (NFE) has chartered the floating storage and regasification unit (FRSU) 'Höegh Gallant' from New York-listed Höegh LNG Partners for a period of 10 years from the fourth quarter of 2021. The FSRU will be deployed to Jamaica, where NFE owns and operates an LNG regas terminal with adjacent gas-fired power plant.

Shareholders of Höegh in March 2021 approved an offer by Morgan Stanley Infrastructure Partners (MSIP) and Leif Höegh & Co, for a joint takeover. The partnership disclosed the charter rate for the 'Höegh Gallant' to New Fortress Energy would be lower than under the existing charter for the FSRU.

But under the Suspension Agreement, "Höegh LNG's subsidiary shall compensate the partnership monthly for the difference between the charter rate earned under the new charter and the charter rate earned under the existing charter with the addition of a modest increase until July 31, 2025," Höegh LNG Partners explained. In addition, certain capital expenditures incurred to ready and relocate the "Höegh Gallant" will be shared 50-50 between Höegh LNG Holdings and the Partnership, the charterer added.

Extended charter length

Sveinung Støhle, CEO of Höegh LNG Partners, singled out the newly structured long-term FSRU contract with New Fortress as an important development for the partnership as it extends contract coverage and average charter lengths. "The 'Höegh Gallant' will serve the Old Harbour facility in Jamaica, where its size and performance will enable New Fortress to further optimize its already highly successful operation," Støhle explained.

NFE's Old Harbour LNG terminal, situated 3.6 miles off the coast near St. Catherine, is providing regasified LNG to several industrial facilities and Jamaica Public Service's (JPS) 190 MW power plant in Old Harbour. The regas terminal is also selling regasified LNG to local industries including Caribbean Products, Appleton, IGL Ltd, CB Group, Clarendon Distillers, Wisynco and Seprod.

Höegh Gallant' will be moored off Old Harbour Bay

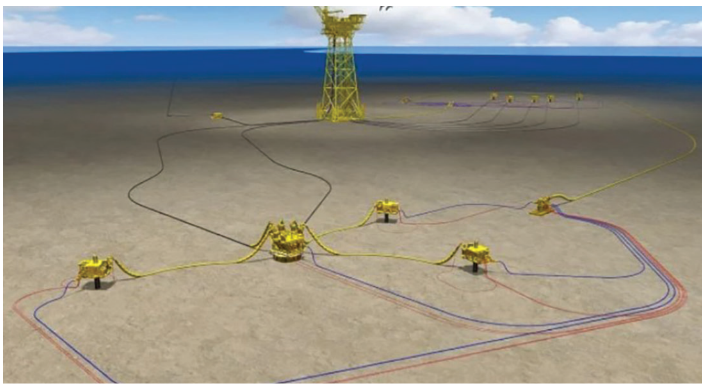
The LNG fleet of Höegh LNG Partners consists of vessels, mostly FSRUs that operate under long-term charters. These vessels are the 'Höegh Gallant', the 'Höegh Grace' and the 'PGN FSRU Lampung' currently deployed in Indonesia, the 'Cape Ann' and the 'Neptune'. ■

BP's Matapal projects comes onstream, boosts exports from Atlantic LNG

Trinidad and Tobago, the Caribbean nation shipping cargoes from the Atlantic LNG facility at Point Fortin in Trinidad, will have access to more natural gas after UK major BP brought on stream the Matapal project. Matapal is the BP Trinidad and Tobago subsidiary's second subsea development.

The field is located about 80 kilometres off the southeast coast of Trinidad and around 8 kilometres east of Juniper platform in a water depth of 163 metres. It comprises a three-wells tie back into the existing Juniper platform, which helped to minimize development costs. "Matapal will deliver gas into the Trinidad gas market from resources discovered by the Savannah exploration well, which was drilled in 2017. The initial production from this development is expected to be in the range of 250-350 million standard cubic feet per day, once all wells are fully ramped up," BP explained.

The success of BP, the main shareholder in the Trinidad LNG plant along with Shell, followed the company's start-up in July 2021 of "Project Barracuda", otherwise known as Block 5C in the East Coast Marine Area (ECMA) of Trinidad and Tobago.


Render of BP's drilling activities at its Matapal acreage off Trinidad

Backfill venture

Project Barracuda is a backfill venture amounting to around 25,000 barrels of oil equivalent per day, or 140 million standard cubic feet per day of gas, of sustained near-term output with peak production expected to be around 220 million scf per day. The new feed-gas resources are a boost for the liquefaction plant in Trinidad that saw exports drop in 2020 by 19.3 percent to 10.08 million tonnes.

Before the shale-gas boom in North America, Trinidad was the main LNG supplier to import terminals in the US, now the world's third-largest LNG exporter. However, several years of under-investment in exploration and production by Trinidad & Tobago's energy partners meant the country was becoming short of energy resources.

Shell is a major shareholder along with BP in the Atlantic LNG plant and both have large equity shares in the four liquefaction Trains at the Point Fortin facility. The Anglo-Dutch company is additionally planning a four-well development project in Block 22 and NCMA 4, known as the Colibri Project. This is a joint venture with Heritage Petroleum Co., the emerging Trinidad and Tobago oil and gas company, with first gas from Colibri expected in 2022. ■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US LNG 'in the money' as Henry Hub winter strip approaches $5/mmbtu

Liquefaction demand at US terminals will stay strong through end-October, given that Henry Hub gas prices for the winter strip (November-March 2022) are approaching $5 per million British thermal unit (mmBtu). Exports to Europe remain lucrative, analysts explained, as long as prices at the Dutch TTF trading hub remain above $18/mmBtu.

Balances are tight as domestic gas demand from the US petrochemical industry returns after facilities were shut down in the aftermath of Hurricane Ida. Two of Dow Chemical's ethylene crackers in Plaquemines, with a combined 50 mmcf/d of demand, have been restart the weekend just passed, and Exxon Mobil is also restarting its Baton Rouge ethylene cracker (33 mmcf/d) and its nearby refinery.

Lock stockpiles and rising demand provide a strong support for gas prices at the bellwether Henry Hub as well as for prices of related petrochemical products. Henry Hub prices for the front-month October 2021 were last seen at $4.929/mmBtu – nearly $1.00/mmbtu higher year-on-year.

Cove Point LNG maintenance

The tight supply/demand balance is getting a small reprieve as some liquefaction plants are going into maintenance. Cove Point is undergoing its annual maintenance shutdown from 20 September, which lowers feedgas demand by 0.75 billion cubic feet per day until 10 October. "The decline to 10 bcf/d of total feedgas has been baked into our balances since the start of the year," Energy Aspects said, pointing out that "other US terminals will likely run above 95% utilisation for its duration."

Looking at the supply side, analysts believe that total US Lower 48 production has bottomed out in the near term. "With all else equal, September total US production is set for a 0.6 bcf/d month-on-month decline, with 1.6 bcf/d of Gulf of Mexico declines offset by 0.4 bcf/d of gains from Appalachia and Haynesville and 0.2 bcf/d of gains from associated gas plays in September," they explained.

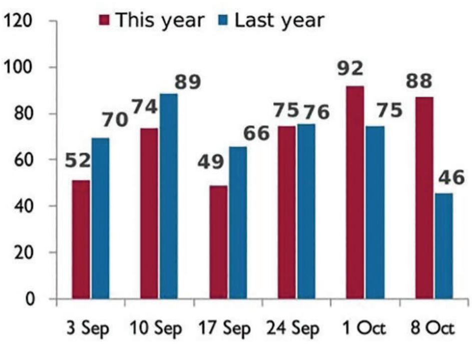
From this low September baseline Energy Aspects expect total US production to return to the pre-Ida level of 92.4 bcf/d by mid-October, if not earlier.

Supply from Permian Shale falls

Production of associated gas from crude oil wells in the Permian shale has fallen after three years of steady growth as the Covid 19 pandemic depressed oil demand and production. Since 2020, the share of associated gas in all five US onshore crude oil-producing regions dropped 1.5% to just 37.7% of overall gas output.

The Permian region, spanning parts of western Texas and eastern New Mexico, produced 50% of total U.S. associated gas in 2020. Only the Permian managed to raise its production of both crude oil and associated gas last year, but these increases did not offset declines in both crude oil and associated gas production in the other four regions. Analysts from the EIA reckon parts of "some of this increase in associated gas production can be attributed to greater natural gas takeaway capacity in the Permian region." ■

EIA weekly storage activity, bcf



Louisiana ethylene plants shut by Ida, mmcf/d

Company	Plant Name	Gas demand	Restart date
ExxonMobil	Baton Rouge OLA-2X	33	11 Sep
Dow	Plaquemine LHC 2	17	11 Sep
Dow	Plaquemine LHC 3	33	11 Sep
Dow	St. Charles Taft 1	20	
Dow	St. Charles Taft 2	13	
NOVA Chem.	Geismar	30	
Shell	Norco OL5	28	
Shell	Norco GO1	19	
Shintech	Plaquemine	17	
Total		**209**	

NEWS NUDGES

Charter rates rise

Shipping spot charter rates for LNG carriers soared in the West of Suez market with rates rising by up to $18,500 per day to be between $82,000 per day and $78,000 per day for vessels of 155,000-165,000 cubic metres capacity. East of Suez spot charter rates showed a more moderate increase of $1,500 per day to be quoted by shipbrokers at between $64,000 per day and $60,000 per day. One-year charter rates for the most modern vessels were unchanged at about $93,000 per day.

US LNG for UK

The 145,000 cubic metres liquefied natural carrier "Methane Lydon Volney" was discharging a US cargo on September 29 at the Isle of Grain import terminal on the Medway-Thames estuary, southeast of London. The vessel carrying a cargo lifted from the Sabine Pass plant in Louisiana docked after the UK National Balancing Point benchmark natural gas price hit a seasonal record on September 28.

Fatih Birol on Time 100 list

The Executive Director of the International Energy Agency (IEA), Fatih Birol has been named as one of the 100 most influential people by Time Magazine in its annual list. "In a world where facts are assaulted, Fatih Birol combines the best of high-tech data, optimistic know-how and old-school rhetorical finesse," US Special Presidential Envoy for Climate John Kerry commented, suggesting the IEA head would use his authority to "slash carbon emissions and save our planet." ■

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At ExxonMobil LNG, we salute the winners of the 2021 Power Play Awards. With the third annual Power Play Awards, we continued to celebrate the achievements of remarkable professionals in the LNG industry from around the globe.

This year, the Power Play Awards celebrated professionals in four categories: The Rising Star, The Ambassador, The Pioneer and the Conqueror. The four winners exemplified and exceeded all the characteristics sought after for their respective award categories.

The 2021 Power Play Awards winners are:

THE RISING STAR
Presented to an outstanding female professional, age 35 or younger

Dr. Tolulope Ijitona

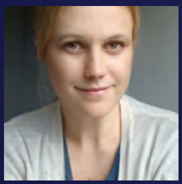
Instrumentation Engineer at Nigeria LNG Limited, Nigeria

THE AMBASSADOR
Given to a professional who displays positive energy and collaborative leadership while inspiring those around them

Candace Jimerson

Senior Director of Commercial LNG Operations at Golden Pass LNG, United States

THE PIONEER
Awarded to a professional who has delivered outstanding business results or innovation and technology leadership



Sandra Antonovic

Chief Operating Officer at Reflex Marine Ltd, United Kingdom

THE CONQUEROR
Recognized a female professional who has overcome challenges in the workplace, particularly in light of the 2020 pandemic

Hilary Ware

Senior Vice President, Chief Human Resources Officer at Cheniere, United States

Congratulations to these four deserving Power Play Award winners and to everyone nominated in this year's event! Each of your stories was impressive and inspiring.
Learn more about the Power Play Awards at **exxonmobillng.com/Power-Play/Power-Play-Awards**

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Brazil and China: Top destinations for US LNG despite rising prices

Despite rising prices for the six US liquefaction and export plants, China and Brazil remain the top destinations for US LNG shipments. Data from the Department of Energy (DoE) shows 97 cargoes were delivered in July at an average price of $6.96 per MMBtu, up from $6.32 per MMBtu in the previous month.

The top five countries of destination, representing 56.3 percent of total US LNG exports in July 2021, were China (42.2 Bcf – 12 cargoes), Brazil (39.6 Bcf – 12 cargoes), South Korea (39.3 Bcf – 10 cargoes), Argentina (25.1 bcf – nine cargoes) and Japan (24.9 Bcf – seven cargoes).

Tanker discharging at Petrobras Bahia LNG terminal

In terms of exports, The Sabine Pass plant remained the volume leader in July 2021 with five Trains on stream and supplying 29 cargoes, followed by Freeport with 21, Corpus Christi 21, Cameron LNG 17, Cove Point seven and Elba Island two.

Shipments from the Cameron plant at Hackberry in Louisiana cost the most for July 2021 at an average $7.28 per MMBtu versus $6.92 in June 2021 and for the year-to-date the Cameron shipments fetched an average of $6.75 per MMBtu from the point of export.

The average prices for each of the five other plants (from the export point) from highest to lowest in July 2021 were: Freeport LNG (Texas) $7.23 per MMBtu ($6.38, June); Cove Point (Maryland) $7.20 per MMBtu ($6.76, June); Corpus Christi (Texas) $7.04 per MMBtu ($6.30, June); Elba Island in Georgia $6.57 per MMBtu ($5.876 June); and Sabine Pass (Louisiana) $6.54 ($5.98, June).

Notable cargoes shipped from the facilities on the Gulf Coast, included 11 mostly split cargoes sent to South America from the Freeport plant on Quintana Island, seven to Argentina and four to Brazil. ■

JERA and Mitsui divest their Mexican power assets to UK fund

Japan's largest utility JERA, along with Mitsui and partners, has agreed to sell its entire stake in the Mexican power plant operator MT Falcon Holdings to the British investment fund Actis GP for an undisclosed sum. JERA holds 20% in MT Falcon which runs five combined-cycle power plants (2.2 GW combined).

View of Rio Bravo power units II-IV

The five Independent Power Projects (IPPs) with a combined capacity of 2,233 MW, include the Saltillo CCGT brought into commercial operation in 2001, Altamira II started up in 2002, Rio Bravo II (start-up: 2002), Rio Bravo III: II (start-up: 2004), Rio Bravo IV: (start-up: 2005).

All five IPPs were divested to Actis GP, and the sale is expected to be completed by March 2022. Headquartered in London, Actis GP was founded in 2004 and acts as global investor in sustainable infrastructure with a focus on power plants, digital infrastructure including electricity networks and real estate.

As one of the world's largest LNG portfolio players, JERA has been acquiring gas-fired power generation assets in various countries around the globe. However, tight gas supply and rising spot LNG prices have rendered some older gas-fired power plants commercially unattractive in some locations.

Mexico's gas demand rebounds since August

Natural gas consumption in Mexico had been recovering since August after having slumped to 7.5 billion cubic feet per day (Bcf/d) in May 2020 following Covid-related lockdowns. However, most of this demand is covered by pipeline gas from the United States, which costs less than LNG shipments.

Figures by the US Energy Administration (EIA) show that rising volumes of US pipeline gas are more than offsetting the fall in LNG deliveries to Mexico and declining domestic gas production. Mexico has in fact evolved as the largest destination for US gas exports since 2015, and the recently completed Wahalajara pipelines has boosted US pipeline gas flows.

Industry and power generators account for 54% and 46% of Mexico's gas consumption, and most of the country's electricity, around 61%, is also generated from natural gas, followed by fuel oil, coal and renewables. ■

Peru LNG faces threat of nationalisation

The Peru LNG export plant at Pampa Melchorita on the Pacific Coast had just re-started shipping cargoes in September after a two-and-a-half month shutdown for technical issues. Now, it has been targeted by the Marxist Prime Minister Guido Bellido for possible nationalization.

Peruvian Prime Minister Bellido has now announced that the companies which operate in the natural gas sector in Peru are required to pay higher taxes or else face nationalizations. The Camisea natural gas fields comprise the nation's main energy resources, and the Camisea consortium is led by Argentina's Pluspetrol and with stakes also held by Hunt Oil of the US, South Korea's SK Group and Repsol of Spain.

The natural gas from Camisea is liquefied by a separate group of companies, called Peru LNG, and also including Texas-based Hunt Oil, SK Group of Korea as well as Royal Dutch Shell and Japan's Marubeni Corp. Peru LNG consumes about half the natural that flows from the Camisea fields and the balance goes into the domestic market.

"We decree that Camisea gas operating and trading company will renegotiate the distribution of profits in favour of the State," said Bellido. "Otherwise, we will opt for the recovery or nationalization of our fields," stated the Prime Minister. Bellido was appointed by President Pedro Castillo, who took office in July 20201 after a surprise election win after a campaign focused on reforming mining and energy policies and taxation levels. In addition to producing natural gas and LNG, Peru is the world's second-largest copper producer.

The Pampa Melchorita LNG plant came on stream in 2010 and is currently the only LNG production plant in South or Central America. ■

Calcasieu Pass LNG progresses in time for 2022 commercial start

Venture Global's Calcasieu Pass LNG export project has filed its monthly construction report to regulators showing sub-stantial progress as the facility aims to be the next large US LNG export plant to start commercial operations by around the fourth quarter of 2022.

The Calcasieu Pass plant is taking shape in Cameron Parish, Louisiana, south of the city of Lake Charles, according to the latest report and photographs filed with the Federal Energy Regulatory Commission.The monthly status report showed that many parts of the project have already been completed.

Once the Calcasieu Pass plant starts up it becomes the seventh US facility as the US heads for the position of the World's No. 1 exporter, moving ahead of Australia and Qatar, with both producing just under 80 million tonnes per annum.

The Calcasieu Pass plant will have nameplate output of 10 mtpa and its completion is expected to be ahead of schedule because of the use of modular building methods for the liquefaction Trains. With full production from Calcasieu Pass, the US would move to total nameplate capacity at the seven plants of 81.5 mtpa. This would rise to 86 mtpa once the sixth Train at Cheniere Energy's Sabine Pass plant in Louisiana also comes on stream in 2022.

More than half of the 18 mid-scale processing Trains to be used at the facility have now been installed. Kiewit is acting as the main engineering, procurement and construction (EPC) contractor.

"Key work during the month included ongoing materials delivery, site civil work, foundation work, piping and electrical system installation, equipment work, building erection, module delivery, LNG tank construction and commissioning," said Venture Global. The company told the FERC that the completed works included the paving of all roadways in Power Island area, the installation of all piping tie-ins to the north and south steam turbine units and hydrotesting of the high pressure, intermediate pressure and low pressure boiler tubes and steam drums for heat recovery steam generator (HRSG) unit No. 5. The engineering and work crews also performed final shaft alignment for combustion turbine and generator units No. 2 and No.3. ■

Construction works at Calcasieu Pass LNG terminal

Commonwealth LNG submits environmental statement to FERC

Commonwealth LNG, the export venture proposed for Cameron Parish in the US Gulf Coast state of Louisiana, has been informed by the Federal Energy Regulatory Commission of the launch of an environmental impact statement (EIS) process with firm deadlines.

The Commission will use this EIS in its decision-making process to determine whether the project is in the public interest.

Commonwealth LNG proposes to construct and operate a new export plant and accompanying natural gas pipelines on the west side of the Calcasieu Ship Channel at its entrance to the Gulf of Mexico. "As a result, Commission staff have revised the schedule for issuance of the final EIS, based on an issuance of the draft EIS in March 2022," said the FERC statement. "Issuance of notice of availability of the final EIS is September 9, 2022 and the 90-days federal authorization decision deadline is December 8, 2022," it added.

Render of Commonwealth LNG project in Louisiana

Commonwealth's plan is for a liquefaction facility consisting of six liquefaction Trains, each with a nominal production capacity of 1.4 mtpa totaling 8.4 mtpa. The project is also proposing to construct six LNG storage tanks, each with capacity of 50,000 cubic metres and one marine berth capable of accommodating vessels of up to 216,000 cubic metres capacity.

Commonwealth has told the FERC that the purpose of the project was to liquefy and export to foreign markets, domestically produced natural gas sourced from the existing interstate and intrastate pipeline systems of Kinetica Partners and EnLink Bridgeline respectively in southwest Louisiana.

"Commission staff has identified a few expected impacts that deserve attention in the EIS," said the FERC statement. "These include wetland impacts, associated threatened and endangered species impacts and increased greenhouse-gas emissions," it added. ■

continued from page 1

capacity remains offline in the region and EIA analysts think this lost capacity will not be fully back online before mid-October.

Low storage inventories

Looking towards the upcoming winter, the low level of US gas storage is of great concern. "Injections into storage this summer have been below the previous five-year average, largely as a result of hot weather and high export amid relatively flat production. The EIA forecasts inventories will end the 2021 injection season (end of October) at almost 3.6 Tcf — nearly 5% below average.

On the supply side, dry gas production is seen average 92.7 billion cubic feet per day in the US during the second half of 2021, up from 91.7 Bcf per day in the first half of the year. Output levels will likely increase to 95.4 Bcf per day over the course of 2022, driven by natural gas and crude oil prices. ■

US LNG: August – September 2021

LNG Journal

- August-September exports at 11.83mmt
- Up 0.21mmt (2pct) over June-July period
- Shipments up 6.74mmt (132pct) over period year-on-year
- Avg. US capacity utilisation at 94pct for report period

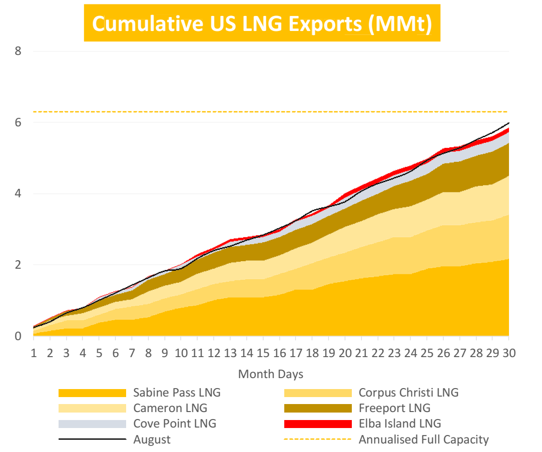
Overall US LNG exports, which had grown fast to 12.58mmt during the March-April report period (helped by full access to feedgas, higher Asian demand as well as the inauguration of Corpus Christi LNG's third train) but fallen back to 11.83mmt for the May-June period, had recovered somewhat during August-September. Nevertheless, August exports stood at 5.98mmt, shipments had decreased to 5.84mmt in September.

The export decrease in September was mainly due to considerably lower exports from Freeport LNG, where a power outage caused by Tropical Storm Nicholas hampered LNG production. Still, shipments during the report period of August-September came in 6.74mmt (132pct) above their year-on-year equivalent of 5.09mmt. As a result, export capacity utilisation averaged 94pct for the report period, up 53pp compared to 40pct during the equivalent report period in 2020 and up 2pp from the previous period of June-July.

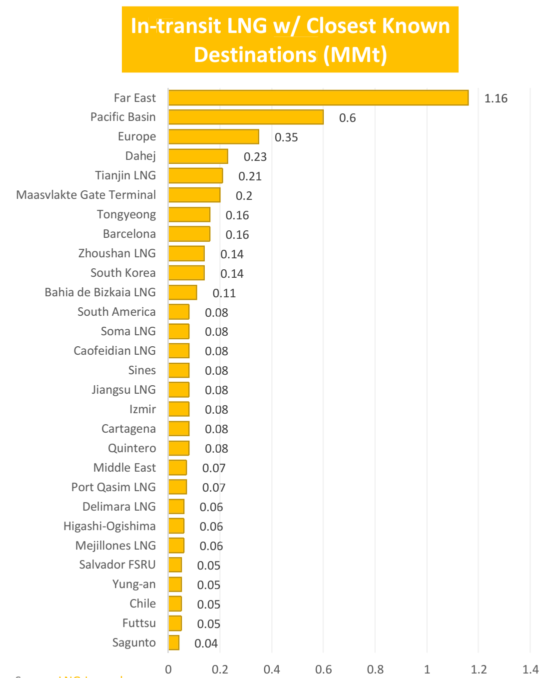
The month-on-month decrease in September was led by Freeport LNG, where the number of shipped cargoes decreased from 22 to 15 and thus from 1.36mmt in August to 0.93mmt in September. This, however, was partially compensated by higher exports from Sabine Pass LNG, where month-on-month exports increased by 0.36mmt from 1.82mmt in August to 2.18mmt in September, as well as more modest increments at Corpus Christi LNG and Cameron LNG.

Notably, natural gas spot prices at Henry Hub had continued to climb quickly over the report period. The Henry Hub spot price rose from an average of US$3.84/mmBtu in July to US$4.07/mmBtu in August and around US$5.40/mmBtu in September as US natural gas stocks were drawn upon more than last year. Alongside the recent price rally we have also observed an increasing number of US shipments taking longer routes around South Africa's Cape of Good Hope and the Suez Canal by avoiding the more expensive Panama Canal. This effectively cut into available shipping capacity to carry US LNG.

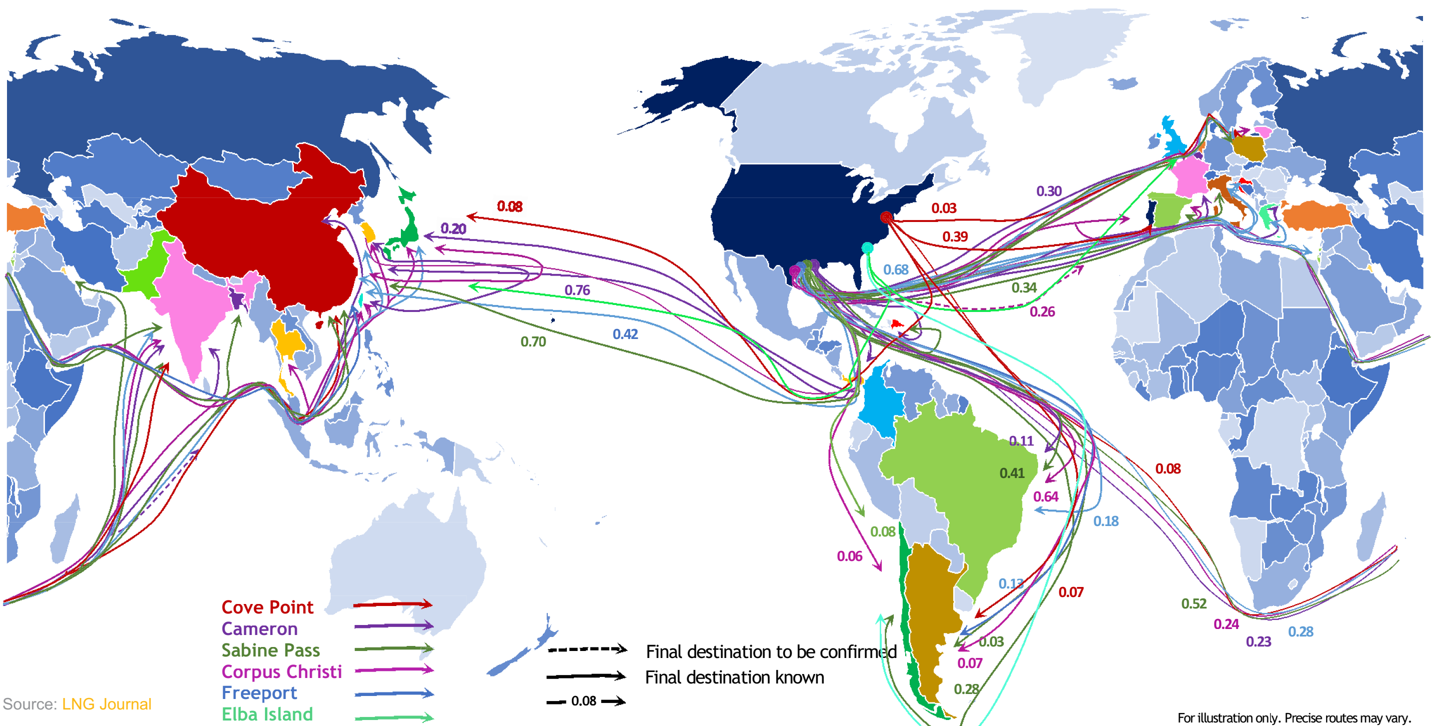
Meanwhile, there has been little incentive to send spot LNG cargoes into Europe for much of the year. The Asian spot LNG premium over the Dutch TTF stood at around US$1.50/mmBtu, making Asia a more attractive region in August. However, TTF is now trading at a premium to spot Asian LNG as the European market adjusted to prevailing supply conditions. In conjunction with reported maintenance on both the Yamal-Europe and Nord Stream we are expecting LNG inflows into Europe to pick up in October. Indeed, this has already begun to happen in the second half of September, according to our data.



Source: LNG Journal



Source: LNG Journal



Source: LNG Journal

For illustration only. Precise routes may vary.

LNG Journal

US LNG Still in Transit as of 6 October 2021

Sum of Original Cargo MMt					Total
Cameron LNG	BW Lilac	9758076	Cartagena	09-Oct-21	0.08
Cameron LNG	Diamond Gas Orchid	9779226	Higashi-Ogishima	24-Oct-21	0.06
Cameron LNG	Golar Frost	9655042	Far East	14-Oct-21	0.07
Cameron LNG	La Seine	9845764	Europe	16-Oct-21	0.08
Cameron LNG	Marvel Crane	9770438	Tianjin LNG	30-Oct-21	0.08
Cameron LNG	Marvel Falcon	9760768	Far East	13-Oct-21	0.08
Cameron LNG	Marvel Hawk	9760770	Far East	09-Oct-21	0.07
Cameron LNG	Methane Nile Eagle	9321770	Maasvlakte Gate Terminal	06-Oct-21	0.06
Cameron LNG	Point Fortin	9375721	Mejillones LNG	27-Oct-21	0.06
Cameron LNG	SK Audace	9693161	Zhoushan LNG	06-Oct-21	0.08
Cameron LNG	Stena Crystal Sky	9383900	Far East	19-Oct-21	0.07
Cameron LNG	MOL Hestia	9885996	Caofeidian LNG	12-Oct-21	0.08
Corpus Christi LNG	Adam LNG	9501186	South Korea	21-Oct-21	0.06
Corpus Christi LNG	Arctic Princess	9271248	Yung-an	11-Oct-21	0.05
Corpus Christi LNG	British Sponsor	9766580	Barcelona	06-Oct-21	0.08
Corpus Christi LNG	Celsius Canberra	9864796	Pacific Basin	04-Nov-21	0.08
Corpus Christi LNG	Cool Discoverer	9861031	Sines	05-Oct-21	0.08
Corpus Christi LNG	Elisa Larus	9852975	South America	11-Oct-21	0.08
Corpus Christi LNG	GasLog Warsaw	9816763	Sagunto	08-Oct-21	0.04
Corpus Christi LNG	Aristarchos	9862918	Izmir	04-Oct-21	0.08
Corpus Christi LNG	Celsius Carolina	9878723	Pacific Basin	26-Oct-21	0.08
Corpus Christi LNG	Hellas Diana	9872987	Pacific Basin	14-Oct-21	0.08
Cove Point LNG	Gail Bhuwan	9877145	Dahej	17-Oct-21	0.08
Cove Point LNG	LNG Fukurokuju	9666986	Dahej	05-Oct-21	0.07
Elba Island LNG	Bilbao Knutsen	9236432	Chile	10-Oct-21	0.05
Elba Island LNG	Madrid Spirit	9259276	Delimara LNG	06-Oct-21	0.06
Freeport LNG	Flex Rainbow	9709037	Dahej	05-Oct-21	0.08
Freeport LNG	GasLog Wales	9853137	Far East	09-Nov-21	0.08
Freeport LNG	Golar Celsius	9626027	Middle East	09-Oct-21	0.07
Freeport LNG	Hoegh Gannet	9822451	Pacific Basin	15-Oct-21	0.07
Freeport LNG	Kmarin Diamond	9333620	Futtsu	18-Oct-21	0.05
Freeport LNG	LNG Alliance	9320075	Tianjin LNG	09-Nov-21	0.06
Freeport LNG	LNG Schneeweisschen	9771913	Bahia de Bizkaia LNG	09-Oct-21	0.06
Freeport LNG	Marib Spirit	9336749	Pacific Basin	22-Oct-21	0.07
Freeport LNG	Prism Brilliance	9810551	Far East	24-Oct-21	0.07
Freeport LNG	Sean Spirit	9781918	Far East	29-Oct-21	0.07
Freeport LNG	Bishu Maru	9691137	Zhoushan LNG	13-Oct-21	0.06
Sabine Pass LNG	Cool Explorer	9640023	Far East	06-Oct-21	0.07
Sabine Pass LNG	Flex Artemis	9851634	Far East	10-Oct-21	0.08
Sabine Pass LNG	Flex Resolute	9851646	Far East	24-Oct-21	0.08
Sabine Pass LNG	GasLog Galveston	9864928	South Korea	30-Oct-21	0.08
Sabine Pass LNG	GasLog Gladstone	9744025	Quintero	04-Oct-21	0.08
Sabine Pass LNG	GasLog Salem	9638915	Pacific Basin	06-Nov-21	0.07
Sabine Pass LNG	Golar Crystal	9624926	Europe	12-Oct-21	0.06
Sabine Pass LNG	Hyundai Peacepia	9761853	Tongyeong	17-Oct-21	0.08
Sabine Pass LNG	Maran Gas Pericles	9709489	Europe	13-Oct-21	0.07
Sabine Pass LNG	Methane Jane Elizabeth	9307190	Far East	31-Oct-21	0.06
Sabine Pass LNG	Pan Americas	9750232	Far East	14-Oct-21	0.07
Sabine Pass LNG	Pan Asia	9750220	Far East	07-Nov-21	0.08
Sabine Pass LNG	Qogir	9851787	Barcelona	08-Oct-21	0.08
Sabine Pass LNG	Seri Balhaf	9331660	Port Qasim LNG	13-Oct-21	0.07
Sabine Pass LNG	SM Eagle	9761827	Tongyeong	13-Oct-21	0.08
Sabine Pass LNG	Trinity Arrow	9319404	Salvador FSRU	11-Oct-21	0.05
Sabine Pass LNG	Valencia Knutsen	9434266	Pacific Basin	15-Oct-21	0.08
Sabine Pass LNG	LNGShips Athena	9872949	Jiangsu LNG	05-Oct-21	0.08
Sabine Pass LNG	Diamond Gas Crystal	9874454	Soma LNG	06-Oct-21	0.08
Grand Total					**3.98**

*Values are based on journey time to date in accordance with draught at departure and in-transit BOR. Eventual journey times will thus affect the final amounts delivered.

Source: LNG Journal

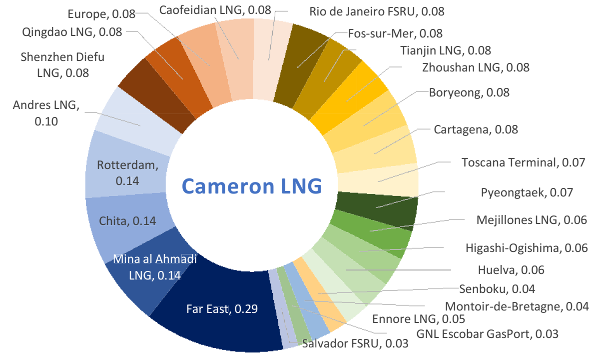
Monthly US LNG Exports (MMt)

Period between 01 August and 30 September 2021, inclusively

LNG Journal

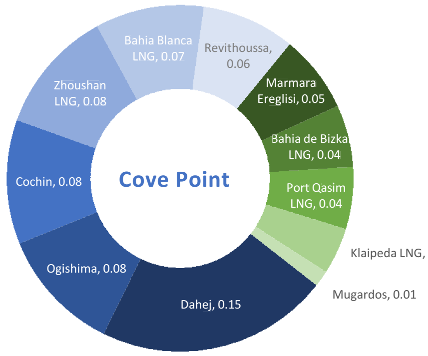
Elba Island LNG

Elba Island LNG exported five cargoes amounting to 0.29mmt in August and September, broadly steady in volume terms compared to the 0.30mmt of the June-July period. Notably, only one of these August-September shipments has gone to the Pacific to date – India's Mundra terminal – whilst three cargoes went to Spain. In addition, one cargo still had to declare its destination at the time of writing but was likely headed for Chile. Elba Island's capacity utilisation, therefore, stood at 70pct for the August-September period.



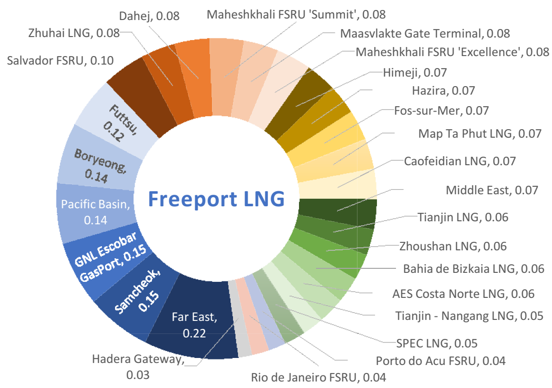
Cameron LNG

Exports from Cameron LNG saw period-on-period growth. The plant shipped 2.12mmt in August-September, up by 0.21mmt (11pct) from the 1.91mmt recorded during the previous period of June-July and thus considerably higher than the 0.49mmt seen during the same period last year. Cameron LNG thereby operated at an average utilisation of 94pct over the report period. At the time of writing, the plant was loading a cargo onto the Meridian Spirit.



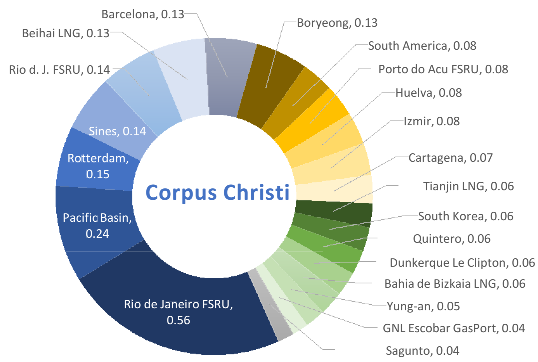
Cove Point LNG

Cove Point LNG saw exports decrease to 0.69mmt in August-September after they had stood at 0.90mmt during the previous period of June-July. In August-September, the plant thus could not hold on to the productivity gain seen at the beginning of summer. Accordingly, utilisation in August and September averaged 72pct. At the time of writing, the plant was not scheduled to load a cargo.



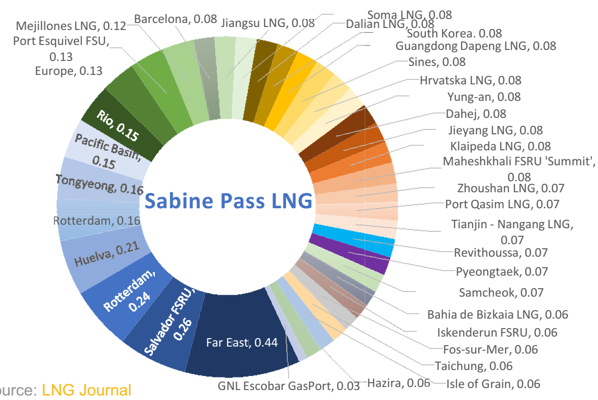
Freeport LNG

Freeport LNG saw production improve slightly in August-September from 2.24mmt at the end of July to 2.29mmt by the end of September, pegging annualised utilisation for the current report period at 99pct. This period-on-period growth came despite a power outage caused by Tropical Storm Nicholas, which hampered LNG production in September. The plant still had 11 cargoes amounting to 0.74mmt in transit as of 6 October, most of which are expected to arrive in India and the Far East.



Corpus Christi LNG

Underpinned by new capacity, Corpus Christi LNG saw shipments remain broadly steady at nearly full capacity over the previous report period of June-July. The plant shipped 2.44mmt during August and September, pegging average utilisation at 98pct. The plant's exports have decreased only marginally by 0.01mmt period-on-period, mainly on account of one less shipment. At the time of writing, the GasLog Winchester was waiting off the Corpus Christi anchorage whilst the plant was not in the process of loading cargo.



Sabine Pass LNG

Sabine Pass LNG's exports stood at 4.00mmt for the current report period, pegging capacity utilisation at 96pct. This was up 5pct from the 3.82mmt exported during June and July. That increase was once again driven by higher demand in the Far East and Brazil (there were still 0.59mmt of cargoes with undeclared destinations in the Pacific), which lifted overall period performance. Exports to Northern Europe also grew in September. The plant was loading cargoes onto the Cobia LNG at the time of writing.

Source: LNG Journal

US LNG Exports (MMt) - Report Period

LNG Journal

Importers	2020					2021									Grand Total
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
South Korea	0.27	0.54	0.26	0.87	0.78	0.99	0.28	0.71	0.40	0.91	1.10	0.77	0.78	0.37	9.03
China	0.24	0.14	0.63	0.86	0.89	0.72	0.07	0.55	1.01	0.75	0.84	0.86	0.96	0.42	8.94
Japan	0.45	0.14	0.51	0.65	1.06	1.22	0.36	0.56	0.53	0.49	0.82	0.49	0.38	0.19	7.85
Brazil	0.06	–	0.43	0.57	0.61	0.43	0.28	0.57	0.23	0.48	0.79	0.91	0.72	0.60	6.68
India	0.21	0.18	0.34	0.21	0.19	0.41	0.26	0.35	0.25	0.67	0.26	0.25	0.41	0.42	4.41
Spain	0.07	0.29	0.30	0.15	0.27	0.16	0.14	0.24	0.45	0.13	0.19	0.16	0.38	0.71	3.64
United Kingdom	–	0.06	0.28	0.54	0.60	0.44	0.71	0.33	0.28	0.22	–	–	–	0.06	3.52
Netherlands	–	0.06	0.07	0.15	0.07	0.06	0.41	0.52	0.37	0.59	0.06	0.16	0.16	0.22	2.90
France	–	–	0.18	0.12	0.08	0.08	0.32	0.71	0.74	0.28	0.08	–	0.17	0.14	2.90
Chile	0.14	0.08	0.06	0.14	0.17	0.16	0.17	0.36	0.20	0.35	–	0.45	0.34	0.19	2.81
Turkey	–	0.07	–	0.26	0.32	0.56	0.41	0.08	–	0.08	–	0.13	–	0.19	2.10
Taiwan	–	0.17	0.07	0.12	0.22	0.20	–	0.19	0.14	0.26	0.04	0.40	0.13	0.05	1.99
Pacific Basin	–	–	–	–	–	–	–	–	–	–	–	–	0.07	1.39	1.46
Portugal	–	0.16	0.07	0.11	0.08	–	0.06	–	0.16	0.22	0.14	0.08	0.14	0.08	1.30
Argentina	0.13	–	–	–	–	–	–	0.03	0.09	0.21	0.23	0.30	0.27	0.04	1.30
Dominican Republic	–	0.03	0.13	0.07	0.08	0.09	0.19	0.19	0.09	0.11	0.09	0.05	0.10	–	1.22
Pakistan	0.06	0.19	0.19	–	–	0.07	–	0.07	0.07	–	0.05	0.23	0.04	0.06	1.03
Lithuania	–	0.07	0.10	0.08	0.12	–	0.13	0.07	0.07	0.06	0.06	0.15	0.03	0.08	1.02
Poland	–	–	0.06	–	0.14	–	0.15	0.07	0.14	0.07	0.22	0.13	–	–	0.98
Greece	–	0.15	–	0.07	0.14	0.02	–	0.15	–	0.15	–	0.13	0.11	0.02	0.94
Italy	0.13	–	–	0.05	–	–	–	0.21	0.07	0.13	0.07	0.16	0.07	–	0.89
Kuwait	0.15	0.07	0.07	–	–	–	–	0.08	0.07	–	0.14	–	0.07	0.07	0.72
Bangladesh	–	–	–	–	–	0.05	–	0.07	0.13	0.14	0.07	–	0.22	–	0.68
Mexico	0.07	0.07	0.16	0.07	–	–	0.29	–	–	–	–	0.01	–	–	0.67
Jamaica	–	0.04	0.12	–	0.05	0.08	–	–	0.08	0.06	0.06	0.02	0.06	0.06	0.63
Singapore	0.06	–	0.06	0.14	–	0.08	–	0.06	0.08	0.06	–	0.06	–	–	0.60
Croatia	–	–	–	–	0.06	–	–	0.14	0.07	0.08	0.06	0.08	0.08	–	0.57
Thailand	–	–	–	0.07	–	–	–	–	0.15	0.07	–	–	0.07	–	0.36
Atlantic Basin	–	–	–	–	–	–	–	–	–	–	–	–	–	0.29	0.29
Panama	–	0.03	–	–	0.03	–	–	0.07	–	0.07	–	–	0.06	–	0.26
Israel	0.07	0.06	–	–	–	–	–	0.05	0.04	–	–	–	–	0.03	0.25
Belgium	–	–	0.06	0.07	–	–	–	0.08	–	0.04	–	–	–	–	0.25
Malta	–	–	–	–	–	–	–	–	0.06	–	–	–	–	0.06	0.12
Colombia	–	0.06	–	–	–	–	–	–	0.01	–	–	–	0.03	0.02	0.12
Jordan	–	0.08	–	–	–	–	–	–	–	–	–	–	–	–	0.08
UAE	0.07	–	–	–	–	–	–	–	–	–	–	–	–	–	0.07
Grand Total	**2.18**	**2.74**	**4.15**	**5.37**	**5.96**	**5.82**	**4.23**	**6.51**	**5.98**	**6.68**	**5.37**	**5.98**	**5.85**	**5.76**	**72.57**

Source: LNG Journal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