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China allows construction coal-fired power plants to resume

(Bloomberg; April 19) – China has allowed 11 provinces and regions to resume building coal-fired power plants in another sign that the world's largest energy user is far from finished with the most-polluting fossil fuel. Because the National Energy Administration now forecasts that only 10 provinces and regions would have an excess of coal-fired electricity generation capacity in 2022, down from last year's outlook for a glut in 21 areas by 2021, the 11 areas can start building coal plants again. The overcapacity label had suspended construction of new projects until the issue was addressed.

The decision underscores how dependent the world's second-largest economy still is on coal, even as it invests hundreds of billions of dollars in cleaner energy sources such as natural gas, wind turbines, and solar panels. While coal's share of China's total energy consumption fell to 59 percent last year, the growth in the country's total energy consumption meant burning of the dirty fossil fuel actually increased by 1 percent.

Shares of Chinese coal mining companies jumped on the news. Datong Coal Industry rose as much as 10 percent, the most in 21 months. Shanxi Xishan Coal & Electricity Power gained as much as 9 percent, the biggest intraday advance since December 2017. Areas freed up for new coal power plant construction include Hebei, Qinghai, Chongqing, Guangxi, Guangdong, Yunnan, Guizhou, and Henan. The facilities are not allowed to produce heat for residential customers but can serve large industrial users.

Exxon signs 20-year deal to supply LNG from global portfolio to China

(Houston Chronicle; April 22) - ExxonMobil said April 22 it had inked a 20-year deal to sell liquefied natural gas to the eastern Chinese province of Zhejiang. The contract comes as ExxonMobil is beefing up its LNG project investments from the Texas Gulf Coast to the Eastern Mediterranean. Exxon already has existing LNG operations in Qatar and Papua New Guinea that can provide much of the shipments to China.

The deal is for ExxonMobil to sell 1 million tonnes of LNG a year to Zhejiang Energy as the region builds a new LNG receiving terminal in the port city of Wenzhou. "This sales-and-purchase agreement represents an important milestone and provides a solid foundation for our strategic partnership with Zhejiang Provincial Energy Group," said Peter Clarke, senior vice president of LNG at ExxonMobil.

ExxonMobil is moving forward with the Golden Pass LNG export project outside of Port Arthur, Texas. Qatar is leading that project with Exxon as its top partner. Exxon also is considering natural gas and LNG development offshore of Cyprus with an eye toward further growth in the broader Eastern Mediterranean region. In addition, the company is moving closer to an investment decision to expand its LNG production in Papua New Guinea and is working with partner Rosneft to determine the best path for marketing their substantial gas reserves at the Sakhalin-1 project in the Russian Far East.

FERC again cites cumulative impact of three LNG terminals in Texas

(Houston Chronicle; April 19) - Federal regulators are voicing concerns for endangered species in their second environmental review of three liquefied natural gas export terminals proposed to be built in the Rio Grande Valley of Texas. The Federal Energy Regulatory Commission on April 19 released its 484-page final environmental impact statement for the proposed Annova LNG export terminal at the Port of Brownsville.

Although Annova got the green light as an individual project, FERC expressed concern about the cumulative impacts on endangered species that the terminal would have alongside gas pipelines and two other proposed LNG projects in the area. Combined traffic, noise, and habitat fragmentation from the projects would have "permanent and significant" impacts on the ocelot and jaguarundi movements between the U.S. and Mexico as well as a "significant" impact on the aplomado falcon, FERC officials wrote.

Those concerns echo similar ones raised by FERC last month in its environmental review of the Texas LNG export terminal, a project proposed on the opposite side of the Brownsville Ship Channel from Annova LNG. Keeping the ocelots and other endangered species in mind, Annova LNG has pledged to include a 185-acre wildlife corridor on its 731-acre site and enhancing 250 acres of wetlands. The company has also pledged to use electric-powered motors to reduce pollution and noise.

Release of the final EIS begins a 90-day countdown to July 18 for FERC to decide on the Annova project application. If the project signs up enough customers, Annova plans to build a plant that will produce 6 million tonnes of LNG per year. Annova and the two other proposed terminals face stiff opposition from a coalition of shrimpers, fishermen, environmentalists, neighbors, and communities under the banner Save RGV From LNG.

FERC approves two more Gulf Coast LNG export terminals

(Bloomberg; April 18) - America could become an even bigger player in the global LNG market after the nation's top regulator approved two more projects to export the fuel. Tellurian's proposed \$28 billion Driftwood terminal in Louisiana and Sempra Energy's

project in Port Arthur, Texas, were cleared 3-1 by the Federal Energy Regulatory Commission April 18, with Democratic Commissioner Richard Glick dissenting.

The approvals followed a breakthrough at the commission, which had been divided 2-2 along partisan lines over how much climate change should be factored into pipeline and LNG projects. The stalemate broke in February, when Venture Global LNG got the goahead for its \$5 billion Calcasieu Pass export project in Louisiana. FERC is short one member following the death of former Republican Chairman Kevin McIntyre in January.

Tellurian and Sempra will face fierce competition as global gas supplies soar and LNG prices have plunged, calling into question the economics of new plants. "FERC's job is not to judge which projects are the most competitive or have the best chances of finding financing," said Jason Feer, global head of business intelligence at ship broker Poten & Partners in Houston. "While you need FERC approval ... you still need to have all of the contracts or financial commitments ... to actually execute the project," Feer said.

"Neither Driftwood nor Port Arthur appear to have the offtakers" they'd need to secure financing and make a final investment decision, Feer said. And unlike three U.S. LNG terminals that are already exporting and two more close to start-up, the Venture Global, Tellurian, and Sempra projects won't be built at existing, underused LNG import facilities with storage tanks or ship berths. That means they may be costlier to build.

Tellurian delays decision for Driftwood LNG in Louisiana

(S&P Global Platts; April 18) - Tellurian may delay a final investment decision for its proposed Driftwood LNG project to the second half of the year, the developer said April 18 in an investor presentation in which the company also disclosed it plans to retain more of the Louisiana terminal's capacity to market on its own than previously expected. The updates showed that while Driftwood has gained commercial momentum recently, including a preliminary \$500 million equity investment from France's Total, there is work that still needs to be done before advancing the project.

The presentation was released a few hours before the Federal Energy Regulatory Commission voted to authorize the project. "It could be later than mid-year, but honestly as soon as we finish documents we will take final investment decision," Tellurian spokeswoman Joi Lecznar said in an email. A January presentation said FID was expected in the first half of 2019. Another slide said Tellurian, if it decides to move forward with full development at 27.6 million tonnes annual capacity, will retain 13.6 million tonnes to market on its own, up from 11.6 million tonnes previously.

The developer expects to need about \$20 billion in project financing to go along with its assembled equity investments in the \$27 billion project.

Haynesville shale gas production hits record 10.5 bcf a day

(Houston Chronicle; April 18) - The Haynesville shale in East Texas and Louisiana hasn't boomed for nearly a decade, but a recent resurgence in activity has pushed the gassy shale play's output to a record high this spring. The Haynesville is churning out a record high of 10.5 billion cubic feet of gas a day this April, surpassing the 2011 peak of more than 10.4 bcf a day, according to the U.S. Energy Department, which projects that output will jump to 10.75 bcf a day in May.

The surge is buoyed by moderately higher gas prices and increasing demand coming from the influx of new liquefied natural gas export projects coming online along the Texas and Louisiana Gulf Coast. Maybe most important is the Haynesville's proximity to the Gulf Coast compared to other gas-producing areas. The gas also is selling to petrochemical plants for feedstock, and a lot of it is being piped to Mexico.

The Haynesville was the nation's No. 1 gas source until 2012 when it was passed by the Appalachia region, including the Marcellus and Utica shale plays in Pennsylvania, West Virginia, and Ohio. Meanwhile, the booming Permian in West Texas and New Mexico has surpassed the Haynesville due to all the associated gas that comes up with Permian oil. The Permian is producing almost 14 bcf a day of gas, although pipeline shortages have meant many companies are paying to have the gas taken away.

Total adds to its investment in Russian LNG facilities

(Reuters; April 18) - France's Total plans to take a 10 percent investment in two transport hubs in Murmansk and Kamchatka that Russian gas producer Novatek wants to build to more efficiently ship liquefied natural gas from its arctic operations, the head of Total said April 18. CEO Patrick Pouyanne made the comments before a group of French businessmen met Russian President Vladimir Putin in the Kremlin.

Total already holds a 20 percent equity stake in the Novatek-led Yamal LNG terminal, which started operations in December 2017. Total also has committed to at least a 10 percent stake in Novatek's proposed Arctic LNG-2 project, just east of Yamal with an investment decision on that development expected later this year.

The two LNG transshipment terminals — in Kamchatka, in the Russian Far East, and Murmansk, close to Norway — would allow the transfer of LNG cargoes from Yamal's expensive ice-class carriers to less costly, traditional LNG tankers for much of the travel distance to customers. Putin last week invited foreign investors to take part in the construction of port infrastructure in Murmansk and on the Kamchatka Peninsula.

LNG Canada lines up contracts for project modules built in China

(Globe and Mail; Canada; April 16) - LNG Canada is forging ahead with construction of its liquefied natural gas export facility in Kitimat, British Columbia, despite a continuing dispute with a group from the Wet'suwet'en Nation along the route of the gas pipeline, company CEO Andy Calitz said April 16 at an industry conference in Toronto. The international consortium, led by Shell, already has locked down contracts in China where modules for the gas liquefaction plant will be built, he said.

The LNG export project is one of the rare bright spots for the Western Canadian oil and gas sector, which has seen depressed prices for gas and lack of sufficient pipeline capacity for crude that has resulted in government-mandated oil production cuts. But the LNG project faces challenges from a group led by eight hereditary chiefs of the Wet'suwet'en. The chiefs seek to block access to right of way for the Coastal GasLink pipeline, which would connect the LNG facility with the gas fields of northeastern B.C.

LNG Canada, however, has the support of First Nations in Kitimat and along the route and already has allocated more than \$175 million in contracts with indigenous-led businesses, Calitz said. "I'm confident the pipeline will be built ... on schedule," he said after his presentation. In addition, the project faces regulatory risk after environmental consultant Mike Sawyer last year launched an appeal to the National Energy Board, arguing that the federal regulator should have overseen the project's environment assessment rather than the province. The NEB will hear arguments in the case in May.

Papua New Guinea villagers want to know more about LNG deal

(Radio New Zealand; April 16) - Papua New Guinea's government is under pressure over its handling of the country's burgeoning natural gas sector. The government last week agreed to terms for the Papua LNG project led by French oil and gas major Total. Two days later, PNG's Finance Minister James Marape resigned, citing a breakdown of trust in Prime Minister Peter O'Neill and his government's handling of landowner participation in oil and gas development.

A village leader said local people had not been briefed on what the project on their land will mean for them. Solomon Lae, a chief in Kapai Aikavalavi village, said the lack of consultation reflects how the nation's leaders treat the villagers. It's a similar charge to 10 years ago, when the government struck a deal for the country's first liquefied natural gas project, Papua New Guinea LNG. Even now the clan-vetting process to establish the rightful landowners to receive benefits and royalties from that project is not finished.

"The current government is under pressure to improve on this performance. There's a lot of talk and a lot of political movements," said opposition member of Parliament Richard Mendani. "I'm so surprised that the current government, the prime minister, and Total have, without any proper consultation, gone in and signed the project

agreement." But the country's treasurer, Charles Abel, said the agreement is only part of the process and that landowners will be part of discussions for the benefits sharing agreement.

LNG carriers are 13% of global shipbuilding order book

(Wall Street Journal; April 19) - Ship orders worldwide have shrunk to the lowest level in 15 years as vessel owners struggle with excess capacity that has kept freight rates well below break-even levels. There were 3,200 vessels of a combined 81 million gross tons ordered globally in the first quarter of 2019, the lowest figure since 2004, marine data provider Clarksons said in a report released April 19.

Crude oil tankers and bulk-commodity ships made up about two-thirds of all orders a decade ago, Clarksons said, but this year the share has dropped to 42 percent as volatility in commodity markets and changes in global energy consumption have triggered shifts in trade. Liquefied natural gas carriers now make up a bigger portion of orders. The 141 LNG carriers on order represent 13 percent of the total order book, compared to just 2 percent a decade ago, said George Warner of Clarksons Research.

The LNG market is surging on growing demand from countries including China and India, which are turning to gas rather than coal for power generation and heating. Cruise ship orders also make up a bigger part of the mix, comprising 12 percent of the global order book, compared with 2 percent a decade ago, according to Clarksons. The overall pullback in orders has hurt shipbuilding yards in South Korea, China, and Japan, where authorities are looking at closing some operations and consolidating businesses.

Hearings next week on jurisdiction over gas pipeline to LNG Canada

(Business in Vancouver; April 18) – Canada's National Energy Board should find that the provincially approved pipeline to move gas from northeastern British Columbia to the LNG Canada export terminal in Kitimat is properly within provincial jurisdiction, the federal government said in a filing with the NEB. The attorney general of Canada rejected the arguments of environmentalist Mike Sawyer and Ecojustice that the project is a "federal undertaking" and as such should be federally regulated, the filing said.

"The Coastal GasLink pipeline project, located entirely within British Columbia, is not physically connected to the [federally regulated] NGTL (Nova Gas Transmission Ltd.) and does not depend on the NGTL pipeline system for its gas to transport to the LNG Canada facility," the government said in its April 16 filing, rejecting the contention that the LNG project pipeline is part of the federally regulated pipeline system. The NEB will hold hearings on the matter on May 2-3 in Calgary.

Further, there is no relationship of dependency between NGTL and the LNG project, the government said. The challengers argue the new pipeline is connected to the larger system and could move gas from Alberta to the B.C. terminal. If the NEB sides with the challengers and rules that the Coastal GasLink pipeline is within federal jurisdiction, the NEB would have to conduct its own review for approval. Work already has started on the Shell-led LNG Canada project and prep work has started for pipeline construction.

U.S. LNG going to Mexico by tanker truck

(Houston Chronicle; April 17) - Not all liquefied natural gas exports leave the United States on giant ships from the Gulf of Mexico or Atlantic Coast. Some of it is delivered by 18-wheelers to meet growing demand for energy in Mexico. While the burgeoning U.S. LNG industry has focused on multibillion-dollar coastal export terminals, one company from Houston and another from Mexico City have carved out a niche by using tanker trucks to deliver the fuel to industrial and agricultural customers in Mexico.

Houston-based Stabilis Energy opened a \$55 million plant capable of producing 120,000 gallons of LNG a day in the South Texas town of George West in March 2015. The plant initially focused on supplying fuel to portable LNG-powered generators at remote drilling and fracking sites, but it has since added at least 10 Texas fracking sand mines out of reach of pipelines and power grids. Now, Stabilis is tapping into a growing market in Mexico, supplying LNG to industrial customers and greenhouses in Mexico.

Over the past 18 months, Mexican gas company Enestas has bought truckloads of LNG from Stabilis. Launched in May 2015, Enestas has nearly 25 customers outside of local power grids and miles away from pipelines. Gold, silver, and lithium mines in Mexico use the company's gas-fired generators to power equipment and provide heat in deep mine shafts. Industrial-sized greenhouses designed for growing peppers, cucumbers, and other vegetables in the mountains of Central Mexico burn gas to keep crops warm at night capturing the carbon dioxide to feed the plants and make them grow faster.

Enestas expects to sell 10 million gallons of U.S. LNG to its customers in Mexico in 2019 — equal to more than 800 million cubic feet of natural gas.

Japanese, French utilities form joint venture for LNG trading

(Reuters; April 18) - JERA Global Markets, a newly formed joint venture by Japanese and French partners, is looking to expand into short-term contracts and spot trading of liquefied natural gas to third parties, its chief executive told Reuters. Japan's JERA Co., the world's biggest buyer of LNG, and EDF Trading, a wholly owned subsidiary of French utility Electricite de France, formally launched the trading joint venture earlier this month. It will add LNG to its previous coal-trading joint venture.

JERA itself is a joint venture between Japanese utilities Tokyo Electric and Chubu Electric. JERA was formed in 2015 to purchase fuel to meet domestic power demand in Japan, but with the new joint venture it is looking to step up trading and potentially sell LNG to growth markets in Asia such as India and China, said JERA Global Market's CEO Kazunori Kasai. "Our vision is to become world leader in seaborne energy trading, meaning both coal and LNG," he said.

The newly formed company will handle spot and short-term LNG trading for contracts of up to four to five years, Kasai said. Its mandate will be to better manage the import of coal and LNG into Japan as well as to trade both commodities. JERA imports about 35 million tonnes of LNG annually, of which about 7 million tonnes is set aside for spot and short-term contracts, Kasai told Reuters. It will be JERA Global Market's job to trade and manage that volume.

Conoco sells its British North Sea assets, will focus on U.S.

(Reuters; April 18) - ConocoPhillips has agreed to sell its oil and gas assets in the British North Sea to private equity-backed Chrysaor for \$2.68 billion, Conoco said April 18, making Chrysaor the biggest producer in the region this year. The North Sea has undergone a major transformation in recent years, as long-standing producers have sold assets to smaller players such as Chrysaor that say they can squeeze more money out of the fields due to their nimbler operations.

For Conoco, the disposal is part of a continuing refocus on its U.S. operations. "This disposition is part of our ongoing effort to hone our portfolio and focus our investments across future low cost-of-supply opportunities," said CEO Ryan Lance. Conoco's North Sea assets produced 72,000 barrels of oil equivalent per day last year.

Chrysaor said the deal would bring it up to 177,000 barrels of oil equivalent per day in 2019. Chrysaor, backed by private-equity firm EIG Global Partners, is already one of the biggest North Sea players after acquiring assets from Shell for \$3.8 billion in 2017. In the British North Sea, BP targets around 200,000 barrels of oil equivalent per day by 2020, while Shell said it produced 140,000 last year. Total was at around 180,000.

Record high U.S. gas production and demand last year, FERC says

(S&P Global Platts; April 18) – U.S. gas and power markets experienced higher average prices in 2018 — with record high demand and supply — while power generation capacity additions were led by gas-fired and wind-powered resources, federal regulators said April 18. "In 2018, gas demand reached a record high, driven primarily by increased demand for gas-fired generation and LNG export growth," according to the Federal Energy Regulatory Commission's 2018 State of the Markets Report.

Record-high gas demand was coupled with record-high production with the largest growth from the Marcellus Shale and the Permian Basin. But demand growth outpaced production growth, which resulted in consistently lower-than-average storage levels that "at times were the lowest in more than a decade," the report said. The low gas storage levels contributed to gas price increases across the U.S., the market recap said.

The largest shares of incremental power generation capacity came from renewable energy and gas-fired resources with most of the retirements coming from coal resources, according to FERC's report. U.S. gas spot prices generally rose in 2018 with Henry Hub averaging \$3.12 per million Btu for the year, up 5 percent from \$2.96 in 2017, FERC reported. A cold snap along the East coast led to gas prices as high as \$140.85 per million Btu in New York and \$128.39 in the Mid-Atlantic on Jan. 4.

China says it will promote wind-powered electricity for heating

(Reuters; April 18) - China on April 19 said it would promote using energy generated by the wind to help power heating systems during the bitterly cold winters seen in many parts of the country. This comes as the world's No. 2 economy pushes to reduce carbon emissions from coal-burning as part of its battle against air pollution. The National Energy Administration urged local authorities to set annual targets for generating electric heat from wind farms in the period 2019 to 2021.

It also said they should build infrastructure to promote the use of wind power. Local governments will be given less than two months to draw up plans and submit them to Beijing. Wind power generators that participate in winter heating projects could receive tax reductions or subsidies, the NEA said in a statement. The energy agency also called for grid companies to work on removing technical barriers to reducing power wastage due to insufficient transmission capacity.