

## TOP NEWS

**Texas energy crisis extends to sixth day, spills over to Mexico**

Texas's energy outages caused by a deep freeze extended to a sixth day on Thursday, with the impact of reduced supplies from the biggest energy-producing state in the United States spilling over to Mexico.

The cold snap, which has killed at least 21 people and knocked out power to more than 4 million people in Texas, is not expected to let up until this weekend. It has halted about one-fifth of the nation's refining capacity and halted nearly all oil and natural gas production in west Texas.

Oil production could fall more than 4 million barrels per day, representing almost 40% of U.S. production, and U.S. crude exports could average 1.1 million bpd on the week, according to estimates from researcher Kpler, compared with current levels of about 3.8 million bpd.

Texas's outages also affected power generation in Mexico, with exports of natural gas via pipeline dropping off by about 75% over the last week, according to preliminary Refinitiv Eikon data.

Governor Greg Abbott directed the state's natural gas providers not to ship outside Texas, but a regulator said it is unlikely that they have the right to interfere with existing contracts to buyers.

"I'm not sure we have authority to mess with that, nor do I really want to," said Jim Wright, one of three members of the Texas Railroad Commission, the state's oil and gas regulator.

The ban prompted a response from officials in Mexico, as U.S. gas pipeline exports to Mexico fell to 4.3 billion cubic feet (bcf) per day on Wednesday, down from a 30-day average of 5.7 bcf, according to data from Refinitiv.

The Mexican government called the top U.S. representative in Mexico on Wednesday to press for natural gas supplies as power cuts there have hit millions of residents. The White House said on Thursday it was in discussions with Mexican authorities and Texas officials over Abbott's directive.

However, Mexican President Andres Manuel Lopez Obrador on Thursday said he understands the Texas governor's request for natural gas export ban has not yet been approved and that Mexico is making diplomatic efforts so it is not carried out.

Lingering power outages are due to downed lines and not because of a lack of power generation, Abbott said during a press conference on Thursday.

**MORE BLACKOUTS IN STORE**

Texas exports natural gas via pipeline to Mexico and via ships carrying liquefied natural gas (LNG) from terminals in Freeport and Corpus Christi. It also supplies numerous regions of the country, including the U.S. Midwest and Northeast.

The state's electrical grid operator, Electric Reliability Council of Texas (ERCOT), was trying to restore power as thermal generators - those powered by natural gas,

coal and other fuels - lost the capability to provide power as valves and pipes froze.

ERCOT said that while there is no additional power cutoffs at this time, a little over 40,000 megawatts of generation remained offline, including 23,500 MW of thermal and the rest wind and solar.

"Energy emergency conditions remain as the grid operator and transmission owners work to restore the remaining customers that are without power," it said.

Abbott said he has asked the legislature to mandate the winterization of generators in the power system and has called for funding needed to ensure winterization and modernization occurs.

Blackouts could continue through at least Friday, said Rebecca Miller, senior analyst at consultants Wood Mackenzie.

While the storm has moved away, freezing temperatures remain and oil refining might take days, if not weeks, to full resume operations.

"The oil and gas industry is finally getting some power into these fields," Christi Craddick, chair of the Texas Railroad Commission, said Wednesday night.

Industrial facilities and manufacturing plants are unable to operate without power. Auto companies, including Ford Motor Co, have shut some plants because of a lack of natural gas and power.

U.S. crude futures fell about 1% on profit-taking following days of buying spurred by fears of supply disruptions that sent prices to the highest since Jan. 8, 2020.

Natural gas futures also eased from near a three-month peak as warmer weather was forecast. Next-day prices at Waha hub in the Permian basin in West Texas eased from all-time peak of \$209.75 per mmBtu to \$77 per mmBtu. [nL4N2KO402

**BIG OPERATIONS IN TEXAS**

Texas is the nation's biggest fossil fuel energy producer, but its operators, unlike those in North Dakota or Alaska, are not used to frigid temperatures.

The state produces almost a quarter of U.S. natural gas production and consumes about 15%. Most of the gas it ships domestically goes to neighboring Oklahoma and Louisiana.

LNG plants in Texas - Cheniere Energy Inc's Corpus Christi and Freeport LNG's Freeport - were basically taking no gas from the Texas grid Thursday morning, according to preliminary data from Refinitiv.

The Houston Ship Channel, a key export waterway, had reopened on Thursday, but there was hardly any vessel traffic. With temperatures expected to drop overnight, the port may need to be shut again, said J.J. Plunkett, chief operating officer for Houston Pilots.

"The hydrocarbon water lines are frozen and the cargo cannot be loaded," he said. "This time of the year, we generally have 60 ships in and out the channel; last night we had only nine."

Next-day power for Thursday at the ERCOT North hub, which includes the cities of Dallas and Fort Worth, were near a record high of \$8,800 per MWh hit the previous day. Prices were below \$50 per MWh before the cold blast.

### **Real-time oil appetite catches up with futures rally**

Sales of physical crude oil are gaining pace at higher prices following a rally in the futures market, traders and analysts said, as expectations mount of near-term increases in demand.

Global benchmark Brent futures are trading above \$65 a barrel, quadrupling in value since pandemic lows in April. In contrast to Brent futures, physical sales are near-term trades dominated by producers, refiners and trading houses.

Their rise better reflects the real-time appetite for oil, which is growing as OPEC+ oil producers look likely to only gradually reduce their supply curbs in the coming months and forecasters expect a demand recovery in the second half of the year on global vaccine rollouts.

"Spot prices are catching up with the rise in futures, especially in the North Sea," a European refining source said on condition of anonymity.

Interest in North Sea crude spiked on Monday, traders said, with more than 20 bids in the Platts window and main grades reaching highs last seen in August. Brent physical crude rose to near dated Brent plus 90 cents a barrel on Wednesday.

Dated Brent is based on the trade of physical oil from North Sea Brent, Forties, Oseberg, Ekofisk and Troll streams.

Asia's crude trading resumed after a lull during Lunar New Year holidays, pushing up the premium for Russian Sokol crude to a 7-month high above \$2 a barrel to Dubai quotes.

Spot premiums for Russian ESPO Blend crude, a China-focused grade also rebounded from a 4-month low last month to spot premiums near \$2 a barrel.

One of the clearest signs of the tightening oil market is its deepening backwardation, a structure in which oil is more valuable now than in later months, spurring prompter sales.

Brent futures' 12-month backwardation hit a 13-month high above \$6 this week.

UBS oil analyst Giovanni Staunovo said UBS was long on Brent.

"Brent futures contracts expiring in mid-2022 are currently trading at a 10% discount to the spot price. We expect them to rise to \$70 a barrel by expiry."

### **EXCLUSIVE-Oil trader GP Global APAC seeks debt moratorium in Singapore**

Oil trader GP Global APAC Pte Ltd has applied to the Singapore High Court for a six-month debt moratorium as its parent company seeks to restructure more than \$1

billion dollars in debt, according to a company director, lawyers and a court document.

The parent, GP Global - a major global oil trader and ship fuel supplier based in the United Arab Emirates - said in July it would restructure the group's debt by selling assets after lenders scaled back credit.

GP APAC, which has missed loan payments in recent months, joins a string of defaults among Asian oil trading companies - including Singapore's Hin Leong Trading Pte Ltd, one of Asia's biggest bunker fuel suppliers - in the wake of last year's pandemic-driven crash in oil prices.

The parent company, owned by India's Goel family, said last year it had uncovered fraud within the company and filed criminal complaints against some of its employees, while it has faced several lawsuits and ship seizures by creditors.

The Singapore trader's restructuring strategy includes "standstill agreements" with creditors that let it sell assets without the threat of creditors independently taking action against the firm.

"The moratorium application simply seeks to give effect to the in-principle agreement and allow GP APAC breathing space to carry on with the restructuring," said Moses Lin, a legal adviser to GP APAC and partner at the law firm Shook Lin & Bok LLP.

Daniel Tan, another GP APAC adviser from the same firm, told Reuters: "The potential for seeking a moratorium in support of the restructuring has always been an option in the event any minority creditor falls out of line, and as you can see, that has happened with a couple of minority creditors."

GP APAC owes more than \$464 million to its top 20 unsecured creditors, according to an affidavit filed by Roderick Sutton, GP APAC's sole director. Sutton, from FTI Consulting, was appointed GP Global's chief restructuring officer in August.

Among the unsecured creditors is Singapore-based marine fuel supplier Equatorial Marine Fuel Management Services Pte Ltd, which has more than \$700,000 in claims against GP APAC, according to the affidavit.

After GP APAC defaulted on Equatorial's payment demand, Equatorial in January obtained a court ruling allowing it to seize GP APAC's Singapore office, according to the affidavit. That derailed GP's plans to sell the office for S\$8.5 million (\$6.4 million).

In doing so, "Equatorial sought to queue-jump" by laying claim on the property "which is meant to be divided equally to all creditors," Sutton told Reuters by phone.

Equatorial declined to comment, citing ongoing discussions.

Equatorial's action also prompted Singapore's DBS Bank Ltd to withdraw credit facilities for GP APAC and demand a repayment of more than S\$2.4 million, according to the document.

DBS declined to comment.

DEBTS

Of GP APAC's two largest unsecured creditors, Credit Suisse (Switzerland) Ltd is owed \$91 million and UBS Switzerland AG \$70.4 million, and they both supported the moratorium application, according to the court document.

Credit Suisse and UBS declined to comment.

In a report to lenders in September, Sutton said financial statements based on GP Global's management accounts through July showed the company had total liabilities of more than \$1.2 billion in bank borrowings and trade payables as well as a \$1 billion provision for bad debts.

Sutton said in the affidavit that "various irregular commodity trades and/or fictitious trades where there was no actual transfer of any underlying cargo" led to the company's financial woes.

"This left the Group with significant bad debt as the trade receivables due from these 'trades' are unlikely to be recoverable," he said.

He told Reuters GP Global's unsecured liabilities were expected to be reduced to about \$800 million or less.

Asked how much creditors could expect to recover, he said that if the restructuring proceeds, "We think it's 20 to 30 cents on the dollar - and if there is a liquidation it's zero."

### **THE REUTERS GRAPHIC-The messy business of sand mining**

From Shanghai to Seattle, the world's cities are built on massive amounts of sand.

It's in the cement and concrete that make up the bulk of buildings. The glass in the windows of those buildings is made with sand, too, as is the tarmac on the roads around them.

Sand is the planet's most mined material, with some 50 billion tons extracted from lakes, riverbeds, coastlines and deltas each year, according to the United Nations Environment Programme.

Demand for sand is only expected to grow, as the global population continues to climb, cities expand and countries further develop. But in much of the world, sand mining faces little to no government scrutiny.

This means that it is being extracted far quicker than it is naturally replaced, causing environmental damage and, in some cases, jeopardising livelihoods.

Damage from sand extraction can be seen clearly in satellite images, with coastlines eroded, ecosystems destroyed, and even small islands in Southeast Asia entirely wiped off the map.

Rivers have faced major environmental disruption, including the erosion of riverbanks to the point where they collapse, and the destruction of breeding habitats for riverine animals including birds and crocodiles.

Scientists have called for a global programme to monitor and manage the sand mining industry as a first step to controlling the plunder. Standardising the industry would also mean miners don't have to become criminals to operate.

"This isn't an issue that's relevant for only some places. Sand is a critical material for every country," said ecologist Aurora Torres at the Universite Catholique de Louvain in Belgium, who researches how sand mining can affect both the natural world and people's well-being.

### **Texas ranchers scramble to keep animals alive in unusual cold**

Texas ranchers worked overtime to haul water and hay to cattle to keep them alive during a freak winter storm, but some cows have already succumbed to unusual icy temperatures that also killed chickens, idled meat plants and threatened crops.

The deaths of baby cows in the top U.S. cattle state and struggles to care for surviving livestock are the latest challenges for ranchers who over the past year have dealt with COVID-19 cutting demand for meat at restaurants and shuttering slaughterhouses.

In Texas, home to more than 13 million cattle, ranchers said they are spending long, cold hours breaking up ice in water tanks and on frozen ponds so animals have something to drink. Icy conditions have turned diesel fuel into a useless gel in tractors. Ranchers said they are using gasoline-powered pickup trucks to transport hay that cattle can eat and use for warm bedding.

Kaylin Isbell, a rancher in Florence, Texas, said a few cows and sheep had died after birth. Babies are particularly vulnerable to the shock of the cold when they leave their mothers' warm wombs covered in fluid. Isbell said her mother-in-law took newly born sheep into a spare bedroom in her home to keep them warm.

The cold will also kill oats Isbell planted for young cattle to graze on, she said. As a result, Isbell said she will need to sell the animals earlier than expected, reducing her profit margins.

Ranchers nationwide were already facing higher feed costs as corn and soybean prices soared to multi-year highs.

"We just keep going," Isbell said. "That's all you can do."

Texas Agriculture Commissioner Sid Miller told Reuters that baby chicks are freezing to death because there is not enough natural gas to heat hatcheries. He said dairy operations are dumping \$8 million worth of milk down the drains daily because milk processing plants are without power. Grain mills across the state cannot manufacture animal feed without power either, Miller said.

"We've got an animal welfare issue going on," he said.

Major meat processors like Cargill Inc and Tyson Foods Inc said they suspended operations at some plants.

In Whitesboro, Texas, fifth-generation rancher Austin Miles said he is filling a red 300-gallon tank with water from a hose at his parents' home two to three times a day and shuttling it to cattle to drink. The pond they would normally drink from froze, he said.

"This is extreme for us," Miles said. "Our infrastructure was just not quite set up for these prolonged cold periods."

The storm has killed at least 21 people across four states, and temperatures are forecast to remain 20 to 35 degrees below average across parts of the central and southern United States for days.

Cattle could suffer from respiratory problems once the deep freeze gives way to warmer temperatures, said Missy Bonds, assistant general manager of her family's ranch in Saginaw, Texas.

"Mother Nature needs a Xanax," she said.

### **U.S. crude stockpiles fall sharply in week prior to snow storms -EIA**

U.S. crude oil stockpiles fell sharply to their lowest since March as exports jumped in the week before a deadly cold snap hit major energy-producing areas of the United States, the Energy Information Administration said on Thursday.

Crude inventories fell by 7.3 million barrels in the week to Feb. 12, compared with analysts' expectations for a decrease of 2.4 million barrels. At 461.8 million barrels, stocks nationwide are the lowest since March.

The decline was driven by a sharp decline at the Cushing, Oklahoma, delivery hub for U.S. crude futures where inventories fell by 3 million barrels to about 45 million barrels, also their lowest since March, EIA said.

The data covers a period that ended Friday, so just before blistering cold and snow hit most of Texas, New Mexico and other big energy producing areas, shuttering millions of barrels of production and refining output.

Next week's release is likely to show the effects of the storms and just how extensive the shut-ins were. Depending on the extent of damage, production could be impaired for several weeks in major shale regions like the Permian Basin in Texas and New Mexico.

"I think crude inventories overall will build significantly because barrels are being backed up in the system and seeing low demand from the refiners," said John Kilduff, partner at Again Capital in New York.

In the week, crude production dipped to 10.8 million barrels per day from 11 million bpd. Weekly output figures are volatile and subject to adjustments from the EIA, but analysts expect that figure to fall sharply next week.

Net U.S. crude imports fell last week by 1.2 million bpd. Overall imports were steady, but exports rose dramatically to 3.9 million bpd, their highest since March. In the most recent week, however, the Houston ship channel has been closed, so both imports and exports are likely to fall.

Refiner utilization inched up 0.1 percentage point but at 83.1%, it was at its highest since March.

Gasoline stocks rose by 672,000 barrels, compared with analysts' expectations in a Reuters poll for a 1.4 million-barrel gain.

Distillate stockpiles, which include diesel and heating oil, fell by 3.4 million barrels, versus expectations for a 1.6 million-barrel drop, the EIA data showed.

Oil prices were little changed after the data. U.S. crude futures were up 12 cents to \$61.26 a barrel while Brent rose 9 cents to \$64.43 a barrel as of 11:44 a.m. EST (1644 GMT).

### **Rio Tinto willing to negotiate new Mongolia mine agreement -sources**

Global miner Rio Tinto is willing to enter a new agreement with Mongolia to expand its Oyu Tolgoi mine as the government requested, two sources with direct knowledge told Reuters on Thursday, as both parties look to resolve an impasse over the multibillion-dollar project.

Mongolia had sought agreement with Rio to cancel the deal underpinning the mine's underground expansion, saying rising costs and project delays had eroded expected benefits.

Oyu Tolgoi is one of the world's largest-known copper and gold deposits, located in the South Gobi region of Mongolia.

The Mongolian government holds a 34% stake in the mine and Rio's majority-owned Turquoise Hill Resources holds the rest.

Investment terms for the underground expansion were agreed in a 2015 deal known as the Dubai Agreement. Mongolia argues that agreement lacks legitimacy because it was not approved by the country's parliament, among other issues. The government also wants more tax revenues from the project.

Rio is open to replacing the underground development agreement with a new deal ratified by parliament, one of the sources said. Discussions could include fees Rio gets for managing the project and interest rates on partner loans, the source said.

Rio declined to comment. Sources declined to be identified due to the sensitivity of negotiations.

Rio Chief Executive Jakob Stausholm told investors on Wednesday he was convinced the miner would resolve the standoff.

Costs for the expansion have ballooned to \$6.75 billion, about \$1.4 billion higher than Rio's estimate in 2016.

First production is expected in late 2022 and will push annual output to nearly 500,000 tonnes over time, making Oyu Tolgoi among the world's biggest copper mines.

### **EXCLUSIVE-Mexico's government readying roughly \$5 bln Pemex lifeline, source says**

Mexico's government will inject between \$1.3 billion and \$1.6 billion into state oil company Petroleos Mexicanos (Pemex) this year and offer a tax break of 75 billion Mexican pesos (\$3.68 billion), a senior official told Reuters on Thursday.

The world's most indebted oil company, Pemex had more than \$110 billion in financial debt at the end of the third quarter last year, while its liabilities far exceeded its assets.

In the past two years, the government of President Andres Manuel Lopez Obrador has injected billions of



dollars in capital in the loss-making company and reduced its tax burden.

The source, who has direct knowledge of the matter but declined to be identified, said the tax reduction will be applied on a monthly basis and be separate from the already reduced profit sharing rate (DUC) from 58% to 54% for this year.

Neither Pemex nor the finance ministry immediately responded to a request for comment. Earlier on Thursday, Lopez Obrador said a new agreement will come into force to further reduce the tax burden on Pemex, but he gave no details.

Last year, the government reduced the DUC, the largest payment Pemex makes to state coffers, from 65% to 58%.

The source also said the first of several capital injections, scheduled within the next two weeks, will be used to pay down debt, and that it is unlikely Pemex will issue bonds on the international market this year.

Pemex has carried out liability management of different types, including bond refinancing and bank line extensions, totaling more than \$30 billion between 2019 and 2020.

Luis Gonzali, co-director of investments at Franklin Templeton Investments in Mexico, said the \$5 billion will "enter and leave, without any major impact" on the company's long-term prospects.

"Lowering taxes and capitalizing in small amounts does not solve the underlying problem: lack of infrastructure, capital supporting unprofitable projects, lack of exploration," he said. "But it will help it survive more comfortably throughout the year."

### **U.S. forecasts record combined U.S. soy, corn acreage for 2021**

U.S. farmers will plant 182 million acres of corn and soybeans in 2021, the highest combined total for the two crops on record, the U.S. Department of Agriculture (USDA) forecast on Thursday at an annual outlook forum. Robust demand from exporters as well as domestic users has sent prices for both crops soaring to multi-year highs in recent months. The United States is the world's top corn exporter and the No. 2 soybean supplier after Brazil. USDA Chief Economist Seth Meyer projected U.S. 2021 plantings at 92 million acres for corn, 90 million acres for soybeans, 45 million acres for wheat and 12 million acres for cotton.

The acreage figures assume normal planting weather this spring, Meyer told reporters, adding that weather problems have curbed U.S. seedings in recent years. A return to normal weather, coupled with higher prices, should encourage farmers to expand acreage, he said.

A Reuters poll of analysts estimated that 2021 corn plantings would rise to 92.9 million acres and soybean seedings would total 89.4 million acres.

U.S. soybean stocks are expected to shrink to the smallest in seven years, just before the Northern

Hemisphere harvest ramps up in September, leaving just days worth of supplies.

The USDA this month projected U.S. soybean imports for the 2020/21 marketing year that ends Aug. 31, 2021, at 35 million bushels, up from 15 million in 2019/20. An increase in soybean plantings this spring could limit such imports despite the tight supplies, Meyer said.

"We often import small amounts of these products. But at 90 million acres (of soybeans), under normal weather, it's not something that we are going to have to do a lot of," Meyer said.

The USDA projected U.S. agricultural exports for fiscal 2021 at a record \$157 billion, an increase of \$21 billion over FY2020, with exports to China reaching a record \$31.5 billion.

"There is an expectation, I think by USDA too, that the export picture looks to be pretty solid," Meyer said.

However, he cautioned that estimates of China's demand for grains and soy are clouded by a lack of transparency. CBOT corn futures surged after the USDA confirmed massive private sales of U.S. corn to China in January, but traders are unsure whether the feed grain is being consumed or stockpiled.

"While we think there is a big demand internally - and that this is largely being used while they stabilize stocks, and that that demand will continue at least for the next season - we don't have really good ways to observe this, and they (Chinese officials) certainly don't report it," Meyer said.

The USDA is scheduled to release its supply and demand outlooks for U.S. grains and oilseeds on Friday.

### **Golden quarter for miners Newmont, Barrick as high prices help profit beat**

Newmont Corp and Barrick Gold Corp unveiled higher dividends as the world's top two gold producers share with investors the benefits of higher prices for the metal after trouncing Wall Street earnings estimates.

A 25% surge in gold prices last year, supported by unprecedented stimulus measures, has offered miners a lifeline following production disruptions due to the COVID-19 pandemic.

Cost-conscious executives are also prioritizing investor returns over production growth, hesitating to spend on pricey projects that often take years to break even.

Newmont raised its quarterly dividend by 38% and pledged to return up to 60% of incremental free cash flow to shareholders, provided gold prices stay above \$1,200 per ounce.

Barrick left its quarterly payout unchanged at 9 cents per share, while proposing a \$750 million special dividend for 2021 after it sold assets worth \$1.5 billion last year.

The special payout provided an opportunity for Barrick to assess the economic environment before deciding on any formal dividend policy, the Toronto-based miner's Chief Executive Officer Mark Bristow told Reuters.

Barrick's capital return plan comes days after Warren Buffett's Berkshire Hathaway Inc exited its stake in the miner.

While Bristow did not comment on the Berkshire move, he said there remains significant interest from generalist funds in the stock.

The miner's Canada-listed shares rose about 21% through 2020, while Newmont gained about 39%. The stocks have given up some gains since the start of this year as COVID-19 vaccine roll-outs buoyed investor confidence in other assets.

On an adjusted basis, Barrick earned 35 cents per share for the reported quarter, beating estimates of 32 cents, according to Refinitiv IBES data. Newmont reported a profit of \$1.06 per share, excluding items, compared with estimates of 95 cents.

### **COLUMN-Unusually dry February renews risk to Argentina's soybeans and corn -Braun**

After plentiful January rainfall that saved Argentine corn and soybeans from potential disaster, this month is on pace to be the country's second-driest February in more than three decades, once again raising harvest concerns. Bumper crops were never expected in 2021 for the No. 3 corn and soybean exporter, but last month's rainfall had some estimates on the uptrend. Crop conditions remain stable, though forecasts suggest Argentina is nearly two weeks away from its next substantial rainfall opportunity. Soybean planting began in earnest in November, while corn planting started more than a month earlier. Rainfall between October and December hit a 10-year low across the country's grain belt, and soil moisture reserves were at a 12-year low for the time of year by the end of December.

January rainfall was nearly 30% above the month's recent average. That set crops up well to enter the crucial yield-formation stages in February and beyond, but precipitation has again turned sparse.

The rest of the month will likely remain dry, with weather models as of Thursday predicting the first week of March could feature the next round of rains.

Total rainfall this month will likely be just half of what is normal. February 2018 was the driest in at least 30 years, some 75% below the five previous years. Thin rainfall throughout that entire season coupled with hot temperatures led to one of the most disastrous harvests on record.

Crop conditions are holding up well despite the dry spell. This week in the top three provinces of Cordoba, Buenos Aires and Santa Fe, the portions of soybeans rated good or very good were 87%, 84% and 98%, respectively. Those are all within 3 percentage points of the end-of-January scores.

Corn in Buenos Aires is 4 points better than three weeks ago at 93% good or very good, and Santa Fe corn is unchanged at 89%. But corn in Cordoba stands out

among the other scores with just 69% good or very good, down 2 points in three weeks.

Cool temperatures have been a saving grace for the Argentine crops, and the grain belt is on pace for the coolest February in more than 20 years. Temperatures over the next couple of weeks are forecast at closer to normal levels and possibly a bit above, but excessive heat is not in the cards.

### **OK CROP ON DECK**

There are not many years with which to compare given such a dry February, and while that condition is not necessarily a death sentence for the crops, there are some varying circumstances.

For example, strong soybean and corn yields were observed in 2019, and that February was the third-driest since at least 1988. January 2019 rainfall was plentiful as in 2021, but unlike the present season, precipitation was abundant in late 2018 during planting and soil moisture was closer to average. March 2019 rainfall was also average.

History suggests that Argentina's corn and soybeans, like crops in the United States, can combat hot temperatures with high rainfall or low rainfall with cool temperatures, and the latter has helped prevent failure in 2021.

Last week, the Rosario grains exchange bumped its 2020 -21 forecast for Argentina's soy harvest to 49 million tonnes from 47 million previously. Corn rose to 48.5 million from 46 million, and those improvements were based on the abundant January rains.

On the same day, the U.S. Department of Agriculture left its outlook for soybeans and corn unchanged from the previous month at 48 million and 47.5 million tonnes, respectively. USDA's soy and corn yields would be three-year lows, about 10% and 9% below the long-term trend, so the agency is by no means expecting a stellar performance.

On Thursday, the Buenos Aires Grains Exchange kept estimates for both crops at 46 million tonnes after having pared estimates a couple weeks ago due to dryness, though it was suggested that the success of crops would depend on upcoming rain.

### **FOCUS-Investors seed indoor farms as pandemic disrupts food supplies**

Investors used to brush off Amin Jadavji's pitch to buy Elevate Farms' vertical growing technology and produce stacks of leafy greens indoors with artificial light.

"They would say, 'This is great, but it sounds like a science experiment,'" said Jadavji, CEO of Toronto-based Elevate.

Now, indoor farms are positioning themselves as one of the solutions to pandemic-induced disruptions to the harvesting, shipping, and sale of food.

"It's helped us change the narrative," said Jadavji, whose company runs a vertical farm in Ontario, and is building others in New York and New Zealand.

Proponents, including the U.S. Department of Agriculture (USDA), say urban farming increases food security at a time of rising inflation and limited global supplies. North American produce output is concentrated in Mexico and the U.S. Southwest, including California, which is prone to wildfires and other severe weather.

Climate-change concerns are also accelerating investments, including by agribusiness giant Bayer AG into multi-storey vertical farms or greenhouses the size of 50 football fields.

They are enabling small North American companies like Elevate to bolster indoor production and compete with established players BrightFarms, AeroFarms and Plenty, backed by Amazon.com Inc founder Jeff Bezos.

But critics question the environmental cost of indoor farms' high power requirements.

Vertical farms grow leafy greens indoors in stacked layers or on walls of foliage inside of warehouses or shipping containers. They rely on artificial light, temperature control and growing systems with minimal soil that involve water or mist, instead of the vast tracts of land in traditional agriculture.

Greenhouses can harness the sun's rays and have lower power requirements. Well-established in Asia and Europe, greenhouses are expanding in North America, using greater automation.

Investments in global indoor farms totaled a record-high \$500 million in 2020, AgFunder research head Louisa Burwood-Taylor said.

The average investment last year rose sharply, as large players including BrightFarms and Plenty raised fresh capital, she said.

A big funding acceleration lies ahead, after pandemic food disruptions - such as infections among migrant workers that harvest North American produce - raised concerns about supply disruptions, said Joe Crotty, director of corporate finance at accounting firm KPMG, which advises vertical farms and provides investment banking services.

"The real ramp-up is the next three to five years," Crotty said.

Vegetables grown in vertical farms or greenhouses are still just a fraction of overall production. U.S. sales of food crops grown under cover, including tomatoes, cucumbers and lettuce, amounted to 790 million pounds in 2019, up 50% from 2014, according to the USDA.

California's outdoor head lettuce production alone was nearly four times larger, at 2.9 billion pounds.

USDA is seeking members for a new urban agriculture advisory committee to encourage indoor and other emerging farm practices.

#### PLANT BREEDING MOVES INDOORS

Bayer, one of the world's biggest seed developers, aims to provide the plant technology to expand vertical agriculture. In August, it teamed with Singapore sovereign

fund Temasek to create Unfold, a California-based company, with \$30 million in seed money.

Unfold says it is the first company focused on designing seeds for indoor lettuce, tomatoes, peppers, spinach and cucumbers, using Bayer germplasm, a plant's genetic material, said Chief Executive John Purcell.

Their advances may include, for example, more compact plants and an increased breeding focus on quality, Purcell said.

Unfold hopes to make its first sales by early 2022, targeting existing farms, and start-ups in Singapore and the United Kingdom.

Greenhouses are also expanding, touting higher yields than open-field farming.

AppHarvest, which grows tomatoes in a 60-acre greenhouse in Morehead, Kentucky, broke ground on two more in the state last year. The company aims to operate 12 facilities by 2025.

Its greenhouses are positioned to reach 70% of the U.S. population within a day's drive, giving them a transportation edge over the southwest produce industry, said Chief Executive Jonathan Webb.

"We're looking to rip the produce industry out of California and Mexico and bring it over here," Webb said.

Projected global population growth will require a large increase in food production, a tough proposition outdoors given frequent disasters and severe weather, he said.

New York-based BrightFarms, which runs four greenhouses, positions them near major U.S. cities, said Chief Executive Steve Platt. The company, whose customers include grocers Kroger and Walmart, plans to open its two largest farms this year, in North Carolina and Massachusetts.

Platt expects that within a decade, half of all leafy greens in the United States will come from indoor farms, up from less than 10% currently.

"It's a whole wave moving in this direction because the system we have today isn't set up to feed people across the country," he said.

#### 'CRAZY, CRAZY THINGS'

But Stan Cox, research scholar for non-profit The Land Institute, is skeptical of vertical farms. They depend on grocery store premiums to offset higher electricity costs for lighting and temperature control, he said.

"The whole reason we have agriculture is to harvest sunlight that's hitting the earth every day," he said. "We can get it for free."

Bruce Bugbee, a professor of environmental plant physiology at Utah State University, has studied space farming for NASA. But he finds power-intensive vertical farming on Earth far-fetched.

"Venture capital goes into all kinds of crazy, crazy things and this is another thing on the list."

Bugbee estimates that vertical farms use 10 times the energy to produce food as outdoor farms, even factoring

in the fuel to truck conventional produce across country from California.

AeroFarms, operator of one of the world's largest vertical farms, a former New Jersey steel mill, says comparing energy use with outdoor agriculture is not straightforward. Produce that ships long distances has a higher spoilage rate and many outdoor produce farms use irrigated water and pesticides, said Chief Executive Officer David Rosenberg.

Vertical farms tout other environmental benefits.

Elevate uses a closed loop system to water plants automatically, collect moisture plants emit and then re-water them with it. Such a system requires 2% of the water used on an outdoor romaine lettuce operation, Jadavji said. The company uses no pesticides.

"I think we're solving a problem," he said.

### **COLUMN-OPEC+ under pressure to boost output as oil climbs towards peak: Kemp**

Saudi Arabia's oil minister has called for a cautious approach to raising production, even as prices surge and many traders anticipate an increasingly severe shortage of petroleum later this year.

"We are in a much better place than we were a year ago, but I must warn, once again, against complacency. The uncertainty is very high, and we have to be extremely cautious," the minister said in a speech on Wednesday.

In contrast, futures markets point to a rapid tightening of supply, with front-month Brent up more than \$25 per barrel or 65% in just over three months since successful vaccine trials were announced in early November.

Brent's six-month calendar spread has surged into a backwardation of more than \$3.70 per barrel, putting it in the 94th percentile for all trading days since 1990, and indicating traders expect a rapid depletion in oil stocks.

The spread was this strong for brief periods during 2019 and in the first few weeks in 2020, flashing expected tightness, but the last time it was this tight on a sustained basis was in 2013.

### **OPEC+ AND TRADERS**

Disagreements between the Saudi oil minister and traders about the forecast balance between production and consumption historically have been common at this point in the price cycle.

Saudi Arabia and other producers in the Organization of the Petroleum Exporting Countries, as well as the broader group of allies led by Russia (OPEC+), tend to be over-pessimistic about consumption early in the upswing.

Part of the reason is fear of a return to low prices and revenues when memories of the recent slump are still fresh. "The scars from the events of last year should teach us caution," as the Saudi minister said on Feb. 17.

But producers also have a financial incentive to err on the side of caution. Under-forecasting consumption and over-forecasting production leads to a rise in prices and revenue windfall.

"If we have to err on over-balancing the market a little bit, so be it. Rather than quitting too early and finding out we were dealing with less reliable information ... stay the course," Saudi Arabia's previous oil minister said almost exactly three years ago in February 2018, when prices and spreads were at the same level they are now.

Rising prices are beneficial for government finances in the short term, even if they create the conditions for over-production and another slump in the long term.

The result is that it is quite normal for OPEC to be wary of raising output at this stage in the cycle – even as prices rise, inventories shrink and the market moves into a pronounced backwardation.

OPEC's slowness in raising production typically causes inventories to fall below average, and prices to overshoot on the upside, until a rise in output from non-OPEC producers causes prices to peak and then start to fall.

### **OPEC+ RESPONSE**

Speaking this week, the Saudi oil minister had a warning for any traders or analysts trying to guess how OPEC+ will respond to the recent rise in prices:

"On the subject of predictability, this also applies to those who are trying to predict the next move of OPEC+. To those I say – don't try to predict the unpredictable."

In fact, the outline of the price cycle and OPEC+ responses to it are both broadly predictable, in the sense that they follow a regular pattern of moves.

Every price cycle is slightly different. Some slumps are triggered by recessions, others by volume wars. And OPEC+ ministers come and go. But the basic decision-making framework and incentives stay largely the same.

The precise timing and magnitude of peaks and troughs cannot be forecast because the market is a complex adaptive system that has some chaotic features.

But the broad pattern of rising and falling prices, production, consumption, inventories and spreads, as well as OPEC's response to them, follows a familiar sequence.

The cycle can be split into a series of phases. The exact number is somewhat arbitrary and the phases can overlap and not be fully distinct

The attached chart book shows both a basic 4-phase and a more elaborate 6-phase version, but it can be split into even more phases if necessary.

The recent fall in inventories, rise in spot prices, and shift towards a steep backwardation, indicate the market is moving towards a peak (Phase II in the six-phase version of the cycle) or peaking (Phase III).

In previous cycles, at this point OPEC's resolution to continue restricting output would weaken (Phase II) and it would come under pressure to curb price increases by boosting production (Phase III).

The current upswing appears to be following the same pattern. In late 2020 and early 2021, several members of OPEC+ pushed for output increases and compliance appears to be fading for many members.



## TOP NEWS

With prices surging, the organisation already faces increasing calls to start boosting output or risk a resurgence of drilling and production from U.S. shale firms.

With inventories shrinking rapidly, the speed with which OPEC moves from Phase II to Phase III is likely to determine the eventual timing and scale of the overshoot – as well as the timing and depth of the subsequent slump.

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(Inside Commodities is compiled by Shoubhik Ghosh in Bengaluru)

For questions or comments about this report, contact: [commodity.briefs@thomsonreuters.com](mailto:commodity.briefs@thomsonreuters.com)

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