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More oil discoveries may become stranded assets

(Bloomberg; Aug. 15) - The Falkland Islands in the southern Atlantic were once at the forefront of a new era for the oil industry as companies scoured the planet for resources. Yet a decade after the discovery of as much as 1.7 billion barrels of crude in surrounding waters, the British overseas territory looks as remote as ever. Rather than the next frontier, the start of oil production is at risk of being added to the list of what companies call "stranded assets" that could cost them huge sums to mothball.

With the coronavirus crisis and global shift to cleaner energy dampening demand, fossil fuels will likely cost less than expected in the coming decades, while carbon emissions will get more expensive. These two predictions mean that tapping some fields no longer makes economic sense. The industry was already grappling with the energy transition, copious supply and signs of peak demand even before COVID-19. The pandemic will likely bring forward that peak and discourage exploration, according to Rystad Energy.

The consultant expects about 10% of the world's recoverable oil resources — some 125 billion barrels — to become obsolete. "There will be stranded assets," said Muqsit Ashraf, senior managing director for global energy at Accenture. "Companies are going to have to accept the fact." The Sea Lion project in the Falklands promised to be a world-class resource when Rockhopper Exploration found the field in 2010. But hundreds of millions of dollars later, the first phase still hasn't brought any oil to market.

The list of projects most at risk includes deepwater discoveries off Brazil, Angola, and in the Gulf of Mexico, said Parul Chopra, vice president for upstream research at Rystad. Canadian oil-sands projects in Alberta are also in doubt, he said.

Forecasts agree: 2019 global oil demand will not recover until 2022

(Bloomberg; Aug. 14) - Global oil demand will not return to 2019 levels until at least 2022 and the gap may be getting wider than it seemed a month ago. All three of the world's main oil forecasting agencies — the International Energy Agency, the U.S. Energy Information Administration and the Organization of Petroleum Exporting Countries — published new quarterly forecasts this week and none project oil demand back at 2019 levels by the end of 2021.

Transport fuels are proving particularly vulnerable, with jet fuel and gasoline hardest hit during the depth of the pandemic and remaining so as restrictions have been gradually eased. With the Northern Hemisphere summer season drawing toward its close at the beginning of September, time is running out for the normal seasonal boost to driving and flying. Commercial flights are languishing 40% below their peak January level.

The International Energy Agency placed the blame for its lower forecast firmly on transport fuels, noting that "the aviation and road transport sectors, both essential components of oil consumption, are continuing to struggle." Despite the worsening demand outlook, the IEA said, the OPEC+ group of oil-producing countries should still be able to drain the excess oil inventories built up over the first half of 2020 by the end of next year — as long as they all stick to the output promises they made to each other.

Oil traders less optimistic price recovery will continue

(Bloomberg commentary; Aug. 14) - Crude oil traders have become progressively less optimistic about the outlook for prices in recent weeks as concern over the lingering COVID-19 epidemic and its impact on the global economy have trumped output cuts by the OPEC+ group of producers. In retrospect, the second half of June and first half of July marked the peak of optimism about a rapid drawdown in excess oil stocks and a rise in prices. In the weeks since, positive sentiment has been ebbing away.

In the physical market, the price of the global benchmark, Brent crude, indicates a slower expected drawdown in crude stockpiles. It has held between \$42 to \$45 a barrel the past month, still far off from almost \$70 in January. On the futures side, Brent pricing also signals that traders expect inventories to remain plentiful. It all suggests the earlier price rally has run out of momentum. On every price and position measure, market sentiment has become neutral or mildly bearish, having been positive two months ago.

Though much market commentary has remained positive over the past seven or eight weeks, drawing inspiration from the drawdown in U.S. petroleum inventories, traders have become more cautious of late as the resurgent pandemic has complicated efforts to reopen major economies and restart international aviation. Softening market indicators have coincided with the upsurge in reported coronavirus cases in the United States since the middle of June, hindering efforts to return the economy to normal.

OPEC+ compliance at 97% in July

(Reuters; Aug. 17) - Compliance with OPEC+ oil output cuts is seen at around 97% in July, two OPEC+ sources told Reuters on Aug. 17, two days ahead of a meeting of key OPEC+ producers to review adherence with their production pact as demand slowly

recovers. A ministerial OPEC+ monitoring committee, known as the JMMC, is meeting on Aug. 19 to review the oil market and compliance with the global oil supply reduction pact. The JMMC advises OPEC and allies including Russia, a group known as OPEC+.

OPEC+ sources said they expect no change in the current production agreement and would rather focus on full adherence by countries such as Iraq, Nigeria, and Kazakhstan that have pledged to improve their compliance. In August, OPEC+ eased its production cuts to 7.7 million barrels per day from 9.7 million previously. "There is no change," one of the sources said. Russian Energy Minister Alexander Novak said last week there have been no additional proposals to change the deal.

At least 80 oil tankers still waiting to offload at northern Chinese ports

(The Wall Street Journal; Aug. 12) - Crude-laden tankers have been lining up for weeks at a time off China's coast as ports struggle to handle the millions of barrels of inbound oil that have swamped the country's overfilled storage sites. Brokers in Shanghai, Singapore, and London said at least 80 ships have been waiting for more than a month to unload their cargo in northern Chinese ports including Yingkou, Rizhao, and Qingdao, where congestion is the most severe.

More than half of the vessels are very large crude carriers, the workhorses of seaborne oil trade, which can move up to two million barrels each in a single sailing. China is the world's biggest oil importer, and as demand for oil has fallen during the coronavirus pandemic, VLCC freight rates have tumbled from an average \$129,000 a day in March and \$176,000 in April to around \$15,400 on the benchmark Middle East-to-China route. That is at least \$12,000 below average break-even levels for such ships.

"We had two ships waiting for more than 40 days to unload in Qingdao and Yingkou," said a Greek owner, who charters tankers to oil majors like Shell and ExxonMobil. "The longest we had to wait in the past was a week. They have no space to store the crude and the congestion is severe." Up to a quarter of all VLCCs, by industry estimates, have been hired for so-called floating storage, mostly by oil traders looking to sell at higher prices later this year on the belief that oil demand and pricing will recover. The ships stalled off the China coast were hired to deliver their cargoes, however, not for storage.

North Dakota up to 890,000 barrels a day, but far from peak 1.5 million

(Grand Forks Herald; ND; Aug. 14) - North Dakota's oil output stayed well below prepandemic levels in June as even the state's producers struggled to keep drilling rigs running and some workers on the job. Companies operating in the state produced about 890,000 barrels of oil per day in June — a slight increase from May by still far below the peak output of nearly 1.5 million barrels per day in February.

Department of Mineral Resources Director Lynn Helms said Aug. 14 that about 10,700 oil workers have been laid off. The number of drilling rigs running in North Dakota has dropped from 52 in March to only 11 in the field now. Helms said the rigs still running are mostly operated by big producers that are just trying to stay active, to ensure they will have workers and equipment in place whenever prices recover. He offered a grim outlook for the state's oil patch, saying the earliest rigs could come back is late 2021.

The state will likely see a temporary output boost when the July figures are released, but Helms said he wouldn't want to get people excited about an increase that will only last a few months. He characterized it as "flush production," where companies that had shut in wells are bringing them back online, but they won't be producing for long. Helms also noted that uncertainty over a Democratic win in the presidential race has compelled some producers to drill on federal land while they still have White House approval.

Occidental will be down to one drilling rig in the Permian

(Bloomberg; Aug. 12) - Occidental Petroleum will have just a single oil rig in the Permian Basin in the second half of the year, illustrating the scale of the shale industry's pullback and the company's debt woes. Last year's deal to buy Anadarko was supposed to consolidate Occidental's position as the largest producer in the Permian, but instead did the opposite. In May of last year, Occidental was running 12 rigs in the shale region of West Texas and New Mexico, while Anadarko had 10 — the total will now be one.

U.S. shale's explosive decade of growth and transformation of global energy markets came to an end when the COVID-19 pandemic struck this year, crushing demand for oil and busting open the fault lines of the debt-fueled boom. But a rebound in demand from the depths of the crisis in April is failing to translate into any real uptick in activity in the shale patch. Instead, production declines are expected to continue later this year.

There are only 176 oil rigs active in the U.S., the lowest since 2005. And it may get worse, with the number of drilling permits last month dropping to the lowest since September 2010, according to consultancy Rystad Energy. Activity "is not likely to materially recover this year," the Oslo-based researcher said in a note Aug. 11. For Occidental, the pullback is particularly humbling. The Anadarko deal was supposed to create a Permian giant to rival the majors. But the pandemic, combined with the debt, means that Occidental is now shrinking in production and market value.

Oil spill in Mauritius threatens unique marine environment

(BBC News; Aug. 13) - The amount of oil spilled from the Japanese-owned ship near the lagoons and coastal areas of southeast Mauritius is relatively low compared to the big oil spills the world has seen in the past — less than 10,000 barrels — but the damage it will do is going to be huge and long-lasting, experts say. Unlike most previous spills, this one is near two environmentally protected marine ecosystems and the Blue Bay Marine Park reserve, which is a wetland of international importance.

It's the location rather than the size that is causing greatest concern about the spill's environmental impact. The turquoise waters of the blue lagoon outside the coastal village of Mahebourg in Mauritius, the backdrop for numerous Bollywood movies, are now stained black and brown. The ship, the Wakashio, ran aground at Pointe d'Esny in late July, and oil began leaking from it early August. Satellite images show the spill stretching between the mainland at Pointe D'Esny and the island of Ile-aux-Aigrettes.

"The wind and the water currents are not helping, they are taking the oil toward the areas that have vital marine ecosystems," Sunil Mokshananda, a former Greenpeace strategist, who is on an island near the oil-spill site, told the BBC. The Mauritian marine environment is home to 1,700 species including 800 types of fish, 17 kinds of marine mammals and two species of turtles, according to the U.N. Convention on Biological Diversity. Coral reefs, seagrasses and mangroves make the waters rich in biodiversity.

Papua New Guinea negotiating LNG expansion in a weak market

(Oxford Business Group; Aug. 15) - Papua New Guinea started producing liquefied natural gas in 2014 when the ExxonMobil-led \$19 billion PNG LNG project came online ahead of schedule. The focus has now shifted to two more gas projects, which would more than double the country's LNG production capacity. However, as the government is determined to reap more economic and social benefits from resource development, there is no agreement with all the project developers on fiscal terms for the expansion.

According to international media, the government was seeking a revenue share for the projects in excess of 50%, well above the share negotiated for the PNG LNG venture. This stance is consistent with Prime Minister Marape's pledge when he assumed office to "ensure the oil and gas sector is beneficial to our country as well as our investors." However, the government may face difficulties as it seeks to maximize the benefits from its resource wealth without deterring the international capital and expertise required.

The negotiations are taking place against the backdrop of major disruption to global energy markets from the economic shutdowns caused by COVID-19. Spot LNG prices in North Asia fell to record lows below \$2 per million Btu in April. Although prices have risen, LNG exporters are expecting low prices until at least 2022. As such, developers must carefully evaluate the risks and rewards of any exploration and production

activities to ensure adequate returns on investment. Analysts warn that Papua New Guinea risks falling behind its competitors if investment decisions are not reached soon.

<u>Pipeline opposition could present problem for LNG developers</u>

(Natural Gas Intelligence; Aug. 14) – Developers of a second wave of U.S. liquefied natural gas export projects are watching the battle to stop pipelines in the country as it could upend some of their projects if more lines are delayed or canceled. "Additional pipeline capacity is and remains an issue that the LNG industry is especially concerned about as they're trying to develop projects," said LNG Allies CEO Fred Hutchison.

Environmental opposition doesn't pose an immediate threat to export facilities that are largely being developed in the more supportive region along the Gulf Coast, most of which already have key federal permits and export licenses. However, a series of setbacks for U.S. gas pipeline projects, especially in the Marcellus Shale, including the Atlantic Coast Pipeline, Mountain Valley Pipeline and Penn East systems, could increase gas costs and embolden opponents, creating more regulatory challenges.

The opposition "can lose some of the legal battles but win overall in terms of making these projects so challenging politically, and adding costs through delays and complexity, that it makes them not economically viable," said Boston Consulting's Alex Dewar, a manager at the firm's Center for Energy Impact. "They've kind of cracked the code of what it takes to stop not necessarily every project, but at least a few of them." What's more, he said, public opinion is shifting. Gas is not viewed as favorably in some parts of the nation as it once was, and opponents may use that to stop new pipelines.

U.S. companies will share in work for Mozambique LNG project

(Engineering News Record; Aug. 12) - At least 68 U.S. companies have been identified to supply equipment and services for engineering, procurement and construction of the Total-led \$23 billion two-train liquefied natural gas project in Mozambique. Firms from Florida, Georgia, Louisiana, New York, Oklahoma, Pennsylvania, Tennessee, Texas, and the District of Columbia will deliver exports of equipment and services worth \$1.8 billion with financing from the U.S. Export-Import Bank that is part of \$4.7 billion the bank approved to support U.S. businesses supplying the Mozambique LNG project.

Mozambique LNG was previously owned by U.S. energy firm Anadarko Petroleum and its partners in the Mozambique Area 1 concession before the asset was acquired by French oil and gas giant Total. The onshore LNG plant will process gas from the offshore field, with capacity to make 13.1 million tonnes per year of LNG. Site work has started with first LNG production planned for 2024.

Mozambique financing includes 28 banks, national credit agencies

(Natural Gas Intelligence commentary; Aug. 12) - Total's announcement last month that it had landed nearly \$15 billion in funding for its Mozambique liquefied natural gas project came as a surprise given the economic impact of COVID-19, as financing massive LNG export terminals is a complex and lengthy affair even in the best of times. The global gas supply glut and the coronavirus have combined to complicate the sanctioning and funding of LNG projects as financial institutions have been squeezed in the down economy. As a result, many projects have been delayed or canceled this year.

However, Total's ability to secure \$14.9 billion of financing for what would be Africa's first onshore LNG development in the midst of a virus outbreak offers insight into how projects are generally sponsored. The funding includes direct and covered loans from eight national export credit agencies (ECA), 19 commercial bank facilities and a loan from the African Development Bank. Debt typically comes from a syndicate of lenders. ECAs finance projects to ensure their domestic companies can get some of the work.

Mobile, small-scale LNG plants could be solution to gas flaring

(Houston Chronicle; Aug. 13) - Permian Basin oil producers, under increasing pressure to reduce the amount of natural gas that they burn during drilling operations, may have found a solution to convert waste gas into a transportable fuel. The answer could be small-scale liquefied natural gas plants, which chill the gas to minus 260 Fahrenheit, converting it to liquid that is easier to haul to power plants and other markets.

The technology has been used for decades to serve niche gas markets — such as the Northeast, where small-scale plants provide gas to power plants during high-demand winter months, and along Florida's Atlantic coast, where the plants fuel oceangoing vessels. In recent years, a new generation of even smaller LNG units have been developed. These units, which produce no more than 10,000 gallons of LNG per day, are small enough to be hauled by trucks to well sites.

Gas flaring in the Permian has come under increasing scrutiny and criticism, not only for the greenhouse gases and other pollutants spewed into the atmosphere, but also because it wastes a resource. Between April 2019 and April 2020, oil companies in the Texas portion of the Permian burned 146 billion cubic feet of natural gas — equivalent to the consumption of two-thirds of Texas households — according to state regulators.

One company seeking to establish a beachhead in the Permian is Edge LNG, which operates 42-foot-long processing plants known as Cryoboxes, which can turn 1 million cubic feet of gas per day into about 10,000 gallons of LNG. The cleaner-burning fuel could replace diesel in drilling rigs and fracking fleets, said Edge CEO Mark Casaday.

Australia favors gas over renewables in economic stimulus efforts

(Reuters commentary; Aug. 12) - Australia's government appears to be pivoting away from backing coal for future energy needs but hasn't quite made it all the way to renewables, instead waylaying into natural gas. An advisory board set up by Prime Minister Scott Morrison to map out strategies for economic recovery from the COVID-19 pandemic has confirmed it supports various subsidies to boost the natural gas sector.

Nev Power, the advisory board chairman and a former mining executive, told a Senate committee on Aug. 11 that the group was recommending government support for new gas pipelines and guaranteeing off-take agreements in order to support the expansion of the natural gas industry. In doing so, Australia becomes just one of a handful of countries proposing to stimulate fossil fuels over renewable energies. Power acknowledged that his group hadn't really looked at renewable energy projects in detail.

Australia is one of the few nations where fossil-fuel stimulus exceeds green measures. Others include Brazil, India and the U.S. China had the largest value of so-called "brown" stimulus at \$85 billion, but it also had \$155 billion of green projects planned, according to consultancy Eurasia Group. It may be just coincidence, but a characteristic shared by most countries pursuing brown stimulus is that their political leadership is right-leaning and somewhat populist in nature, with some also denying climate change.

Subsea gas line allows Chinese LNG import terminal to boost volume

(S&P Global Platts; Aug. 13) - China's largest private LNG terminal operator ENN Energy Holdings could nearly triple liquefied natural gas imports at its underutilized Zhoushan receiving terminal in eastern China with the start-up of a new subsea gas pipeline that connects the facility with demand centers in Ningbo city. The 50-mile-long pipeline resolves a major logistical bottleneck for Zhoushan LNG, which is built on an island and has been operating below capacity since it started up in 2018 due to government rules limiting the number of LNG trucks that can be sent inland.

ENN, which is also China's largest private city gas distributor, is expected to boost LNG imports at the Zhoushan terminal to around 2 million tonnes per year in 2020 from 732,000 tonnes in 2019, according to multiple market sources. At full capacity, the plant can receive 3 million tonnes per year. The new pipeline will also allow ENN to meet its long-term LNG contract obligations. The company has 5- to 10-year purchase agreements with France's Total, Chevron and Australia's Origin Energy totaling around 1.43 million tonnes per year, and has only been able to import a fraction of that volume.

Like many of China's coastal LNG terminals, ENN relies on trucks to supply LNG from the Zhoushan terminal to Zhenhai district, driving across a bridge or moving aboard rollon/roll-off ships each capable of carrying seven to nine LNG trucks, according to local market sources. ENN began construction of the subsea gas pipeline in mid-2019.