

LNG North America

Includes:
Market Tracker Data

A BI-MONTHLY LNG JOURNAL PUBLICATION

July/August 2024

Smaller rivals to LNG Canada advance with Cedar first to take FID

Activity returned in the Canadian LNG space as Pembina Pipeline Corp and the Haisla First Nation have just taken FID to proceed with the near-shore Cedar FLNG project on the Douglas Channel near Kitimat. With a nameplate capacity of 3.3 million tons per annum (mtpa), the project is strategically positioned to export parts of Western Canada's abundant gas supplies to Asia, though it is way smaller than the massive Shell-led LNG Canada project which is meant to enter operations in early 2025.

At the Cedar side, South Korea's Samsung Heavy Industries is working as an EPC contractor on the project alongside the US firm Black & Veatch.

As for funding, Pembina Pipeline Corp and the Haisla First Nation will cover 60 percent of the cost with debt and the remaining 40 percent with equity from both partners. "Cedar LNG has secured a construction term

loan from a syndicate of banks," Pembina disclosed, adding that the Haisla Nation obtained committed capital through the First Nations Finance Authority.

Alberta-based Pembina wants to fund the project from operating cash flow. "No material change is expected to our 2024 Cedar LNG equity contributions disclosed previously, with no incremental post-FID contributions anticipated,"



Render of the Cedar LNG project in Kitimat

the company said.

Financiers embraced the project, given its positive merits, notably Pembina arranging a 20-year take-or-pay liquefaction tolling services agreement with a fixed toll signed with ARC Resources. The Canadian upstream firm ARC

has operations focused in the Montney shale-gas play in north-east BC and the tolling agreement is for 1.5 mtpa of LNG.

Investors have become more demanding when it comes to LNG project finance: almost fully contracted liquefaction capacity is

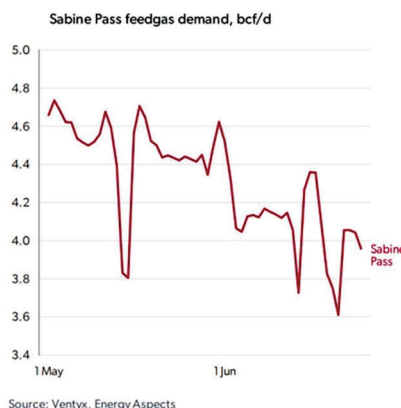
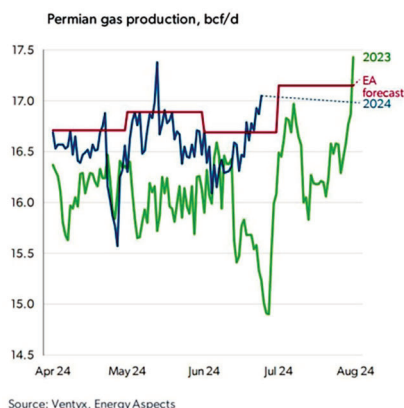
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Falling feedgas demand for liquefaction boosts US gas sales to Mexico

Prices at Henry Hub have eased on lower feedgas demand given that one train at Sabine Pass LNG terminal is off for maintenance. Late-June feedgas demand throughout the US fell by 0.4 billion cubic feet per day (bcf/d) compared to the first half of the month as summer heat impacts terminal utilisation – welcome news for Mexican utilities striving to import more US gas to meet power load.

The downturn in Sabine Pass's intake can be traced to Cheniere's Creole Trail Pipeline, analysts at Energy Aspects said.

Calcasieu Pass's gas intake has also been lower over the past few days after the LNG export terminal suffered a 'trip' that led to an uncontrolled shutdown of parts of the liquefaction unit. The incident reduced feedgas demand by 0.7 bcf/d day-on-



day to less than 0.9 bcf/d. Flows have since recovered to over 90 percent capacity, but analysts under-

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required and equity levels higher than 30 percent. Cautious buyers, meanwhile, refrain from signing offtake agreements if a project cannot reach FID in the next three months, Melanie Lovatt, financial adviser for the ship brokerage Poten & Partners observed.

"To get debt finance, North American projects are required to sell more of their production upfront. This is the big issue right now – not the availability of bank funds," she said, suggesting "the timeline of some US LNG expan-

sions may well slip." To generate upside and make projects more attractive for equity investors and offtakers, developers seek to re-rate LNG trains for higher capacity and look for more efficient and cheaper feedgas procurement.

LNG Canada poised for mid-2025 startup

Canada LNG is set to take seven years from FID in October 2018 to first shipment in early to mid-2025. Construction on C\$40 billion terminal is nearing completion and

once in full swing, massive LNG Canada terminal will process up to 2 billion cubic feet per day (bcf/d), or 11 percent of Canada's current gas production, limiting available volumes for export.

Smaller rivals are advancing gas and will also require feedgas: Cedar LNG on British Columbia's Pacific coast will draw on 0.4 bcf/d of feedgas from Canada's Montney Shale by 2028. Woodfibre LNG, meanwhile, will require 0.29 bcf/d upon completion in 2027.

Upstream companies Tourmaline

and ARC Resources are striving to expand gas production and processing capacity, though not all planned projects have seen the light of day yet. "It's going to take, in our view, up to four years to satisfy the pull that LNG Canada by itself is providing to the market," said Jamie Heard, vice president of capital markets at Tourmaline Oil, warning of a supply squeeze given that Cedar LNG and other smaller projects will follow fast on the heels of LNG Canada. ■

Texas LNG confident of sell-out in FOB cargoes

Texas LNG at Brownsville is "on the verge of full sell out," has touted Brendan Duval, CEO and founder of project's owner, the New York-based fund, Glenfarne Energy Transition. Offtake deals

will be finalised "in the near future," he said, indicating the venture remains on track for a final investment decision (FID).

Glenfarne had signed a non-binding accord with one un-

named company for free-on-board (FOB) cargoes amounting to 500,000 tonnes per annum from the plant's total production of

4 mtpa. Owners of Texas LNG added they would be in advanced negotiations with several potential off-takers for the project's remaining volumes. Gunvor's Singapore-based trading unit in March 2024 signed a Heads of Agreement to offtake 500,000 tonnes per annum over a 20-year period, though the agreement has not been finalised yet.

Texas LNG wants to begin construction in 2024 and commence commercial operations in 2028. Apart from the Brownsville venture, Glenfarne's LNG portfolio

also includes the 8.8 mtpa Magnolia liquefaction facility under development in Lake Charles, Louisiana. The number of deals being concluded in 2024 are vital for the project to reach FID any time soon.

Glenfarne vowed earlier this year it had received sufficient "expressions of interest from leading project finance banks" to move to the execution phase of project financing. Latham & Watkins has been appointed as Borrower's counsel and Milbank as Lenders' counsel. ■



Render of Texas LNG at the port of Brownsville

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lined the incident shows the impact such technical glitches can have on short-term demand.

Sweltering heat is impacting the utilisation of all LNG terminal

on the US Gulf Coast. "On days without maintenance, we have noted a 6 percent drop in capacity utilisation – equivalent to 0.8 bcf/d of USGC export capacity, if temperatures climb from 80° to 90°F (equals 26.6 C to 32 C). Hot temperatures, beyond the 84°F month-to-date average in Lake Charles, Louisiana, have reduced Cameron LNG's feedgas demand from 2 bcf/d in late May to currently less than 1.9 bcf/d.

Possible delay at Altamira FLNG

Strong gas demand for power generation in Mexico has pushed up South Texas' net gas export to a 12-month high. Net trade on the Baja Norte Pipeline in California reportedly doubled to 0.4 bcf/d

over the month just past, with most volumes used to fuel the 350 MW Baja California III combined-cycle power station.

Overall US gas exports to Mexico have risen by 0.1 bcf/d in June, despite limited deliveries at the Sur de Texas-Tuxpan (STT) pipeline that will eventually feed the Altamira floating LNG terminal. Operators of Altamira FLNG have, however, fallen short of confirming its first production of LNG though the company had targeted to reach that milestone by 24 June in the hopes of loading a first cargo in July. Flows through STT are unchanged at just below 1.3 bcf/d, with volumes lower from mid-May peaks due to surging Mexican power load. A delay in the Altamira FLNG start up would be

welcome news for electricity generators in Mexico.

Permian gas production hits monthly peak

On the supply side, production of associated gas in the oil-rich Permian basin has reached a monthly peak of 17.1 bcf/d on June 22 – although some maintenance still stifles Permian gas output in some areas. "We expect lesser maintenance in July that will lift Permian gas production consistently over 17 bcf/d," analysts said, pointing out: "More uplift will come later in third quarter of 2024 when Matterhorn is scheduled to come online and further debottleneck the basin with additional takeaway capacity." ■

LNG North America

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Subscription included with
LNG Journal

Judge halts Biden administration's pause on LNG permits

US District Judge James Cain in Lake Charles, Louisiana, has blocked President Biden's temporary ban on approving applications to export LNG to non-FTA countries, ruling the ban should "be stayed in its entirety, effective immediately." The Trump-appointed judge sided with 16 Republican-led states, including Texas, Louisiana and Florida, which argue the Department of Energy (DOE) overstepped its authority and jeopardises billions of dollars in investment.

Judge Cain ruled the DOE's freeze on approving LNG export permits was "completely without reason or logic." He indicated the coalition of Republican-led states had good chances to succeed in proving the pause is in contradiction with the Natural Gas Act and hence "arbitrary and unconstitutional."

The sought-after permit allows developers to export LNG to Europe, most of Asia and dozens of other countries that the US does not have a Free Trade Agreement with (non-FTA). American energy law stipulates the Federal Energy Regulatory Commission (FERC) to greenlight LNG projects unless they are not "in the public interest". A narrow definition of "the public interest" used to be



Republican-led states expected to succeed in proving the permitting pause contradicts the Natural Gas Act

applied, so far: the regulator only considered if exports could cause domestic gas prices to rise too much for US consumers. But environmentalists successfully rallied Biden and FERC to expand its view and also factor in environmental-justice issues.

DOE claims only four projects affected

The US Department of Energy (DOE) claims only four projects with pending export approvals are directly affected by President Biden's order to pause non-FTA export permits, but analysts warned

it also affects many projects which aim for first LNG exports before 2027.

Permitting of Venture Global's 20 mtpa Calcasieu Pass 2 LNG export venture – as well as almost a dozen of other projects – is on hold as the Biden administration wants to place greater scrutiny on how LNG affects climate change.

Construction still advances on Sempra's Port Arthur Phase 1 and first cargo deliveries are expected in 2027 – but the proposed expansion is also directly affected. The proposed Trains 3 and 4, capable of producing up to 13.5 mtpa, would take Port Arthur's total liquefaction capacity to 26 mtpa. Sempra filed for DOE approval already in September last year and that process could now take more than a year to complete.

Nearly 90 mtpa of projects awaiting non-FTA approval – and without that permit, the projects will struggle to gain sufficient backing to secure financing and proceed to financial close. The pause clearly impacts 10 projects

with pending permit applications, but analysts warned it may also affect many projects which under their current DOE approval aim for first LNG exports before 2027.

Importers fear ban affects supply security

Japan's JERA as well as Germany's state-owned gas importer SEFE and the power producers Uniper, EnBW have warned that the US permitting pause undermines the world's energy security. Both SEFE and JERA were planning to buy LNG from Venture Global's Calcasieu Pass 2 plant, one of the many stalled projects.

The regional power producer EnBW signed a contract to import 0.75 mtpa while SEFE agreed to offtake 2.25 mtpa from the Calcasieu Pass 2 venture. Over in Japan, both Inpex and JERA signed 20-year contracts for around 1 mtpa from Venture Global's contested LNG project. In the UK, Grain LNG recently signed a binding long-term terminal use agreement giving Venture Global access to 3 mtpa of LNG storage and regas capacity at the Isle of Grain

terminal for sixteen years starting from 2029.

While power producers fear rising prices due to volume shortages, analysts are less concerned. "The EU will become a declining gas consuming region, the signals are downward," said Anne-Sophie Corbeau, a researcher at Columbia University's Center on Global Energy Policy. "Between growing biomethane, Norwegian gas, some African gas, Azeri gas and declining production, we might just see eventually a progressive decline of our LNG demand, especially post 2030 – and this is precisely for that period that the Biden decision would matter," she argues.

In fact, US LNG exports to Europe have fallen amid ample gas in storage and relatively mild temperatures, though they continued to grow overall in the first half of this year. According to LNG Journal data, exports were up by 2.08 million tons, or 5 percent, to 47.17 mt from 45.09 mt in the first half of 2023. This increase was underpinned by higher gas demand in India, the Middle East and southeast Asia.

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“Low-cost gas enabled reshoring of many industries,” Williams CEO says

Abundant, low-cost natural gas has become essential to the US energy system and is enabling the reshoring of many industries. “In fact, today, natural gas is more than five times cheaper than crude oil, on a thermal unit basis, so it plays an indispensable role in our economy and way of life,” said Williams CEO Alan Armstrong.

Natural gas, in his view, is not just a “bridge” fuel. “It is key to meeting today’s energy demand as well as projected growth in electrification and renewables, Armstrong told McKinsey in an interview.

Gas-burn for power generation helps mitigate emissions as well as electrification and renewables-build-out. In fact, some 60 percent of US emissions reductions have come on the back of converting coal to gas-fired power generation.

In the transport sector, there is still much scope for emission reductions: Most ships today still run on residual oil and replacing that with natural gas could cut emissions in the shipping industry by about 2.4 times. “Putting a much-lower-cost fuel in place of a much heavier hydrocarbon fuel – are exactly what we ought to be going after first,” Armstrong pointed out, stressing natural gas should not be condemned as yet another fossil fuel.

In the power sector, the benefit of natural gas is that it is “very fast-following” and can hence help utilities handle load increases from data centres and electric cars. A gas-fired power plant can quickly ramp up and respond to shifts in electricity demand,

whereas nuclear plants or coal plants typically run in a steady state and need more time to adjust their electricity output.

“Loads that are starting to show up in certain markets are tremendous,” the Williams CEO noted, with reference to a PJM report forecasting that, just in their power market, generation load will soar by 32 percent between now and 2039 – with 178 gigawatts (GW) of new demand from data centers and electrification.

Low-capital solution with least emissions

Counting capital costs, it’s much cheaper to install gas-fired generation than any of the above technologies, the Williams CEO noted. “I’m a huge fan of nuclear as a technology and a solution for the future. But today, the cost of installing it is so high that when you couple that with renewables, it becomes very pricey.



“Natural gas is a great complement because it’s a low-capital solution and it’s the lowest-emitting of the fossil fuels for load-following power generation,” he concluded.

Shift to hour-by-hour system management

Williams’ midstream gas business used to focus on aggregating services, like gas processing, for industries at scale. Today, Williams’ pipeline networks connect multiple markets and storage facilities, serving different kinds of demand, whether it’s industrial, residential, power generation, or LNG exports.

Gauging the network value

going forward, the Williams CEO said being able to deliver energy when it’s needed is getting even more important. “Where it used to be seen as a seasonal issue, it’s really getting down to hour-by-hour management of the systems,” he explained.

Toughing on the hype around hydrogen, Armstrong cautioned “a lot of people don’t understand that to be able to use hydrogen as a fuel, we’re going to need a lot more pipelines.” Williams is in the middle of realising two hydrogen hubs in the US, though the country still has a long way to go before being able to utilize this clean-burning fuel as scale. ■

World’s energy demand shifts to LNG, awaits US supply boost

Global energy demand is shifting to natural gas and investment in LNG is set to soar over 50 percent by 2029, while growth in oil investment shows signs of peaking in non-OECD countries, Goldman Sachs noted. Researcher anticipates an 80 percent increase in global LNG supply by 2030, driven by new projects in the North America and Qatar.

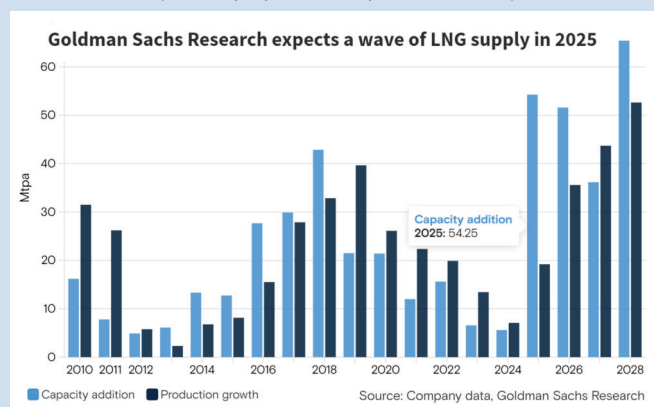
By 2028, the US will hold 232 billion cubic meters per year (bcm/y) of LNG export capacity,

up from 126 today – far ahead of Qatar with 171 bcm/y. The world’s rising gas demand has greatly increased drilling activity in the US and analysts anticipate a further 54 percent rise by 2029, mainly from shale gas. Cost advantages in gas production and exports could make the US the world’s largest energy exporter – though those costs continue to flatten.

Committed US projects are going to double export capacity over the next three to four

years, but analysts are wary about how many more projects

will go ahead afterwards, as prices are likely to come down. ■





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A handwritten signature in black ink, likely belonging to Jill Evanko.

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Forecast strong hurricane season puts US oil & gas production at risk

Meteorologists are forecasting a particularly intense Atlantic hurricane season this year; they expect 20 to 25 named storms which can potentially disrupt crude oil and natural gas production as well as refining operations. Government analysts warn hurricanes could substantially reduce upstream operations in the Gulf of Mexico and damage LNG export facilities.

June is the month when the earliest storms begin forming over the Atlantic, though most severe hurricanes usually occur in August and early September. In the United States, hurricane often hit the southeast and Gulf Coast, where most of the country's oil and gas as well as refining industry is situated.

Refineries along the Texas and Louisiana Gulf Coast account for almost half of U.S. refining capacity. The Texas Gulf Coast region has clusters of refinery capacity in Corpus Christi, Port Arthur, and the Houston-Galveston region, with a total of 5.5 million barrels per day (bpd) of refinery capacity. The area is home to the largest refineries in the United States, including Motiva's 626,000-bpd Port Arthur refinery, Marathon's 593,000-bpd Galveston Bay refinery, and Exxon-Mobil's 610,000-bpd Beaumont and 564,000-bpd Baytown refineries.

These facilities risk flooding or power outages associated with major storms or hurricanes. Like

offshore floating production facilities, many refinery operators will evacuate nonessential personnel and temporarily stop production in case of severe weather.

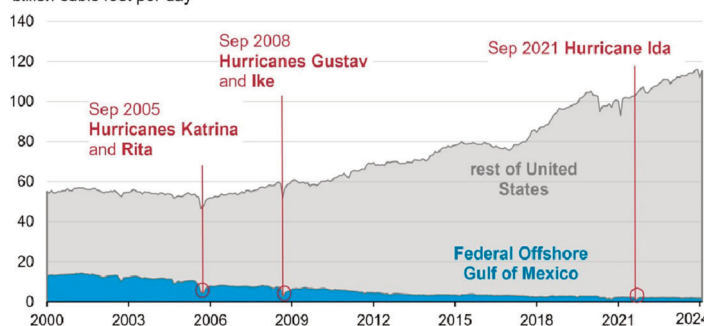
Impact on gas production and LNG exports

A severe hurricane could substantially reduce gas production in the Gulf of Mexico (GOM), home to most associated gas production, though analysts noted recent hurricanes have had a much smaller impact on overall production because more and more volumes are produced from shale gas plays.

In its Short-Term Energy Outlook, analysts from the US Energy Information Administration (EIA) assume a low double-digit percentage of GOM crude oil production could be offline during each month of the hurricane season while the impact on natural gas is less pronounced. According to EIA figures, the GOM provided less than 2 percent of total US marketed natural gas production



Monthly marketed natural gas production (Jan 2000–Feb 2024)
billion cubic feet per day



Data source: U.S. Energy Information Administration, *Natural Gas Monthly*

in 2023, down from 17 percent in 2005 when Hurricanes Katrina and Rita interrupted significant volumes of natural gas production.

Hurricanes also affect gas demand by interrupting LNG export operations, given that the US has nearly 13 billion cubic feet per day of liquefaction capacity on

the Gulf Coast. Though terminals have layers of protection, hurricanes can damage electrical and marine infrastructure and hamper ship movement. Hurricane Laura, which made landfall in August 2020, temporarily halted LNG exports from Louisiana's Sabine Pass and Cameron LNG facilities. ■

Fitch upholds Henry Hub assumptions, though supply outstrips demand

Fitch Rating has maintained all Henry Hub base-case assumption, although US gas production continues to outstrip consumption albeit with a narrowing gap. Analysts expect gas production will fall as a result of announced curtailments and some well shut-ins. With the supply gap closing in, gas prices are extremely volatile and dependent on weather.

As for European gas markets, analysts also kept up all base-case assumptions for the Dutch TTF

trading hub. "EU gas storage is 68 percent full, and we believe the bloc's member states will be

able to fully refill storage before the heating season - limiting upward price pressure," Fitch analysts commented.

Nevertheless, they forecast a seasonal increase in prices in autumn, in line with the usual natural gas price seasonality.

Looking at the wider picture, analysts take the view that natural gas markets will remain "fairly tight" in 2024 and 2025. New LNG capacity in the US and Qatar will lead to a

gradual decrease in prices from 2026. One front-runner in terms of new liquefaction capacity will be Canada's first LNG export terminal, the massive Shell-led LNG Canada project.

Construction of the 14 mtpa venture in Kitimat, British Columbia, is nearing completion and start-up activities are about to begin with a view to bringing the C\$40 billion terminal into operation in mid-2025. The terminal will process up to 2 billion cubic feet per day (bcf/d), or 11 percent of Canada's current gas production - limiting available volumes both for export to the US and the domestic market. ■

Oil and Gas Price Assumptions

FitchRatings

	2023		2024		2025		2026		2027		Mid-cycle	
	Actual	Old	New	Old	New	Old	New	Old	New	Old	New	
Base Case												
Brent (USD/bbl)	82.5	80.0	80.0	70.0	70.0	65.0	65.0	65.0	65.0	60.0	60.0	
WTI (USD/bbl)	77.6	75.0	75.0	65.0	65.0	60.0	60.0	60.0	60.0	57.0	57.0	
Henry Hub (USD/mcf)	2.6	2.50	2.50	3.0	3.0	3.0	3.0	2.75	2.75	2.75	2.75	
TTF (USD/mcf)	13.0	10.0	10.0	10.0	10.0	8.0	8.0	7.0	7.0	5.0	5.0	
Stress Case												
Brent (USD/bbl)		50.0	65.0	35.0	35.0	45.0	45.0	48.0	48.0	48.0	48.0	
WTI (USD/bbl)		47.0	60.0	32.0	32.0	42.0	42.0	45.0	45.0	45.0	45.0	
Henry Hub (USD/mcf)		2.0	2.0	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	
TTF (USD/mcf)		5.0	7.0	5.0	5.0	5.0	5.0	5.0	5.0	4.5	4.5	

Assumptions as of June 2024.



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Engineering firm working on Golden Pass LNG hit by Zachry bankruptcy

Chiyoda, the Japanese LNG engineering firm working on the Golden Pass LNG project, has been hit by the bankruptcy of the US Zachry construction group. The Yokohama-based company said it was revising full-year consolidated financial forecasts and was publishing its earnings late.

Golden Pass LNG is being developed by ExxonMobil and QatarEnergy on the Sabine-Neches Waterway in Texas. Three liquefaction Trains are planned with 16 mtpa combined nameplate capacity. Train 1 mechanical completion had been scheduled for the end of 2024, aiming for first LNG in the first half of 2025.

Bankruptcy and withdrawal of Zachry, one of the engineering partners the Golden Pass venture, had forced Chiyoda to reorganise an operational structure with remaining partner, the McDermott unit CB&I. "Under the circumstances, the cost required to complete construction was forecast and recalculated with sufficient margin based on the currently effective contracts," Chiyoda said, adding: "Consequently, sales and operating income are expected to decrease from the previous forecast."

Ordinary income is expected to



Construction progresses at Golden Pass LNG in Texas

drop to 5.5 billion Japanese yen (\$34.5 million) from 28 billion yen (\$175.37m) in the previous forecast. This is down from the 20.32 billion yen (\$127.2m) logged in the previous 2022-2023 fiscal year.

"Short-term and long-term plans to complete construction will be agreed among the three parties Chiyoda, CBI and the

Golden Pass (GPX) project soon after Zachry's official and formal withdrawal from the project," Chiyoda explained. Stakes are high for Chiyoda to negotiate a contract with GPX and count the contract money in its financial results in order to re-estimate reserves for losses on construction contracts in the second quarter. ■

Chart wins processing contract from Argent

Argent LNG, with plans to develop a liquefaction terminal at Port Fourchon, Louisiana, has selected Chart Industries to supply modular processing equipment. Argent is proposing a facility at a 144-acre site west of Belle Pass with an initial capacity of 10 mtpa which could be doubled, targeting the LNG maritime fuel market.

Targeted offtakers include LNG-powered Offshore Supply Vessels (OSVs) in the Gulf of Mexico. Under the contract, Chart will be supplying its Integrated Pre-

Cooled Single Mixed Refrigerant (IPSMR) processing technology to the Louisiana plant. Atlanta-based Chart said its equipment has the capability to optimize the matching of gas turbine power with single cold box capacity, ensuring maximum operational efficiency and cost-effectiveness. Cost and ease of fine-tuning system configuration are some of the technology's key advantages.

"We are excited to partner with Argent

LNG to provide our IPSMR technology, brazed aluminium heat exchangers, cold-boxes and air coolers," said Jill Evanko, Chart's President and CEO. "Argent is strategically optimising a 20 mtpa LNG facility by moving entirely to modular, resulting in a smaller footprint, higher efficiency and less cost, and therefore offering their customers the most efficient and effective solution," she said adding Chart had begun engineering work related to the Argent project and anticipated booking an IPSMR technology and equipment order in 2025. ■



Birds eye view of Port Fourchon

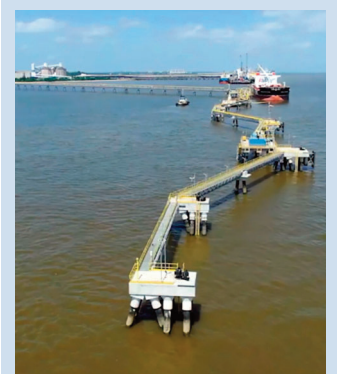
PortoChem project on track for 2026 startup

Mitsubishi Power, together with CONSAG Engenharia, will provide engineering, procurement and construction (EPC) for the 1,600 MW PortoCem power plant in Brazil. Mitsubishi will supply four M501JAC gas turbines to run in simple-cycle mode to power Brazil's largest peaking plant, fuelled by LNG imported via NFE's floating terminal in Baracena.

Financing for the project is underpinned by a 15-year Capacity Reserve Contract as the operator PortoCem Geração de Energia had been the biggest winner of Brazil's first Power Capacity Reserve Auction back in December 2021. Construction of the plant is already in progress, undertaken by CONSG, and operators aim for a start of commercial operation in 2026.

Fuel for the gas-fired plant will be supplied via the Baracena FSRU, recently build by New Fortress Energy, which agreed to supply LNG to more than 2.2 GW capacity in the Brazilian state of Para. The initial 630 MW power gen development in Baracena "remains on schedule for COD in the third quarter of 2025," the developer pointed out.

New York-headquartered NFE wants to make use of its FSRU in Baracena to expand its nearby power gen capacity while fuel imports generate incremental through and earnings at its LNG terminals. ■



View of NFE's Baracena FSRU

US LNG: May – June 2024

LNG Journal

- May-June exports amounted to 15.34mmmt
- Up by 0.36mmmt (2pct) from March-April period
- Shipments up 0.63mmmt (4pct) over period year-on-year
- Avg. US capacity utilisation at 97pct for the report period

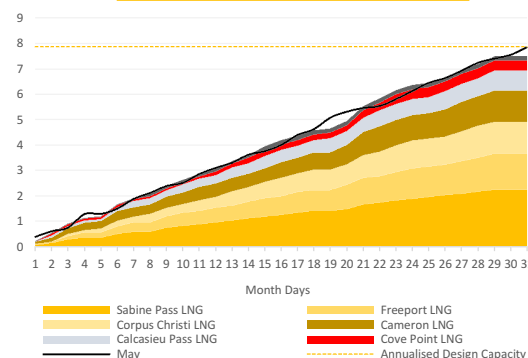
US LNG exports grew slightly to 15.34mmmt during the current report period of May-June, up by 0.36mmmt (2pct) from the 14.98mmmt recorded during the previous period of March-April. However, shipped US LNG volumes dipped by 0.38mmmt (-5pct) to 7.48mmmt in June from 7.86mmmt in May. This was partially due to June being a shorter month as well as reported plant maintenance. Following a cold snap in February and initially regaining full access to feedgas to jump-start production, US LNG plants also had to contend with some pipeline maintenance. Month-on-month exports in May were broadly on par with their year-on-year equivalent whilst June's exports - although lower than in May - still outperformed their year-on-year equivalents of 6.90mmmt by 0.58mmmt (8pct).

US LNG trade continued to be sent on the longer but safer route around South Africa's Cape of Good Hope instead of (for the most part) the Suez or Panama Canals. The only US LNG volumes making it past Port Said in Egypt went to Jordan's Aqaba FSRU terminal and Egypt's Ain Sokhna facility according to our data. Meanwhile, some shipments also went through the Panama Canal to Japan and Chile.

Meanwhile, European demand for US LNG continued to weaken during the current report period as these offtakes accounted for only 5.75mmmt (37pct) of total US LNG exports whilst in March-April that figure stood at 8.36mmmt (56pct). Data by GIE showed European inventories had an average fill level of almost 80pct at the beginning of July, with Germany reporting gas storage to be 84pct full. Spain's storage was almost 97pct full whilst Portugal's was filled to the brim at 102pct at the time of writing. Among major European gas consumers, only the United Kingdom showed inventory levels below 50pct.

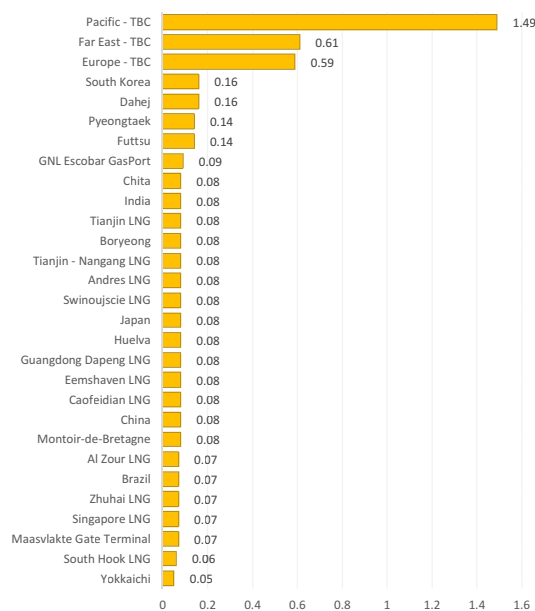
Full European gas stocks were instrumental in maintaining relatively low post-pandemic gas prices in Europe although there was an increase. The TTF spot price for June as assessed by Elexys stood at EUR34.33/MWh, roughly equivalent of US\$10.06/mmBtu. In April, that figure was more than US\$1.54/mmBtu lower at US\$8.52/mmBtu. However, the monthly Henry Hub gas spot price, as assessed by the EIA, had escaped its March floor of US\$1.49/mmBtu to climb to US\$2.53/mmBtu in June.

Cumulative US LNG Exports (MMt)

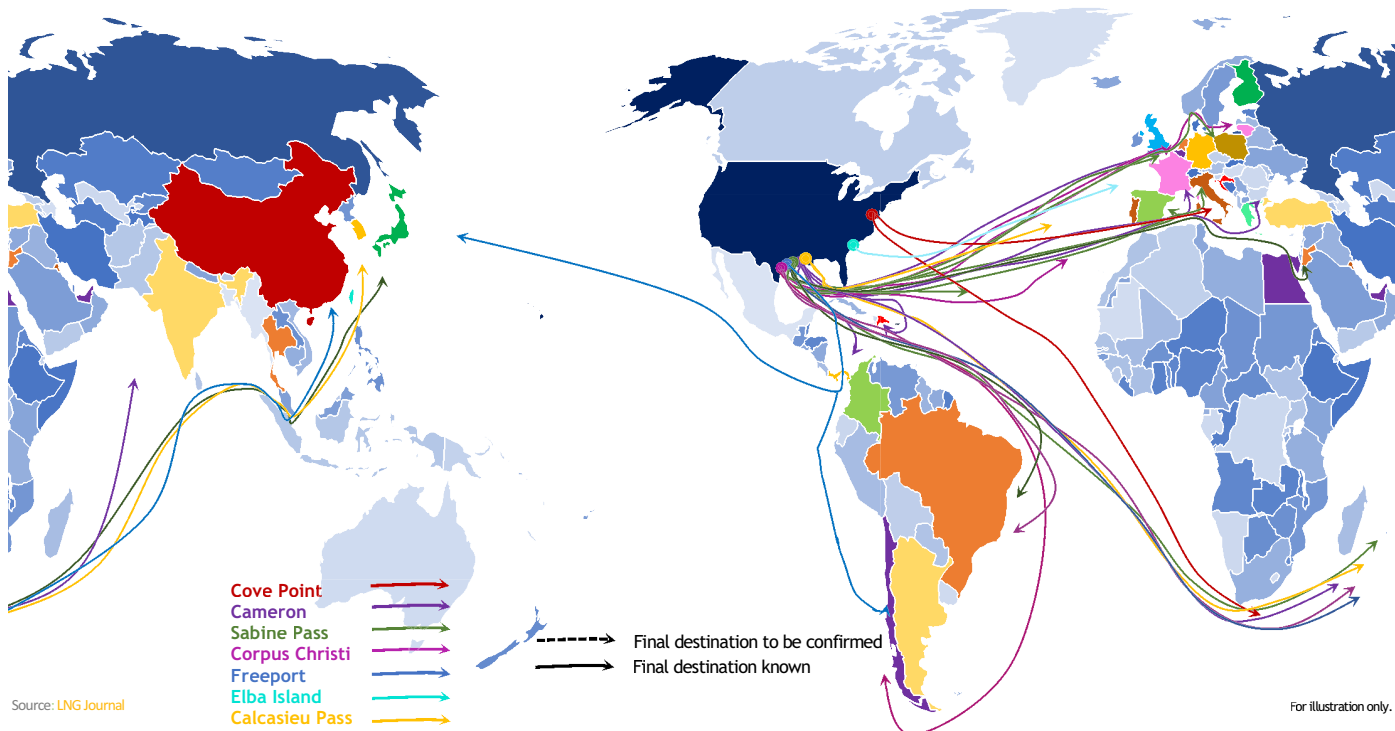


Source: LNG Journal

In-transit LNG w/ Closest Known Destinations (MMt)



Source: LNG Journal



Source: LNG Journal

For illustration only.

US LNG Still in Transit as of 9 July 2024

Plant	Vessel	IMO	Terminal	Schedule	MMt
Cameron LNG	BW Lilac	9758076	Al Zour LNG	14-Jul-24	0.07
Cameron LNG	Energy Endeavour	9854624	Europe	10-Jul-24	0.08
Cameron LNG	Flex Aurora	9857365	Pacific Basin	21-Jul-24	0.08
Cameron LNG	La Seine	9845764	Far East	11-Jul-24	0.08
Cameron LNG	Maran Gas Andros	9810379	Futtsu	14-Jul-24	0.08
Cameron LNG	Marvel Crane	9770438	Boryeong	24-Jul-24	0.08
Cameron LNG	Marvel Falcon	9760768	Pacific Basin	09-Aug-24	0.08
Cameron LNG	Marvel Hawk	9760770	Far East	11-Jul-24	0.08
Cameron LNG	Marvel Swan	9880192	Pacific Basin	20-Jul-24	0.08
Cameron LNG	Sevilla Knutsen	9414632	India	27-Jul-24	0.08
Cameron LNG	SK Audace	9693161	Europe	15-Jul-24	0.08
Cameron LNG	Traiano Knutsen	9854765	Dahej	22-Jul-24	0.08
Cameron LNG	Minerva Chios	9877341	South Korea	10-Jul-24	0.08
C. Christi LNG	GasLog Galveston	9864928	Pacific Basin	15-Jul-24	0.08
C. Christi LNG	GasLog Georgetown	9864916	Far East	12-Jul-24	0.08
C. Christi LNG	GasLog Wellington	9876660	Tianjin - Nangang	05-Aug-24	0.08
C. Christi LNG	Adamastos	9879698	Eemshaven LNG	13-Jul-24	0.08
C. Christi LNG	Asklipios	9884021	Pacific Basin	20-Jul-24	0.08
C. Christi LNG	Woodside Rees Withers	9810367	Pacific Basin	18-Jul-24	0.08
C. Christi LNG	Kunlun	9915911	Pacific Basin	09-Jul-24	0.08
C. Christi LNG	Clean Future	9943504	Pacific Basin	24-Jul-24	0.09
C. Christi LNG	Kool Kelvin	9654701	Pacific Basin	20-Jul-24	0.07
Cove Point LNG	GasLog Gladstone	9744025	Far East	29-Jul-24	0.08
Cove Point LNG	GasLog Seattle	9634086	GNL Escobar	18-Jul-24	0.01
Cove Point LNG	Vivit Americas LNG	9864667	Chita	10-Jul-24	0.08
Cove Point LNG	SM Kestrel	9917579	Dahej	21-Jul-24	0.08
Freeport LNG	Aristidis I	9862906	Pacific Basin	25-Jul-24	0.08
Freeport LNG	Diamond Gas Orchid	9779226	Yokkaichi	11-Jul-24	0.05
Freeport LNG	Energy Atlantic	9649328	Europe	14-Jul-24	0.06
Freeport LNG	Prism Agility	9810549	Rotterdam	24-Jul-24	0.07
Freeport LNG	Bishu Maru	9691137	Futtsu	24-Jul-24	0.06
Freeport LNG	Grace Dahlia	9540716	GNL Escobar	11-Jul-24	0.08
Freeport LNG	LNGShips Athena	9872949	Far East	04-Aug-24	0.08
Freeport LNG	Flex Vigilant	9862475	South Korea	09-Jul-24	0.08
Freeport LNG	Hellas Diana	9872987	Europe	09-Jul-24	0.08
Freeport LNG	Attalos	9862920	Japan	10-Jul-24	0.08
Freeport LNG	Orion Monet	9888766	Guangdong Dapeng	09-Jul-24	0.08
Freeport LNG	Orion Spirit	9956587	Pacific Basin	28-Jul-24	0.08
Sabine Pass LNG	Barcelona Knutsen	9401295	Europe	10-Jul-24	0.07
Sabine Pass LNG	BW Pavilion Vanda	9640437	Pacific Basin	21-Jul-24	0.06
Sabine Pass LNG	BW Tulip	9758064	Andres LNG	09-Jul-24	0.08
Sabine Pass LNG	Flex Endeavour	9762261	Singapore LNG	24-Jul-24	0.07
Sabine Pass LNG	GasLog Hong Kong	9748904	Far East	31-Jul-24	0.08
Sabine Pass LNG	GasLog Westminster	9855812	Swinoujscie LNG	11-Jul-24	0.08
Sabine Pass LNG	Hyundai Peacepia	9761853	Pyeongtaek	11-Jul-24	0.07
Sabine Pass LNG	LNG Adventure	9870159	China	09-Jul-24	0.08
Sabine Pass LNG	Patris	9766889	Pyeongtaek	21-Jul-24	0.07
Sabine Pass LNG	Rioja Knutsen	9721736	South Hook LNG	11-Jul-24	0.06
Sabine Pass LNG	Isabella	9874820	Far East	10-Jul-24	0.07
Sabine Pass LNG	GasLog Winchester	9876737	Pacific Basin	10-Jul-24	0.08
Sabine Pass LNG	Minerva Kalymnos	9869942	Pacific Basin	23-Jul-24	0.08
Sabine Pass LNG	Clean Resolution	9943475	Pacific Basin	17-Jul-24	0.09
Sabine Pass LNG	Global Energy	9845013	Tianjin LNG	14-Jul-24	0.08
Sabine Pass LNG	Kool Blizzard	9635315	Pacific Basin	25-Jul-24	0.07
Sabine Pass LNG	Condor LNG	9307205	Far East	02-Aug-24	0.06
Sabine Pass LNG	Kool Glacier	9654696	Europe	13-Jul-24	0.07
Sabine Pass LNG	BW ENN Crystal Sky	9383900	Zhuhai LNG	24-Jul-24	0.07
Sabine Pass LNG	Puteri Saadong	9937945	Huelva	13-Jul-24	0.08
Sabine Pass LNG	LNG Port Harcourt II	9690157	Europe	10-Jul-24	0.07

*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.

Power Play AWARDS

Presented by **ExxonMobil**



THANK YOU FOR SUPPORTING THE 2024 POWER PLAY AWARDS!

What started as a spark in 2019 has grown into a bright and vibrant flame as the Power Play Awards is in its sixth year of shining a light on the accomplishments of remarkable women and men who uphold the importance of supporting and empowering others in the workplace. They demonstrate how a mutually supportive environment can help support great business outcomes across all parts of the LNG and decarbonization value chains.

Thank you to everyone who has supported these awards over the years, especially to those who took the time to nominate candidates for the awards and to our international panel of judges who have the unenviable challenge of judging the nominations.

The finalists for this year's awards will be announced on August 12 and the winners of the Power Play Awards will be announced at a ceremony during the Gastech Exhibition and Conference in September.

ExxonMobil

Monthly US LNG Exports (MMt)

Period between 1 May 2024 and 30 June 2024, inclusively

LNG Journal

Elba Island LNG

Elba Island LNG produced at annualised nameplate capacity utilisation of 67pct and exported a total of four cargoes amounting to 0.28mmt during the report period of May and June. This was down 0.18mmt (-39pct) from the 0.46mmt shipped during the March-April period. Elba Island's annualised capacity utilisation for the report period, therefore, was also down by 43pp from 110pct during the previous report period. Notably, all but one of the plant's May-June shipments went to Europe, with India's Dahe terminal receiving a 0.08mmt cargo, too.

Calcasieu Pass LNG

Calcasieu Pass LNG increased its period-on-period exports. The plant shipped 1.65mmt during the report period, up 0.29mmt (21pct) from 1.36mmt during the March-April period. Annualised capacity utilisation thus also moved up by 16pp from 72pct in March-April to 88pct in May-June. Roughly 48pct of Calcasieu Pass shipments equating to 0.79mmt sailed for Europe during the report period with 0.47mmt of that share arriving in Germany.

Cameron LNG

Exports from Cameron LNG saw considerable negative period-on-period growth. The plant shipped 2.26mmt in May-June, down 0.52mmt (-19pct) from the 2.78mmt recorded during the previous period of March-April. Cameron LNG thereby operated at an annualised capacity utilisation of 90pct for the report period. This was down 21pp from 111pct in March-April.

Cove Point LNG

Cove Point LNG also decreased exports period-on-period albeit more moderately with shipments down by 0.12mmt (-11pct) to 0.93mmt in May-June from 1.05mmt during the previous period of March-April. In May-June, the plant thus continued to see output well above annualised nameplate capacity at 106pct, which was nevertheless down 14pp from 120pct during the previous period.

Freeport LNG

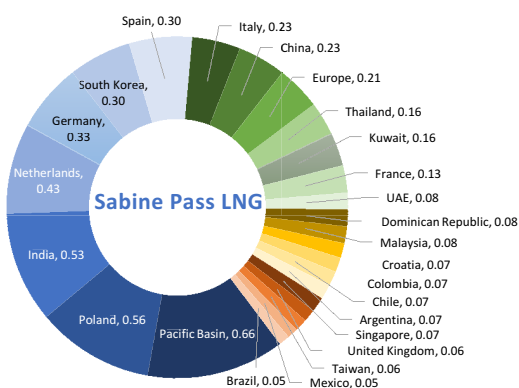
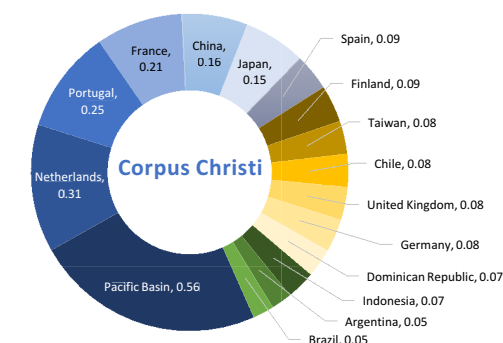
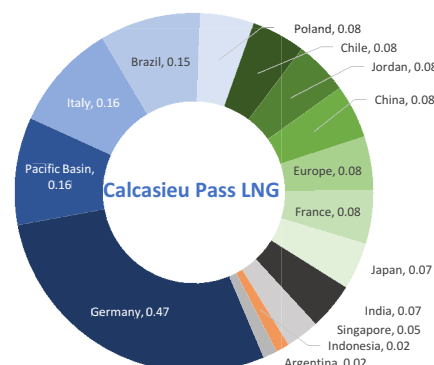
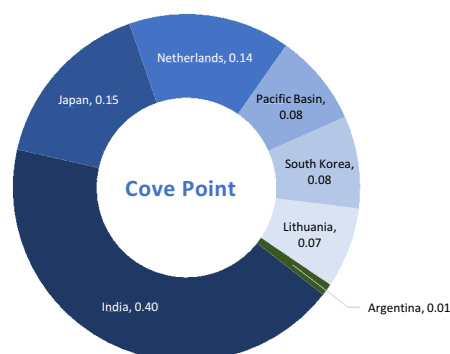
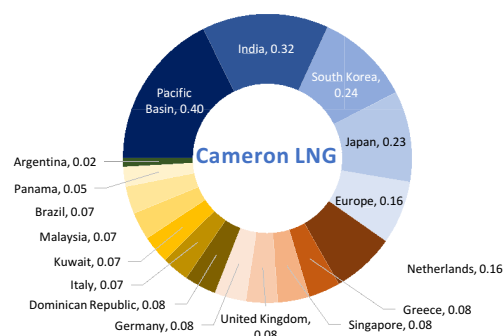
Freeport LNG boosted its LNG exports, with shipments up by 1.57mmt (127pct) to 2.80mmt during the report period. This pegged annualised capacity utilisation for the May-June period at 108pct, up 60pp from 48pct in March-April. During the previous report period of March-April, Freeport's LNG exports amounted to 1.23mmt. At the time of writing, our data did not show an ongoing cargo loading at the plant whilst the LNG Rosenrot and the WilForce were waiting at the plant's anchorage.

Corpus Christi LNG

Corpus Christi LNG saw a slight production decrease after a small increase during the previous report period, thus representing broadly stable output overall. The plant's exports in May-June were down by 0.06mmt (-2pct) to 2.38mmt from 2.44mmt in March-April. The plant's May-June shipments thus pegged report period utilisation at 95pct, down 2pp from the previous period. At the time of writing, the BW Pavilion Aranthra was waiting to load a cargo at the plant.

Sabine Pass LNG

Sabine Pass LNG's exports stood at 5.04mmt for the current report period, pegging capacity utilisation at 101pct, down 12pp period-on-period. The shipped volumes during May-June thus decreased by 0.62mmt (-11pct) from the 5.66mmt exported during March and April. Sabine Pass LNG's exports continued to be underpinned by shipments to Europe, followed by flows to the Far East and the Pacific more generally. The plant was loading LNG onto the Clean Cajun, the Santander Knutsen and the Ribera Duero Knutsen at the time of writing.



US LNG Exports (MMt) - Report Period

LNG Journal

Importers	2023												2024		Total
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Netherlands	1.48	0.98	1.15	1.13	0.91	1.02	0.78	0.98	0.91	0.99	1.21	1.16	0.80	0.65	14.15
France	1.08	0.99	0.48	0.69	0.68	1.15	1.31	0.91	0.69	1.21	1.32	0.83	0.34	0.22	11.90
Japan	0.66	0.59	0.95	0.67	0.70	0.43	0.57	0.57	0.43	0.50	0.63	0.53	0.82	0.27	8.32
South Korea	0.26	0.29	0.45	0.75	0.52	0.59	0.56	0.74	0.48	0.38	0.54	0.36	0.64	0.22	6.78
Spain	0.29	0.31	0.77	0.42	0.24	1.08	0.30	0.33	0.82	0.28	0.43	0.29	0.18	0.36	6.10
United Kingdom	0.54	—	—	0.08	0.15	0.61	1.07	1.22	0.93	0.72	0.30	0.15	0.16	0.14	6.07
India	0.17	0.32	0.47	0.37	0.55	0.28	0.16	0.38	0.24	0.27	0.31	0.44	1.01	0.39	5.36
Germany	0.28	0.33	0.39	0.47	0.36	0.37	0.30	0.46	0.30	0.34	0.40	0.38	0.66	0.30	5.34
China	0.12	0.44	0.78	0.32	0.24	0.39	0.55	0.31	0.15	0.40	0.29	0.31	0.56	0.15	5.01
Italy	0.41	0.31	0.32	0.47	0.48	0.16	0.48	0.45	0.54	0.31	0.23	0.29	0.23	0.23	4.91
Turkey	—	—	—	0.04	0.12	0.14	0.69	0.83	0.95	0.44	0.23	0.08	—	—	3.52
Poland	0.39	0.40	0.08	0.24	0.23	0.40	0.23	0.22	0.22	0.23	0.07	0.08	0.33	0.39	3.51
Taiwan	0.23	0.14	0.29	0.29	0.26	0.14	0.13	0.14	0.15	0.29	0.22	0.28	0.14	—	2.70
Dominican Republic	0.24	0.15	0.17	0.23	0.15	0.15	0.18	0.07	0.23	0.13	0.16	0.28	0.11	0.24	2.49
Belgium	0.08	0.16	—	0.08	0.19	0.54	0.22	0.31	0.30	0.22	0.15	0.08	—	—	2.33
Thailand	—	0.08	0.15	0.31	—	0.15	0.16	0.08	0.16	0.23	0.30	0.39	0.16	—	2.17
Pacific Basin - TBC	—	—	—	—	—	—	—	—	—	—	—	—	0.08	2.02	2.10
Portugal	0.24	0.08	0.23	0.16	0.13	0.16	0.08	0.06	0.14	0.14	0.06	0.16	0.14	0.11	1.89
Brazil	0.05	0.30	—	0.07	0.12	0.10	0.08	0.08	0.23	0.11	0.07	0.05	0.10	0.27	1.63
Croatia	0.02	—	0.21	0.08	0.23	—	0.23	0.05	0.24	0.08	0.22	—	0.07	0.08	1.51
Colombia	0.10	—	—	0.07	0.15	0.16	0.09	0.16	0.16	0.12	0.18	0.08	0.08	0.07	1.42
Chile	0.15	0.12	0.21	—	0.08	—	—	—	0.08	0.07	0.15	0.16	0.15	0.08	1.25
Lithuania	0.15	—	0.15	0.15	0.22	0.15	—	0.07	0.02	0.16	0.08	—	—	0.07	1.22
Singapore	—	0.22	—	0.07	0.19	0.07	—	—	0.08	0.15	0.16	0.08	0.13	0.07	1.22
Greece	0.16	0.08	—	0.10	0.08	—	—	0.25	0.16	0.06	0.08	—	0.13	0.07	1.17
Kuwait	0.08	0.22	0.15	0.07	0.16	—	—	—	—	0.08	0.15	—	0.16	0.07	1.14
Argentina	0.32	0.26	0.11	—	—	—	—	—	—	—	—	0.06	0.18	0.14	1.07
Finland	0.15	0.05	0.07	0.16	0.16	—	0.08	0.07	—	—	—	0.08	0.08	0.01	0.91
Panama	0.08	—	0.08	—	0.08	—	0.07	0.08	0.08	0.02	0.05	0.08	0.04	0.05	0.71
Bangladesh	0.08	0.08	—	0.15	—	—	0.08	0.07	—	—	0.08	0.07	—	—	0.61
Europe - TBC	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Jordan	—	—	0.08	—	—	—	—	—	—	—	0.08	0.08	0.08	0.07	0.39
Jamaica	—	—	0.04	—	0.08	—	—	—	0.08	0.04	—	—	—	—	0.24
Malaysia	—	—	—	—	—	—	—	—	—	—	—	—	0.15	—	0.15
Philippines	—	—	—	—	—	0.06	0.08	—	—	—	—	—	—	—	0.14
Mexico	—	—	—	—	—	0.08	—	—	—	—	—	—	0.05	—	0.13
Indonesia	—	—	0.04	—	—	—	—	—	—	—	—	—	0.02	0.07	0.13
UAE	—	—	—	—	—	—	—	—	—	—	—	—	0.08	—	0.08
Egypt	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Pakistan	—	—	—	—	—	—	—	0.08	—	—	—	—	—	—	0.08
Puerto Rico	—	—	—	—	—	0.06	—	—	—	—	—	—	—	—	0.06
OPT LNG Hub	—	—	0.04	—	—	—	—	—	—	—	—	—	—	—	0.04
Grand Total	7.81	6.90	7.86	7.64	7.46	8.44	8.48	8.97	8.77	7.97	8.15	6.83	7.86	7.48	110.62



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