

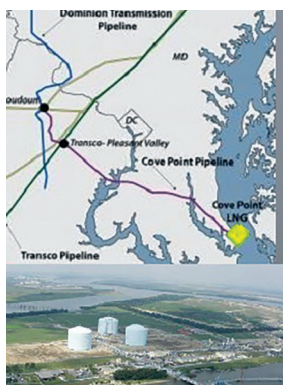
LNG *North America*

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Shell tanker lifts 1st LNG cargo from Cove Point liquefaction plant

“Gemmata”, a tanker with 138,000 cbm capacity operated by Shell Shipping, has set sail from Cove Point LNG export facility in Maryland, lifting the first cargo. The tanker departed just after midnight on March 2, awaiting orders, according to shipping data which indicates Shell wants to sell it into the spot market.



As a leading portfolio player, Shell had supplied Dominion with the natural gas needed for liquefaction during Cove Point's commissioning process and consequently lifted the first LNG cargo. The destination of this much-observed cargo is still uncertain, though speculation abounds that it might be sold to high-priced markets in Northern China or Japan.

According to AIS shipping data, the Shell-chartered tanker Maran Gas Delphi had been carrying a

shipment from Nigeria's Bonny LNG export plant to Chesapeake Bay, with Cove Point as its final destination. Apparently, Bonny LNG has been used to support cool-down operations at Cove Point, adding to the feed gas sourced from American shale gas plays.

Output sold to Japan and India

In the weeks ahead, Dominion will be producing LNG for a joint ven-

ture of Sumitomo and Toyko Gas as well as the US affiliate of Gas Authority of India (GAIL), underpinned by 20-year take-or-pay contracts.

Combined, the facility is slated to send up to 1.8 billion cubic feet of LNG to Japan and India. These longterm offtake agreements make the Cove Point liquefaction facility a fairly stable project with a stable revenue stream.

Financing spearheaded by BoA

Financing of the \$3.8 billion Cove Point venture was primarily supported by the Bank of America (BoA). As the lead partner in a consortium, BoA is part of a consortium of banks that is lending Dominion up to \$4 billion to finance several planned gas infrastructure projects. In June 2013, Bank of America also underwrote \$275 million to contribute to the

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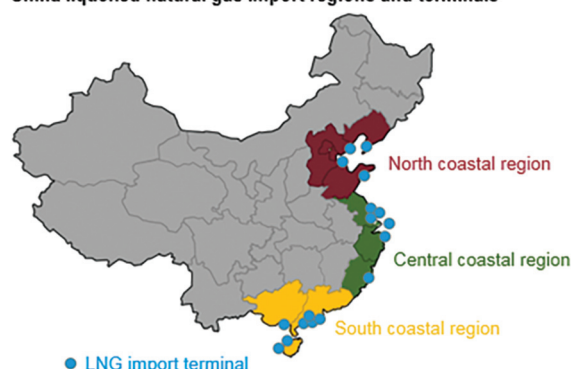
US sellers strike lucrative deals with China

American shale gas exporters are beefing up their business with Chinese gas buyers: In February 2018, Cheniere and CNPC signed two contracts for longterm LNG offtake from Sabine Pass and Corpus Christi, a new facility under construction in Texas. These deals were preceded by preliminary export agreements from the Delfin LNG project off Louisiana's coast, and the proposed Alaska LNG project.

Over the past two years, Export volumes of US LNG to China have increased significantly, rising from 17.2 billion cubic feet (Bcf) in 2016 to currently over 103 Bcf. Today, China accounted for nearly 15% of U.S. LNG exports last year, behind only Mexico and South Korea.

Statistics, issued by the Chinese government, as well as IHS Markit data show Chinese LNG imports averaging 5 billion cubic feet per day (Bcf/d) in 2017, exceeded only by Japanese imports of 11 Bcf/d. Beijing's drive to reduce air pollution by switching from coal- to gas-fired power generation has led to a 1,6 Bcf rise, or 46%, in LNG imports over the course of last year, with monthly imports reaching 7.8 Bcf/d in December.

China liquefied natural gas import regions and terminals



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capital expense of the Dominion Cove Point facility.

Construction of the Cove Point liquefaction facility began in October 2014, following more than three years of federal, state and local permit reviews and approvals. With a cost of \$4 billion, it is the largest construction project ever thus far for Maryland and for Dominion Energy. Construction has involved more than 10,000 craft workers and a payroll of more than \$565 million.

Beset by slight delays, Cove Point has now entered service in early March although it was initially targeted to start shipping cargoes in the fourth quarter of 2017. The operator stated in late January the 5.25 mtpa liquefaction facility had been cooled down



The prolific Marcellus and Utica Shale increased their combined share in total US gas production from 2% in 2008 to currently 27%

- EIA

to produce LNG after feed gas had been introduced in December.

Shale gas sourced from Appalachian States

Most of the feedgas for the Cove Point liquefaction terminal is being produced in the three Appalachian states - Ohio, Pennsylvania, and West Virginia -, where supply is exceeding regional demand and keeps pushing down prices.

The prolific Marcellus and Utica Shale increased their com-

bined share in total US gas production from 2% in 2008 to currently 27%, according to EIA figures, while gas consumption in the Appalachian region has grown due to the power sector, but to a much lesser extent.

Appalachian production has been displacing Gulf Coast supply, freeing additional U.S. production for export by pipelines and as LNG.

Direct pipeline interconnections are at advanced planning stages for Appalachian natural gas

to reach the Cove Point Liquefaction facility which is designed to process an average of 0.75 Bcf/d of natural gas for export.

The project vehicle company for Cove Point is a unit of Dominion Energy, one of the largest energy producers in the US, with a portfolio of about 25,600 MW of generation, 15,000 miles of natural gas transmission pipelines, an 6,600 miles of electric transmission lines.

Waiting in the wings

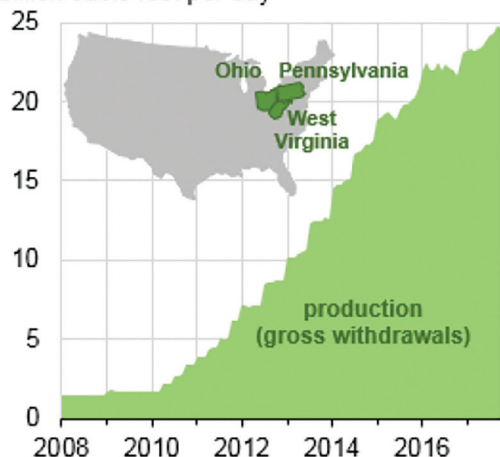
At least one other LNG export plant is scheduled to come on stream before the end of 2018.

The Elba Island facility in Georgia will start up six of the 10 small-scale, modular Trains, each with a capacity of 0.25 mtpa.

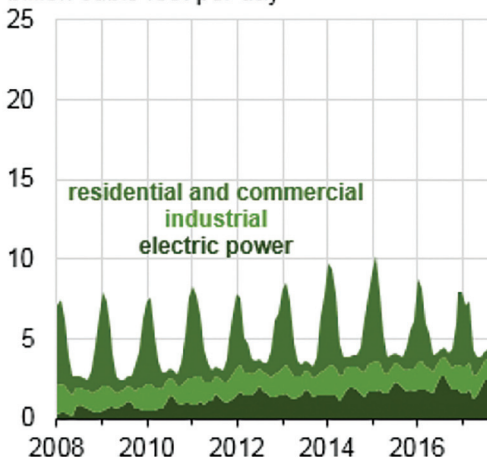
The first liquefaction Train at Freeport LNG in Texas with 5.1 mtpa is then expected to come online by the end of 2018 or early 2019. Train 5 and 6 at Sabine Pass is also slated to come onstream next year, all well as two Trains at Corpus Christi with around 9 mtpa of output.

Furthermore, three Trains at Cameron LNG with a capacity of 14.95 mtpa are anticipated to enter service in 2019.

Natural gas in Ohio, Pennsylvania, and West Virginia (Jan 2008-Oct 2017)
production
billion cubic feet per day



consumption
billion cubic feet per day



continued from page 1

The transition away from coal in the power sector is accelerating as Chinese buyers are getting bet-

ter terms for importing pipeline gas from Russia while more price-sensitive buyers have turned to spot LNG.

Regas capacity to reach 11.2 Bcf/d by 2021

To accommodate the growing number of LNG vessels, China's import infrastructure keeps expanding as well: At total of 17 LNG import terminals are scattered at 14 ports along the Chinese coastline, with a combined regasification capacity of 7.4 Bcf/d. Annual

utilization rates at LNG import terminals averaged about 50% from 2013 through 2016, but the rate increased to 69% in 2017.

Colder-than-normal winter weather increased natural gas demand and led LNG import terminals in the northern and central coastal regions of China to exceed nameplate capacity by 30% and 20%, respectively, in December 2017, according to government figures.

Economics and environmental policies will keep driving up Chi-

nese gas imports, while domestic production of conventional and shale gas also needs to expand to help meet rising demand.

China's LNG import capacity is expected to reach 11.2 Bcf/d by 2021, once capacity expansions at existing terminals and new terminals currently under construction are completed. In addition, China's imports of pipeline gas is also set to increase, especially as the Power of Siberia pipeline from Russia comes online by the end of 2019.

LNG North America

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US-Mexican gas interconnector launches open season

Paso Norte Pipeline Group (PNP), the developer of a new US-Mexico interconnector, has launched a 30 day open season inviting shippers to express interest in delivering natural gas from the Permian Basin in the western part of Texas to under-supplied markets in Central and Western Mexico. The bidding process and consultations will last until March 5, 2018.

"It is Paso Norte's intension to match US shippers with corresponding natural gas marketers in Mexico," PNP said when kick-starting the open season. "This pipeline will link US natural gas production from the prolific Permian Basin, via WaHa, to underserved markets in Central, Western Mexico, terminating at the El Encino hub in Chihuahua, Mexico."

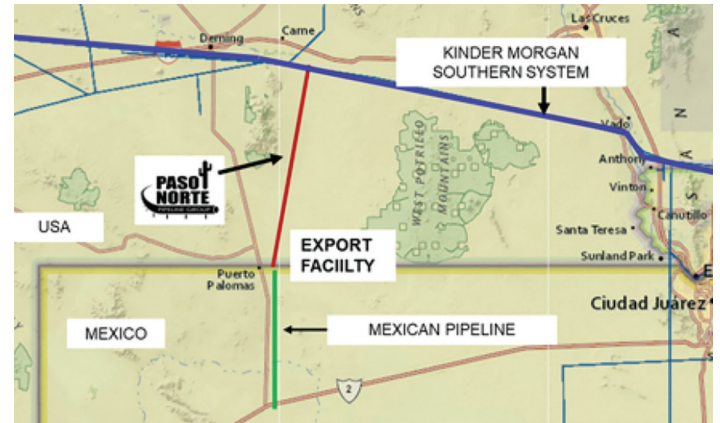
Legally speaking, the 33-mile US Paso Norte Pipeline is considered a greenfield lateral pipeline project by federal regulators and will interconnect with a corre-

sponding 32-inch pipeline at the Mexican Border.

Link to with Kinder Morgan's El Paso

The Permian Basin is one of the largest US shale oil and gas reservoirs, stretching from West Texas to the southeast to the US state of New Mexico. Shale gas produced at the Permian will then be transported through the planned 32-inch Paso Norte pipeline from Luna County, New Mexico to the Mexican Border.

On route, Paso Norte will in-



terconnect with Kinder Morgan's El Paso Natural Gas Southern Pipeline System (WaHa to California) at Florida Station in New Mexico. From there onwards, it will be built as a dedicated pipeline stretching all the way to the Mexican Border near the Columbus-Palomas, Chihuahua International Crossing.

In terms of timing, the first pipeline link, stretching from the Permian to Apache Power Park

in Chihuahua, is scheduled to be at an advanced stage by 2019.

Stage-2 construction to start in early 2020

The second stage of the pipeline will continue from Apache to the Encino Hub in Chihuahua City, from where it interconnects with other pipelines that supply Chihuahua City, such the Encino-Topolobampo pipeline and Encino-Guadalajara link.

Slowdown of Australia's next wave of LNG leaves room for US cargoes

Bogged down by gas shortage and high electricity prices, Australia is re-evaluating the scale and speed of its next wave of LNG export projects. Any slow-down in project development would leave more room for US spot LNG cargoes finding a home in high-prices Asian markets.

Queensland, Australia's power house on the east coast, is on the brink of domestic gas shortages after overzealous exporters had started to ramp up east coast LNG exports excessively, leaving little supply for the domestic market. Wholesale prices for natural gas and electricity skyrocketed as a con-

sequence, prompting the federal government to compel upstream companies to sign 'voluntary' commitments of earmarking a certain quantity of their gas production for domestic market.

"Structural adaptation of the economy," becomes a necessity as Australia's exposure to interna-

tional gas prices increases through massive LNG exports, the IEA's executive director Dr. Fatih Birol commented when presenting the 'Australia 2018 Review' in Cranberra.

Once favourable long-term industry contracts and gas purchase agreement expire in the coming years, consumers in Queensland "can no longer benefit from prices that are below international prices," analysts warned.

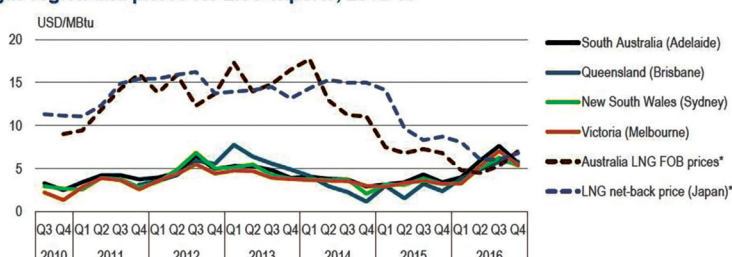
Many legacy gas contracts for domestic supply have already expired between 2010 and 2016, several contracts were replaced by shorter and more expensive one, causing a rise in wholesale and retail power prices. Wholesale gas price for large industrial con-

sumers on the east coast of Australia averaged A\$8 per gigajoule, or US\$6/GJ, in 2015 - a more than 50% increase from just over A\$5/GJ in 2010.

"Some buyer have seen even larger increases over shorter timeframes," analysts stated, referring to consumers having to compete with the LNG export plants and power generation for gas, which is likely to "continue to put upward pressure on gas prices."

Prices on domestic gas hubs are aligning with LNG netback prices, and occasionally exceeding them (see graph). Though trading hub prices represent only a small fraction of the total gas sold on the domestic market, they provide a viable indication for Australia's domestic gas price development.

Wholesale natural gas prices in trading hubs in Australia's eastern gas region and prices for LNG exports, 2010-16



*FOB (free on board) prices include spot LNG prices to the world. Netback prices include spot and contracted LNG (minus cost of transport) to Japan.

Trump's \$1.5-trillion US infrastructure plan helps speed up gas exports

US President Donald Trump has made reforms of the environmental permitting process for pipelines a key part of his \$1.5 trillion infrastructure plan. Speeding up regulatory approvals will help fast-track both gas export pipelines to Mexico and interstate pipelines to transport cheap, domestic shale gas to the second wave of US LNG export projects.

The plan stipulates that environmental reviews for pipelines must be conducted in no more than 21 months, which implies streamlining National Environmental Policy Act's requirements and potential reforms to the Clean Water and Clean Air acts.

Enforcing strategic pipeline projects

Cutting short the permitting process is one of four main goal of Trump's infrastructure plan, next to investments in both federal and rural infrastructure and improving workforce training. Eager to push through strategic pipeline project, Trump proposes to authorize the US Interior Secretary to single-handedly approve pipelines that cross national parks - without Congress approval.

Analysis said the proposed changes, if enacted, would de-

liver "projects in a less costly and more time effective manner by creating a new, expedited structure for environmental reviews and delegating more decision-making to States and enhancing coordination between State and Federal reviews."

The infrastructure plan is, however, facing fierce opposition from Democrats and environmentalists so it is still unclear how much of Trump's far-reaching proposals will ultimately be enacted.

Pledge to make America more competitive

Energy exports has been high on Trump's political agenda for months, so it comes as no surprise that the latest White House document on the President's infrastructure plan makes direct mention of investment in "water resources, energy and rural infrastructure."



Flow chart, supposedly showing all the many permissions needed to build a highway.

Seeking to "address more than traditional infrastructure," Trump pledged the federal government would contribute \$200 billion to the package.

"The reforms set forth in my plan will strengthen the economy,

make our country more competitive, reduce the costs of goods and services for American families, and enable Americans to build their lives on top of the best infrastructure in the world," he stated. ■

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Cap at Groningen leaves Europe reliant on North Steam, spot LNG

Imposing a more stringent output cap on the Dutch Groningen field, Europe's largest onshore gas reservoir, due to another earthquake in the area, would leave Europe dependent on importing more natural gas from Russia through the Nord Stream pipeline, Wood Mackenzie warns, saying "upside potential from Norway will be limited until 2019." Importing spot cargoes with US LNG could come to rescue.

Following an earthquake north of Groningen near the town of Zeerijp with a force of 3.4 on the Richter scale in early January, Netherlands's mining association Staatstoelicht op de Mijnen (SoDM) urged the Dutch Ministry of Economic Affairs (MEA) late Thursday to impose a further output cap. If approved, this would reduce the annual permitted production at Groningen to a maximum of 12 bcm per year over the course of the next four years.

The new cap would cut annual production from Groningen - once

the key swing supplier in winter - by nearly half from the last cap of 21.6 bcm. The proposed further reduction in output represents a cut of around 70% since the first cap was imposed in 2014.

Pipeline gas from Norway, Russia or more LNG?

Replacing 10 bcm of Groningen gas production, which equals about 2% of the volume of the European gas market, will not prove to be an easy task, according to Wood Mackenzie Gas & LNG analyst Massimo Di-Odoardo. For once, ramp-

ing up gas imports from Norway significantly will not be possible until new gas production from Aasta Hansteen is being commissioned.

"Material additional imports from Russian into north-west Europe are dependent on the

development of Nord Stream 2, as the Yamal-Europe and Nord Stream pipelines are currently running close to full capacity," he said. "Conversely, Europe could benefit from a rebalancing global LNG market that will result in more LNG available for imports through to 2020."

But regardless of whether alternative supply will be available, the pace of reducing low-calorie gas production at Groningen will depend upon the ability of transmission system operators in north-west Europe to switch customers to high-calorie gas. "It is likely that Groningen's production will reduce gradually over the next four years, limiting the impact on security of supply and prices," Di-Odoardo forecast.

Output cap reduces field's value and Dutch treasury take

A tighter production cap will impact on the remaining value

of the Groningen field, estimated at \$19 billion estimated by Wood Mackenzie prior to SoMD's statement on February 1. Mandating new cuts in the production cap would be significant for partners in Groningen's operating consortium, which includes Shell (30%), ExxonMobil (30%) and Dutch state participant Energie Beheer Nederlands (40%).

"Groningen has been a dependable source of cash flow for over 50 years for Shell and ExxonMobil, and ranks in both their top 10 assets globally by value," comments Wood Mackenzie North Sea Upstream analyst Jamie Thompson.

"However, it is the effect on the Dutch state that will be felt most acutely," he added. "A cap of 12 bcm per year could diminish the remaining government take by over \$5 billion over the life of the field, and is further compounded by the remaining value Energie Beheer Nederlands stood to realise."



Canadian imports of US gas rise 25%, trigger 33% jump in prices

Prices for US gas flowing to the Canadian provinces of Ontario and Quebec have risen by a third over the first nine months of 2017, pushed up by a 25% rise in imports. Northbound cross-border pipeline deliveries hit 693 billion cubic feet (Bcf) from January through to the start of October, up from 556 Bcf in the previous year, according to the US Department of Energy (DoE).

"Prices for US gas flowing into Canada jumped to an average US\$3.09 per million British thermal units at the international boundary for the first nine months of 2017 from \$2.32/MMBtu for the same period the year before," the DoE report reads.

Infrastructure constraints

Though Canadian gas export to the US remained the biggest volume block in the North American, they recorded only sluggish 1% growth in first three-quarters of 2017, up

from 2.265 Tcf to 2.302 Tcf.

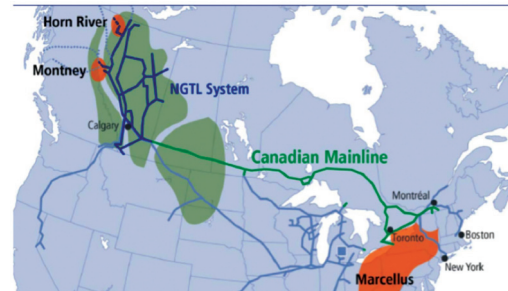
Infrastructure constraints were partly responsible for the slow growth in Canadian gas exports. Works for expansion and maintenance had reduced gas flows by 2 Bcf/d on TransCanada's Alberta and British Columbia (BC) supply collection network, Nova Gas Transmission Limited (NGTL).

Once works for NGTL expansion were completed, increasing the network's capacity, TransCanada introduced a deep toll discount on its long-distance gas mainline

from Alberta to Ontario, Quebec and U.S. border crossings.

Prices achieved by Canadian pipeline exports, recovered from previous lows to reach 2017 first nine-months average of \$2.53/MMBtu, rebounding 30% from last year's low of \$1.95/MMBtu.

Exporters of Canadian gas consistently underachieve price aver-



ages of received by their American rivals, largely because deliveries of Canadian gas gets distributed to widely varying markets across the United States while US exports flow to Canada's high-priced markets in Ontario and Quebec."

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China caps thermal coal price following strong winter demand

China's National Development and Reform Commission (NDRC) imposed a cap on thermal coal prices imports through Qinhuangdao port at RMB750/t from 5 February. Strong demand due to colder-than-normal weather in January had propelled up prices to a record RMB780/t for FOB Qinhuangdao 5500 kcal/kg coal. According to WoodMackenzie estimates, the new price cap will have an impact from now until mid-March.

Demand for thermal coal is expected to fall in February during the Chinese New Year holiday. But supply will also fall for the same reason. After the holiday period, demand will quickly return and restocking by gencos will add additional demand.

"Without the price cap, we do not expect prices for FOB QHD 5500 will drop below RMB750/t until the middle of March, when the need for heating coal disappears," said Wood Mackenzie's Northeast Asia senior consultant, Zhai Yu.

The price cap will be difficult to implement. "The measure impacts thermal coal prices, but it is only the power industry that has called for coal prices to be restricted," he cautioned.

As electricity tariffs are fixed, high coal prices resulted in big losses for the gencos in 2017. Non-power industries aren't so bothered by coal price fluctuations as their product prices are market-driven and can adapt accordingly. For example, the cement industry increased its prices by over 30%

in the second half of 2017.

As the NDRC has asked railway operators to prioritize transporting coal for power use in the winter, stability of supply is more important than price to non-power industries. So even if the NDRC caps coal prices, non-power coal users will be prepared to pay more to miners or traders to receive their supply. FOB Qinhuangdao thermal coal price, RMB/t.

Price cap to be felt after Lunar New Year

"The price cap will have a greater impact after the Chinese New Year holiday. With the national holiday starting on 15 February, spot coal purchases are currently limited," Zhai Yu explained. "However, once the holiday period is over, thermal coal demand will rapidly return to normal, especially since gencos have very low inventories."

For example, the six largest coastal gencos only have coal stocks to last for around 10 days of consumption. Last year, restocking demand caused a rise of more than RMB100/t after the

Chinese New Year holiday.

"We don't expect the NDRC will tolerate prices rising above RMB800/t this year. We believe the NDRC wants to pilot this price cap mechanism before the Chinese New Year so that only a small volume of high-priced coal is impacted," Zhai Yu forecasts. "It will then take what it has learned from this pilot to try to stabilize the market if there is a large gap between supply and demand after the holiday."

Government price-setting disturbs investors

China's coal market has increasingly become policy-driven over the past few years. Supply-side reform, stringent environmental restrictions on production, transportation and consumption of coal, and frequent government intervention in price-setting are puzzling market participants and investors alike.

"This may be a key reason why the price management scheme introduced last year has not been very successful and supply recovery remains muted," Zhai Yu suggested.

Time will tell how successful raising the scheme's upper boundary of RMB600/t by 25% will be in controlling volatility and stabilizing the market. Meanwhile, seaborne suppliers will continue to benefit from China-driven high prices. ■

"Challenging" economics limit enthusiasm for US LNG

Hard-nosed Chinese buyers are sniffing at the economics of US LNG supply deals, trying to find cheaper deals elsewhere.

Liquefaction and shipping from the US to China involve large fixed costs, and US LNG developers also have to compete with the threat of lower cost expansions in Qatar and Australia, the current LNG export giants; and most notably, US suppliers face stiff competition from Russia," said Hugo Brennan, Asia analyst, Verisk Maplecroft.

Still, the deep and liquid nature of the US gas market allows LNG developers to offer their customers more flexibility than what is typically the norm. For example, US cargoes have been sold without destination restriction, allowing buyers to sell-on their purchases when their demand structure changes. According to Mr Brennan, "these benefits could be attractive to Chinese players seeking to grow their global LNG position."

Stepping up spot LNG purchases, combined with some flexible long-term supply deals, could help reduce China's reliance on gas imports that transit strategic choke-points, most notably the Strait of Hormuz (account for approximately 7% of Chinese gas imports) and the Strait of Malacca (16%). ■



Coal terminal at Qinhuangdao maritime port

At the Core of LNG

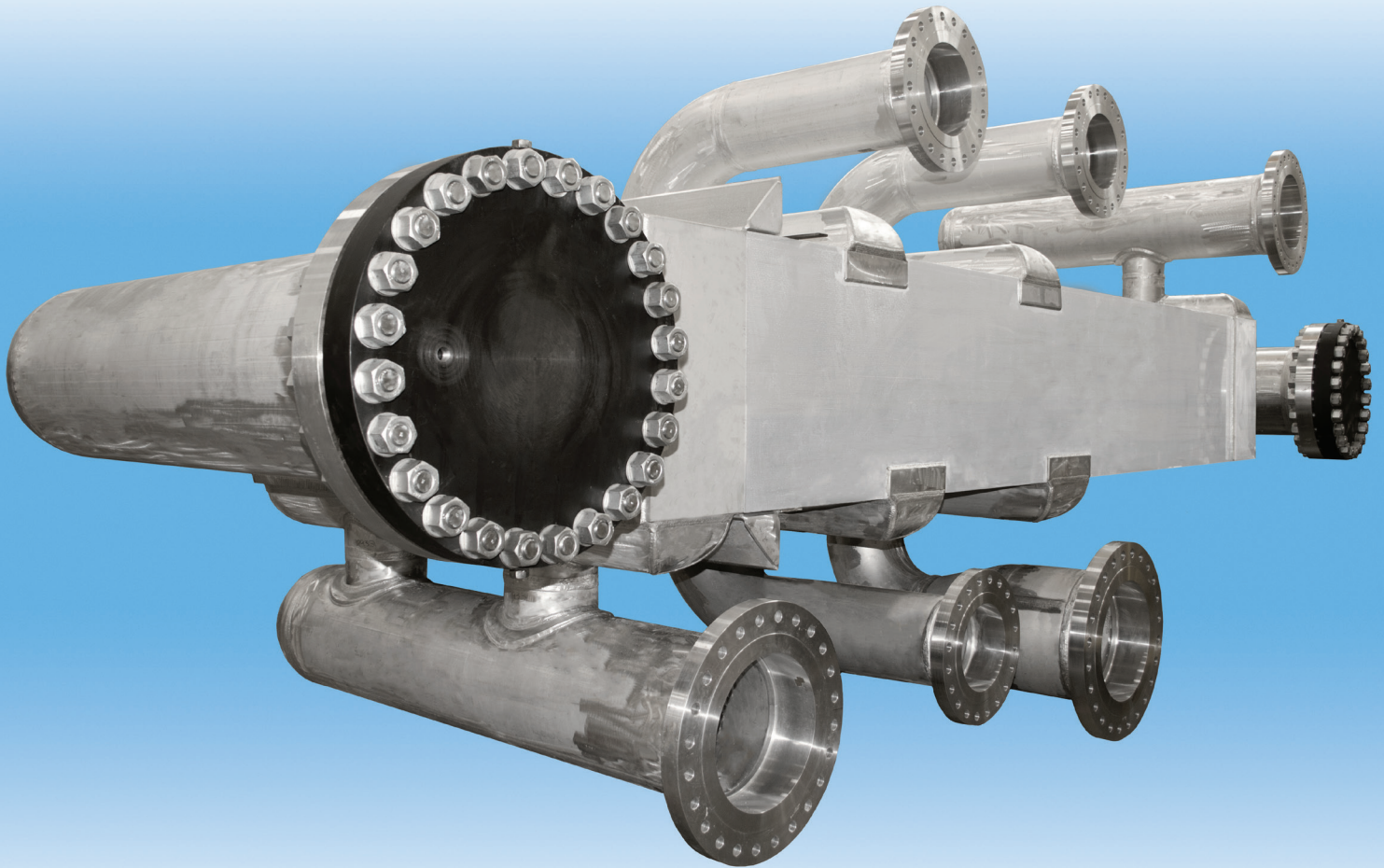


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Pembina makes progress on Jordan Cove project in Oregon

Cheniere Pembina Pipeline Corp., the Canadian energy infrastructure company, said it was making progress with a range of natural gas projects in North America, including the Jordan Cove LNG export plant planned for the northwest US state of Oregon.

"Pembina has committed a 2018 capital budget of C\$135 million to progress Jordan Cove to a final investment decision, pending the receipt of the necessary regulatory approvals and other requirements," the company said in its earnings statement.

Jordan Cove officially filed its application with the US Federal Energy Regulatory Commission (FERC) in September 2017 with the company expecting an outcome during the second half of 2018. If approved, Jordan Cove would be constructed at Coos Bay in Oregon to produce 7.8 mtpa of LNG for export to Asian markets. The plant would be the only LNG export facility on the US West Coast and

proposals include the related Pacific Connector Gas Pipeline to transport natural gas from the Malin Hub in southern Oregon to the Coos Bay export plant.

Pembina said completing the Veresen acquisition in October 2017 had established it as a leading North American energy infrastructure player, given that it Pembina inherited the US Jordan Cove LNG project. Pembina gave its latest project updates as it posted fourth-quarter and full-year earnings of C\$445 million (US\$350M) and C\$891 million, which were respectively 240% and 91% higher than in the previous year.

"The acquisition of Veresen

supports the continued execution of Pembina's long-term strategy by increasing our positioning to long-life economic hydrocarbon reserves, further integrating and enhancing our service offering including adding an entire natural gas value chain, extending our reach into the US," Pembina stated, adding that during 2017 it placed into service \$4.8 billion of new projects.

Among the 10 or so development ventures it is working on, Pembina's board approved building its Prince Rupert liquefied

petroleum gas export terminal located on Watson Island, British Columbia. The company said the expected capital cost is \$250 million with an anticipated in-service date of mid-2020, subject to regulatory and environmental approvals.

The port of Prince Rupert on the Pacific Coast of Canada had been a favoured site for several LNG export projects, now largely cancelled because of the government's tougher regulatory rules that were brought in at the time of an industry downturn. ■



Sempra still plans Mexican outlet for exports from Cameron LNG

Sempra Energy, the California-based utility transforming the US Cameron LNG terminal into an export plant, is still planning an additional Mexican LNG export venture with national Petroleos Mexicano (Pemex), first studied three years ago. IEnova and Pemex refloated the idea of reconfiguring the Costa Azul terminal Mexico's Pacific coast to export US pipeline gas to markets in Asia and South America.

Mexico is a net natural gas importer from the US and the biggest regional customer for LNG. The Costa Azul terminal is isolated from Mexico's main gas

pipeline network and only has a feeder gas line to other interconnections. However, the nearby Rosarito pipeline links directly to two border-crossing points and

indirectly to a third with interconnections with pipelines near San Diego.

Lately, at IEnova's latest annual results presentation, Sempra and Pemex were again pursuing the Mexican export plan: "We received the three major Mexican permits that are required and we are moving forward with discussions to better understand demand and size the project appropriately," said IEnova Vice President Tania Ortiz Mena. "We expect to make substantial progress on defining the project throughout this year."

Sempra had built and commissioned Coast Azul LNG in 2008 to

receive imports the Tangguh export project in Indonesia, operated by BP of the UK, at a time when the US still required LNG imports before the shale-gas boom. When completed, Costa Azul was the first LNG import terminal to operate on the West Coast of North America and is one of three such facilities in Mexico. The other two are at Manzanillo on the Pacific Coast and Altamira on the Gulf of Mexico.

Manzanillo mainly receives cargoes from Peru LNG and Sabine Pass in the US, while Altamira receives Sabine Pass shipments and cargoes from countries such as Nigeria. ■



Costa Azul LNG terminal, Mexico

US LNG exports fall

US LNG exports numbered three carrier-loads from the Sabine Pass export plant in Louisiana in the past week, down from six in the previous week, while a fourth vessel was lifting a cargo at the facility, according to the US Energy Information Administration weekly natural gas report. The EIA report noted that the slow-down was matched by lower natural gas pipeline deliveries to the Sabine Pass facility amounting to an average 2.2 billion cubic feet per day, down 33 percent. Dominion Energy, the owner of the Cove Point liquefaction facility in Maryland, is close to starting commercial operations at its plant on Chesapeake Bay.

Shell cargo heads to Maryland

The 138,100 cubic metres capacity vessel "Gemmata", operated by Shell Shipping, is scheduled to arrive on March 1 at the US Cove Point export plant in Maryland, owned by Dominion Energy, after previously docking at the Peru LNG plant at Pampa Melchorita.

FSRU on route to Singapore

Exmar, the Belgian LNG fleet owner and project developer, said its floating storage and regasification unit (FSRU) barge delivered from the Wison shipyard in China at the end of 2017 has left the facility in Nantong and was now bound for Singapore. "There the unit will undergo site specific modifications before departing to its project destination to commence its long-term employment mid-2018 in line with its time charter commitments," said Antwerp-based Exmar. The vessel is the world's first new-build regasification barge and was ordered on a speculative basis. "More information on the charterer and the location will be released at a later stage," said Exmar.

Cheniere scrapes to a profit, though shipping 200 cargoes

LNG exporter Cheniere Energy, owner and operator of the Sabine Pass plant in Louisiana and developer of the Corpus Christi facility in Texas posted a full-year loss though edged towards a fourth-quarter profit after shipping 200 cargoes in 2017.

Cheniere reported a narrower annual net loss of \$393 million compared with losses of \$610M the previous year. The Houston-based company said it was bringing its losses under control primarily due to increased income from operations as more liquefaction Trains came on stream, now numbering four with 18 million tonnes per annum of LNG production.

Advanced its business in early 2018, Cheniere entered two LNG Sale and Purchase Agreements with PetroChina, a subsidiary of China National Petroleum Corp. for the sale of 1.2 mtpa of LNG through 2043. It also signed a 15-year sales deal with global commodities company Trafigura for 1 mtpa beginning in 2019.

Cheniere Chief Executive Jack Fusco said 2017 was a breakthrough year for Cheniere and

2018 had gotten off to a robust start: "In 2017, we demonstrated our commitment to execution and operational excellence by bringing the third and fourth Trains at

Sabine Pass online ahead of schedule and on budget, fulfilling our obligations to our foundation customers, and successfully marketing and delivering portfolio LNG volumes," he said.

More than 200 cargoes were produced, loaded, and exported from the Sabine Pass in 2017 and around 300 shipments since it started operations in February 2016.

"Financially, we delivered on revised guidance and strengthened



Cheniere's Corpus Christi LNG site

the balance sheets across our structure. Strategically, we have made significant recent progress toward FID for Train 3 at Corpus Christi by entering into three long-term SPAs," Fusco added.

"As we begin 2018, we are committed to capitalizing on these successes by continuing to supply LNG safely and reliably to our customers, progressing construction on Train 5 at Sabine Pass and Trains 1 and 2 at Corpus Christi." ■

Chart's sales keep rising amid three acquisitions

Chart Industries, the US LNG equipment-maker, was moving in a positive path with rising sales and fourth-quarter profits after restructuring, acquiring three new companies and winning a contract for a proposed new LNG export plant in Louisiana.

Net profits amounted to \$28 million compared with \$28.2 million in 2016, excluding one-off charges. Chart posted slightly lower net income for the year even as sales rose 15% to \$988.8 million from \$859.2 million the

previous year.

The order activity in 2017 increased 18% over 2016, or 14 percent excluding its Hudson Products acquisition.

There were no significant orders for LNG liquefaction plants in 2017, although in the fourth quarter, Tellurian Inc. of the US announced an agreement with Chart and US engineers Bechtel to proceed with using Chart's IPSMR process technology and equipment on the Driftwood LNG export project

proposed for Louisiana.

"We are pleased with the 2017 results in the business, in particular the completion of previously announced restructuring activities that we expect to generate \$15 million of savings in 2018, the completion of three strategic acquisitions and a successful refinance of our debt," stated Bill Johnson, Chart's CEO and President. "In addition, the acquisition of Skaff Cryogenics, which closed in January 2018, continues to build upon our strong D&S installed base to build out a full solution for our industrial gas customers." ■



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