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Shell CEO Says Covid-19 May 'Capitalize Society' to Reduce Long-Term Oil, Natural Gas Demand

Royal Dutch Shell plc is buttressing against an uncertain outlook for global oil and natural gas demand this year after profits were decimated in the first quarter by the impact of Covid-19.

The Anglo-Dutch supermajor, a leading natural gas trader and deepwater operator, sliced the dividend by 66% to 16 cents, the first cut to the shareholder prize since the 1940s. The prudent thing for now is to preserve Shell's long-term health because the duration of the pandemic is unknown, CEO Ben van Beurden said during a conference call Thursday. CFO Jessica Uhl joined him at the mic.

"Considering the risks of a prolonged period of economic uncertainty, including the weaker demand for our products and lower and the less stable commodity prices, we do not consider that maintaining the current level of shareholder distributions is in the best interest of the company and its shareholders," van Beurden said. The dividend reduction alone is set to free up around $10 billion for the bottom line.

Real Economic Threats

Pressure on the energy industry "has mounted and the threats to economies around the world are real…"

The economic slowdown has cut into liquefied natural gas (LNG) demand, "a material demand drop compared to the projections earlier in the year," he said. "Similarly, the environment around refining and chemical margins remains challenging," with oil storage capacity a major issue.

Shell is forecasting significant price and margin volatility in (continued on page 29)

Cheniere Chief Says Price Negotiations, Force Majeures Off the Table During Pandemic

Cheniere Energy Inc. said Thursday it earned $53 million in first quarter revenue from customers that canceled liquefied natural gas (LNG) cargoes and elected to pay fees as global prices cratered and demand eroded from the Covid-19 pandemic.

The largest U.S. LNG exporter has contracted 85% of its production under long-term, take-or-pay contracts that generally allow customers to cancel cargoes up to 60 days before they're loaded. CEO Jack Fusco said the company won't quantify how many cargoes were canceled, or "make it a practice to offer details about ordinary interactions with our customers."

Given the economic upheaval caused by the pandemic, and the force majeures and cargo deferrals that have characterized the LNG market in recent months, Fusco also said the company has received "countless investor inquiries" regarding its long-term contracts.

"I remind you that our long-term contracts do not include provisions for renegotiations," he said of term buyers pushing for price reviews as global benchmarks have nosedived. "We intend to meet all of our contractual obligations, and in return, we expect our customers to do the same."

He stressed too that customers can't declare force majeure because of the pandemic. Cheniere's contracts "specifically exclude such events as the unavailability of, or any event affecting downstream facilities, changes in the customer's market factors or other commercial, financial or economic conditions. As such, depressed gas prices globally, or decreased gas demand from Covid-19, do not provide a valid, legal basis on which a counterpart can claim" force majeure.

Cheniere noted that the Dutch Title Transfer Facility price in Northwest Europe plunged 50% (continued on page 30)

News This Week

As Coronavirus Destroys Demand and Pricing, All Bets Off on Global E&P Capex, Says Raymond James

Upstream capital spending was predicted to make a bit of a comeback from 2019, but all bets are off for 2020 worldwide spending, with the United States likely to take the deepest plunge.

There is no doubt that capital expenditures (capex) across the energy complex are going to decline this year, as the Covid-19 pandemic has smothered demand for oil and gas. The annual spending survey by Raymond James & Associates Inc. issued on Monday, which (continued on page 2)

As Coronavirus Destroys Demand

(continued from page 1)

captures public company data accounting for 65-70% of capex, makes clear that oil and gas will find no refuge this year.

The results for January through March begin in earnest this week for the exploration and production (E&P) sector, and "even more companies will downwardly revise previous capital spending guidance," said the analyst team led by Pavel Molchanov. "While none of this is pleasant, it carries with it the seeds of an eventual oil market recovery: the cure for low oil prices is... low oil prices."

The "ultra-bearish" oil price, obviously, reflects the unprecedented demand destruction brought about by the coronavirus, which has been only partially offset by the production cuts recently enacted by the Organization of the Petroleum Exporting Countries and its allies, aka OPEC-plus.

"The big picture," said Molchanov, is that "global spending in 2019 was down 2%, and a much steeper 17% drop (in reality, even steeper) is on deck for 2020" across the worldwide complex.

The firm uses a bottom-up analysis of public company data, which offers a "reasonably close" outlook for international capex. However, the survey can be "way off" on U.S. E&P spend as it only accounts for around half of the industry, he said.

Private E&Ps in the United States, including those owned by private equity, as well as the U.S. operations of multinationals, are not included. Still, the widespread production shut-ins already underway would make it impossible to have an accurate top-down analysis.

"Even if oil were to recover to the $45-50 level by year-end, it is difficult to envision E&Ps outspending their already much-reduced budgets," Molchanov said. "Quite the contrary: we think that most will end up underspending, with cash preservation being the overriding objective in these extraordinary times. Furthermore, additional dividend cuts are inevitable," as several large E&Ps already have announced cutbacks.

Aggregate capex for Raymond James' global 50-company survey peaked in 2013 at $599 billion, followed by three years of "brutal austerity," with capex falling cumulatively by 54%, to $277 billion.

"The first green shoots of recovery came in 2017, with spending rising 6%... followed by a stronger 15% increase in 2018, but then a reversal to a 2% downtick in 2019," Molchanov said.

In the good old days, i.e. January, prices began the year up 30% from early 2019, with West Texas Intermediate (WTI) predicted early on to average in the high $50s for the year. By February's end, however, those prices were too far to see in the rearview mirror.

Last Monday (April 20), WTI fell off a cliff into negative territory. As the new week began, WTI front month had fallen by more than 26% and was trading at around $12.45/bbl.

The Cushing hub in Oklahoma already is near capacity, and E&Ps are shutting in production across the board.

Meanwhile, Reuters said Saudi Arabia was considering whether to reroute 40 million bbl in tankers destined to hit U.S. shores in the coming weeks. According to Reuters, Saudi Arabia Oil Co., aka Aramco, "said it is committed to its long-term contracts with customers with deliveries of crude shipments for April, May and June."

How a surfeit of supply may impact decisions by the U.S. *(continued on page 3)*

Weekly EIA Lower 48 U.S. Working Gas in Storage

Reported Statistics From the EIA for the Week Ending Apr 24

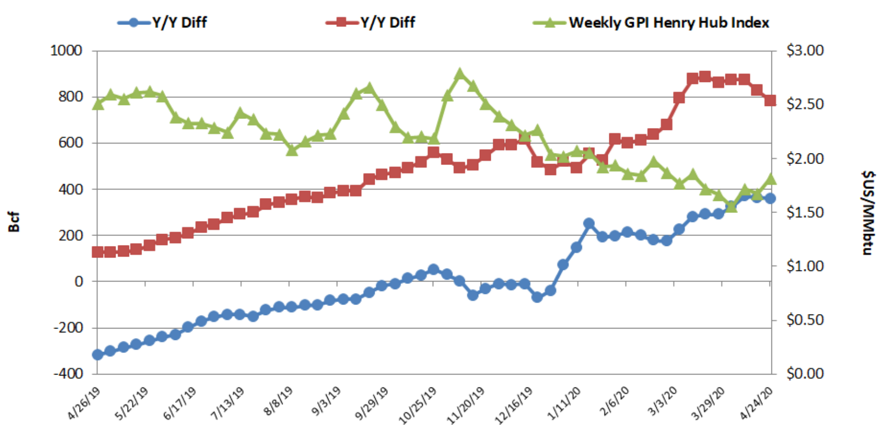
	This Week (Bcf)	Prior Week (Bcf)	Change (Bcf)	Year Ago (Bcf)	5-Year Avg. (Bcf)
East	405	400	5	271	306
Midwest	506	493	13	283	373
Mountain	103	96	7	74	117
Pacific	218	210	8	148	224
South Central	979	941	38	652	830
Total Lower 48	***2,210***	***2,140***	***70***	***1,427***	***1,850***

Actual vs. Weekly Storage Estimate

Range of Injection/Withdrawal Estimates: 59 to 80
Actual Injection/Withdrawal: 70
Year Ago Injection/Withdrawal: 114

Relationship of Storage Levels to NGI's Weekly Henry Hub Spot Market Price

Current Storage (Bcf):	2,210	Previous 5-Yr Avg. Storage (Bcf):	1,850
Last Year Storage (Bcf):	1,427	Difference to 5-Yr Average (Bcf):	360
Diff. to Last Year (Bcf):	783	*NGI's Weekly* Henry Hub Index:	$1.815



How to Interpret This Table: The data in the Reported Statistics From the EIA section are released by the U.S. Energy Information Administration each Thursday at 10:30 Eastern. For more information on the EIA's methodology, please refer to www.eia.gov. Actual vs. Weekly Storage estimates shows the actual reported weekly EIA injection/withdrawal figure versus the range of estimates from market analysts surveyed by NGI. The red line in the graph shows the difference between current working gas in storage vs. the amount at this time last year, while the blue line represents the current working strorage gas level compared to its average from the comparable period over the previous 5 years, as calculated by the EIA. The green line is the Henry Hub spot market price that appears in *NGI's Weekly Gas Price Index*.

Source: Compiled by NGI's Daily Gas Price Index from EIA & NGI's Weekly Gas Price Index data

E&Ps should become clearer this week as E&P earning season kicks into high gear. Supermajors with large domestic operations led by BP plc, ExxonMobil and Chevron Corp. and Royal Dutch Shell plc are scheduled to report.

The biggest of the oilfield services operators — Schlumberger Ltd., Halliburton Co. and Baker Hughes Co. — already have told the tale, however, forecasting a big decline in capex by customers through at least mid-year and likely much longer.

[*Want to see more earnings? See the full list of NGI's 1Q2020 earnings season coverage.*]

Based on the latest capex expectations foreshadowed by the E&Ps, still subject to what are likely more revisions, the Raymond James survey indicates capex will fall globally to $275 billion overall this year, bringing spending fractionally below the previous trough level in 2016.

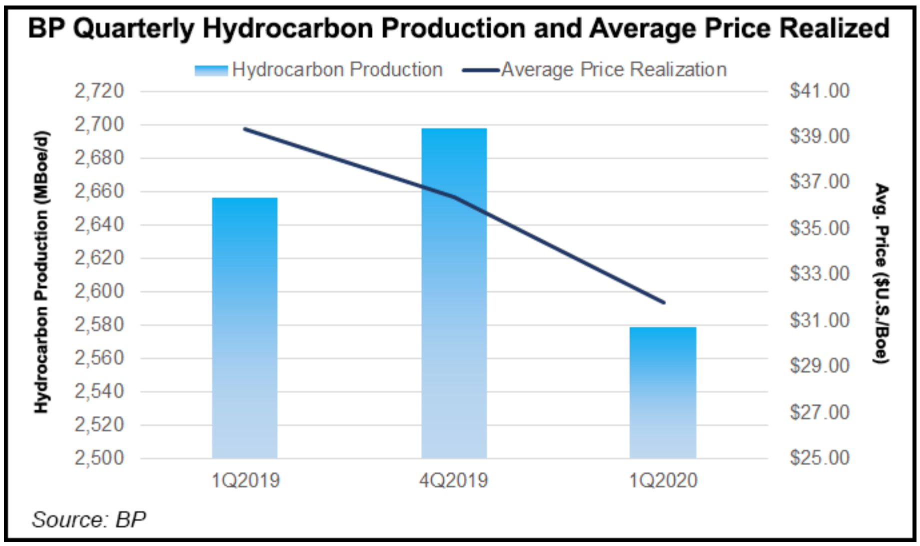
"When adding the latest cuts to those from the 2014-2016 down cycle, 2020 spending equates to a cumulative drop of 54% from the peak level of 2013," Molchanov said. "To clarify, this 54% drop comprises a combination of lower activity levels as well as lower industrywide costs.

"The relative proportions of these two variables naturally differ from region to region and from company to company. In 2020, however, the vast majority of the cuts reflect reduced activity."

It may seem difficult to imagine when — and if — the industry will recover.

"While it will obviously take time for fundamentals to return to something approaching normality," said Molchanov, "we remain convinced that global oil supply growth that can accommodate demand growth over the medium-term will ultimately require meaningful spending increases that can only occur with dramatically higher oil prices in the coming years." ■

BP Gripped by Coronavirus, as 1Q Oil Demand Disappears 'on Scale Never Seen Before'



London-based BP plc, kicking off quarterly results for the supermajors, saw its profits drained by two-thirds from a year ago as the impact of the coronavirus took a big bite out of the bottom line.

In an understatement, Group CEO Bernard Looney, presiding over his first quarterly call, said the energy industry "has been hit by supply and demand shocks on a scale never seen before."

The world is a different place than anyone would have imagined only a few weeks ago, he said during the call with analysts. "The coronavirus pandemic has gripped our world, people are losing their loved ones before their time, many more are afraid for their families, for their finances, their livelihoods, for their futures...and the question I get asked often, will life ever go back to normal?"

BP's underlying business overall performed well considering, but "things are not getting any easier given the demand destruction we are seeing," Looney said, pointing to the recent negative pricing for West Texas Intermediate oil, which is "something never seen before."

"It is a so-called perfect storm, but we are calling on our vast experience of navigating through difficult circumstances."

Challenging Outlook

BP is anticipating oil demand in the second quarter will decline worldwide by around 16 million b/d, about five times the demand destruction during the global financial crisis in 2008-2009. The coronavirus only added to the "challenge for the oil outlook into the future," he said.

BP earlier in April reduced capital expenditures (capex) by 25% for the year to around $12 billion, with most of the cuts to the Lower 48 business, BPX Energy.

Upstream CFO Murray Auchincloss said capex could be "flexed down an additional $1-2 billion if necessary." Most of the capital "interventions" in the upstream "are being made in areas where we do not expect a significant impact on 2020 cash generation at lower prices.

"This includes delaying exploration and appraisal activities, curtailing development activities and lower-margin areas, as well as rephasing or minimizing spend on projects in the early phases of development.

"Overall, we expect these capital interventions to reduce 2020 underlying production by around 70,000 boe/d on an annual basis," he said. The reduction in output is expected to extend into 2021.

A decline in upstream volumes is not as important as cash flow and returns, Auchincloss said. "The volume decline will just be an outcome of decisions we make, and... we'll be very, very focused on our scarce capital dollars, focusing that toward the highest return opportunities that we have both in the upstream and the downstream and just very, very focused on margin and returns."

BP has cut its Lower 48 rig count from 13 at the start of *(continued on page 4)*

the year to one-to-two going forward.

Thus far, BPX has not shut-in any production in the Lower 48 from its operated businesses "because we couldn't find a market or we couldn't find storage," Investor Relations chief Craig Marshall said. "Right now, we feel pretty good about that...Time will tell on how long the broader picture will recover.

"We're seeing at least 1 million b/d come out of tight oil in the U.S. this year. It might be higher than that, obviously. People are looking at oilsands and other parts of the world, so I think it's too early to say what the ultimate response will be, but I think many will struggle to find a home" for supply "and we will see shut-ins increased through the second quarter."

The BPX volumes may be down, but "that is one of the attractive things about the business," Looney said. The Lower 48's unconventional plays allow operators to quickly shift strategy in one direction or another. "But the economics of the business and the investment proposition remains strong in the right environment, and we have the ability to flex it up and down depending on what we see," Looney said.

[*Want to see more earnings? See the full list of NGI's 1Q2020 earnings season coverage.*]

BP initially began to see the impacts to its business in early January from the coronavirus pandemic, Group CEO Brian Gilvary said. Gilvary, on his final BP conference call, announced his retirement in early January; Auchincloss is taking over as CFO.

Energy demand first was swamped in Asia, mostly in China. Further compounding the demand issue was the price war launched between Russia and the Organization of the Petroleum Exporting Countries and its allies (OPEC-plus). In March, Brent and BP's refining marker margin (RMM) was at levels not ever seen before, while Henry Hub natural gas also hit multi-year lows, Gilvary said.

Improving LNG Costs

The imbalance is going to be somewhat improved with the Russia and OPEC-plus agreement to reduce supply, "but it's unlikely to prevent material supply shut-ins by producers in the near term, some of which may be difficult to reverse…

"Gas markets were challenged before the pandemic following significant growth in supply over the last couple of years," he said. The onus now falls on improving liquefied natural gas (LNG) demand "and bringing liquefaction margins below operating costs in the United States."

Gas trading in the first quarter was "strong," while it was, as expected, below average for oil. There remains "an exceptional level of uncertainty regarding the near-term outlook for prices and product demand," Gilvary said. "There is a risk of more sustained consequences" depending on how the effects of the pandemic are handled.

In BP's downstream segment, the fuels marketing business should be significantly lower in key North American and European businesses, where retail fuel volumes have fallen by around half in recent weeks. Demand for aviation fuel is off by around 80%.

As to how the year will shake out, it's a guesstimate because of the "rapidly evolving situation," Auchincloss said.

"We now expect to rebalance our sources and uses of cash at the Brent price of below $35/bbl, Henry Hub price of $2.50/MMBtu" on an RMM of $11/bbl in 2021. "The price assumptions for Henry Hub and RMM are around 20% below our prior guidance."

BP is using "balance point" as opposed to breakeven prices to make clear "about how sensitive we are to things other than Brent, which makes up about 50% of our sensitivity," Auchincloss said. "RMM and natural gas make up an equal amount as well. So we think the balance point is a much more important point to anchor ourselves" on a balance point of $35 Brent and $2.50 Henry Hub.

"We don't control the oil price," said Looney. "We don't control the gas price. We do control our cost base. We do control our investment. And that's where we're very much focused, so we're confident for sure that we have the levers available to us. It's not a free pass. It's not an automatic right, and therefore, we must deliver on what we set out and I hope...you have confidence that we will."

BP earned $791 million net ($3.92/share) in 1Q2019, versus $2.4 billion ($12.67) in the year-ago quarter, reflecting a 67% decline. Debt climbed by $6 billion in the quarter to $51.4 billion, while the debt-to-capital ratio, or gearing, rose to 36%.

"Like many companies, we're doing our best to navigate these unprecedented circumstances as best we can," Looney said. "We probably won't get everything right...We can't know really how things are going to unfold here, but we're very much in control of the things that we control…

"There is a plan. It's a clear plan. We're in action. We are 100% focused on the three things: protecting our staff — the mental and physical health of our staff, supporting our communities, and strengthening the finances of the company."

BP employees, said Looney, "are coming to work every day, looking out for each other and stepping up where they can to help people, and all the time running the business safely and efficiently...That's coming with a lot of personal sacrifice, but they're really rising to the challenge and we're all very proud of them."

In addition to BP's philanthropic efforts, Looney said he and Chairman Helge Lund "believe that this is a mental health challenge as much as a physical health threat, and we are both donating 20% of our salaries for the rest of this year to mental health charities. We are all in this together. I am confident that by supporting each other collectively as a society we will make it through this crisis and rebuild better and stronger." ■

Low Demand Takes Toll on Near-Term Natural Gas Forwards

As the implications of the coronavirus and oil market collapse continue to unravel, natural gas forward prices retreated a bit during the April 23-29 period.

Though volatility remained in the limelight, June forward prices fell an average of only 6.0 cents, while the balance of summer (June-October) dropped an average of 4.0 cents, according to *NGI's Forward Look*.

The back of the curve continued to be supported by an expected pullback in production, with small *(continued on page 5)*

gains seen beginning next winter and extending through calendar year strips, *Forward Look* data show.

The double whammy of the Covid-19 pandemic and the unparalleled oil market tailspin has spurred significant volatility in the natural gas market, with extensive demand destruction already showing up in various datasets.

Genscape Inc. said its sample of U.S. industrial natural gas demand was down more than 12% year/year for the week ending April 25, continuing a decline that began in late March because of the coronavirus. Total U.S. industrial demand in April 2019 averaged 22.4 Bcf/d, according to the Energy Information Administration (EIA), implying a more than 2.5 Bcf/d reduction year/year, according to Genscape.

"Demand is still near the five-year average; however, this is a bit misleading as U.S. industrial demand has grown considerably over the past five years," Genscape analyst Dan Spangler said. Genscape's sample of industrial demand has also increased to include a larger share of the total demand, as several large industrial users have come online that pull directly from interstate pipelines.

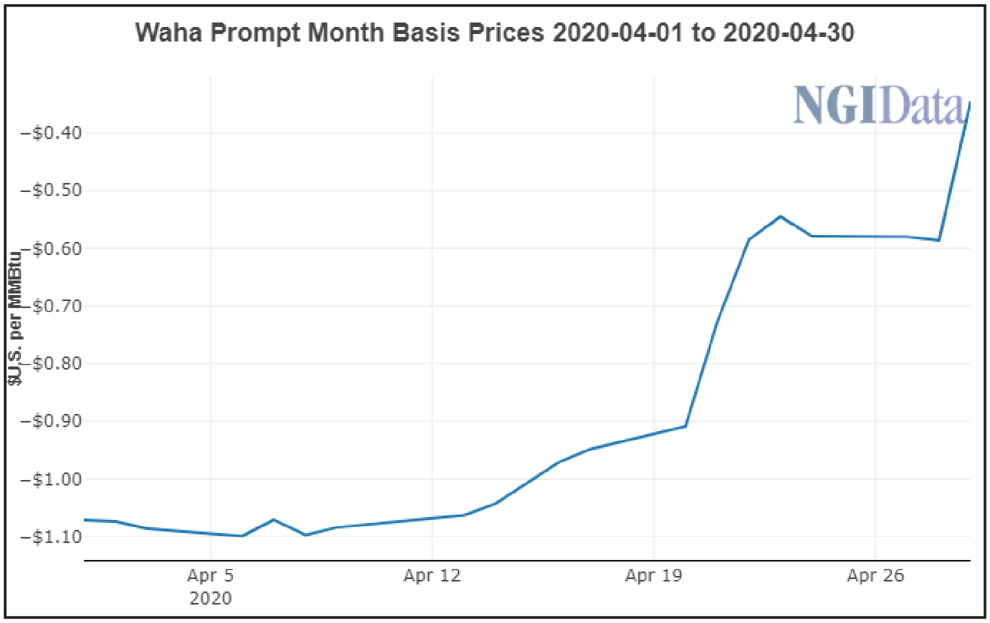
A string of bearish indicators also has been reflected in the EIA's weekly storage inventory reports. However, it appears the market at least has started to more accurately assess the demand-side implications of the coronavirus.

The EIA reported a 70 Bcf injection into storage inventories for the week ending April 24, which compares with last year's 114 Bcf injection for the similar week and the five-year average build of 74 Bcf.

Ahead of the EIA report, a Bloomberg survey of six analysts produced a range of 64 Bcf to 76 Bcf, with a median of 71 Bcf. A Reuters poll of 17 market participants showed injections ranging from 59 Bcf to 80 Bcf. *NGI* also modeled an 80 Bcf build.

Broken down by region, the South Central reported a 38 Bcf injection into inventories, including a 24 Bcf build into nonsalt facilities and a 13 Bcf add in salts, according to EIA. Midwest inventories grew by 13 Bcf, while the Pacific region added 8 Bcf and the East added 5 Bcf.

Total working gas in storage as of April 24 stood at 2,210 Bcf, 783 Bcf above last year at this time and 360 Bcf above the five-year average, EIA said.



Bespoke Weather Services, which had projected a 71 Bcf injection, said despite some balance improvement in its modeling versus the previous week, the overall theme continued to be a supply/demand balance that is "still quite loose, not bullish," at least at the front of the curve.

The forecaster sees mild weather likely keeping the pressure on gas prices for a few more weeks until some early-season heat starts to build in the South and East. Although Bespoke noted that some coronavirus-induced shutdowns are starting to ease, liquefied natural gas (LNG) demand also is falling.

Grim For LNG

The outlook for U.S. LNG has grown increasingly grim over the past couple of months. After emerging from a mild winter that left global inventories at historically high levels and a glut of supply in the market, the coronavirus poured salt in the wound for gas exports.

More than 20 cargoes reportedly have been canceled for June, sending domestic export terminal utilization down by as much as 40%, according to Poten & Partners. Even worse, the firm sees cancellations extending through September. Gobally, more are needed, probably to the tune of 30-40 cargoes a month through October.

Leading LNG developer Cheniere Energy Inc. on Thursday reported another solid quarter, producing and exporting 128 cargoes of LNG, with more than 55% delivered to Europe. In addition, long-term sales and purchase agreements tied to the second production unit of the Corpus Christi terminal were set to begin Friday (May 1).

However, COO Anatol Feygin said Cheniere is seeing the coronavirus' impact, "as gas demand in Europe's six main gas markets declined year/year in the first quarter." Although management declined to discuss in detail how many cancellations it received from offtakers, the Houston-based company's earnings included about $50 million in revenues associated with canceled cargoes. Cheniere's contracts do not include provisions for renegotiations.

"While the demand impact of the coronavirus remains uncertain in the near term, we expect many concerns will be alleviated in the coming months as the world recovers from the pandemic downs, lockdowns are lifted and economic activity resumes," Feygin said. "Looking beyond the current market events, we believe the long-term fundamentals have not changed in that LNG remains a reliable competitive and flexible solution for the energy needs of both Asia and Europe."

However, the likelihood of more LNG cancellations occurring over the coming months "highlights the economic vulnerability of the situation," according to EBW Analytics Group. As Henry Hub spot prices briefly surpassed key international benchmarks in recent days, the firm said "an economic problem rapidly arises" if higher-cost U.S. LNG is intended to flow from the Gulf Coast to lower-cost international destinations.

"This need to *(continued on page 6)*

continue exporting LNG and maintain elevated power sector coal displacement helps put a soft ceiling on Nymex futures, at least for the 2020 injection season," EBW said.

Shifting Supply

As the calendar flips to May, the market is anticipating the start of a substantial decline in production.

Although Lower 48 production already is about 7 Bcf off late-November highs and a host of exploration and production companies have announced extensive shut-ins, this hasn't yet translated into meaningful associated gas declines, according to Tudor, Pickering, Holt & Co. (TPH) analysts. This is largely because around 1 Bcf/d of flared gas exited the first quarter, which the TPH team said may need to be worked through the system before sales gas is impacted.

"Flow data for the April 27-May 1 week shows aggregate U.S. gas volumes down roughly 0.9 Bcf/d versus the March average, with the Midcontinent and Texas being the largest contributors with declines of 0.4 Bcf/d and 0.3 Bcf/d, respectively," TPH said.

Waha pricing provides a window into Permian Basin flaring, and with basis contracting to around minus 52 cents from a 1Q2020 average of $1.37, it appears flared volumes have come down significantly, according to TPH. In the Bakken Shale, the firm also has begun to see sales volumes decline, but the drop has been minimal so far.

North Dakota Department of Mineral Resources Director Lynn Helms has indicated oil shut-ins have reached around 300,000 b/d, "but with March flaring levels of around 0.3 Bcf/d, we estimate the first roughly 200,000 b/d would have had no impact on sales," TPH analysts said. "From this perspective, it isn't surprising the observed impact to sales gas has been minimal so far, but with up to 3 million b/d of shut-ins expected, sales gas should show meaningful impacts in the coming weeks."

Improving Waha

Fresh off a week in which Permian forward pricing far outperformed the rest of the country, West Texas prices continued to fare marginally better than other markets.

Waha June forward prices slipped 3.0 cents between April 23-29 to reach $1.524, while the balance of summer lost 4.0 cents to hit $1.770, according to *Forward Look*. Winter prices emerged in positive territory as the winter 2020-21 strip climbed 4.0 cents to $2.41, as did prices for next summer, which rose 5.0 cents to $2.04.

The Waha forward curve indicated market expectations for higher prices beginning in May, "and the possibility of a summer in which Permian gas prices could be some of the strongest on a consistent basis since negative pricing first appeared in the basin back in 2018," according to RBN Energy LLC.

RBN analyst Jason Ferguson noted that there are now several months along the Waha summer 2020 curve that are priced at less than 40 cents below Henry Hub, and most of this year is now priced above the 2021 curve. While the rally in Waha basis over the last few weeks has been "breathtaking," according to the analyst, prices for the last few months of 2021 have exhibited a more muted price response, an indication that the market is pricing in the impact of two major Permian natural gas takeaway projects set to come online next fall.

Nevertheless, the collapse of crude prices has sent U.S. rig counts plunging as producers drastically scale back their capital expenditure plans. The Permian has been particularly hard hit, given its focus on oil drilling, Ferguson said, with rig counts in the basin having plunged by more than 40% since the beginning of the year.

"In fact, current prices suggest that Permian natural gas production will decline modestly by the end of this year, which will help alleviate pipeline constraints in the basin even before new pipelines come online in 2021," the analyst said. "However, a supply reduction may come even sooner, as some producers have already announced curtailments of production for as early as May. As a result, price improvement for Waha natural gas may arrive quicker than expected."

Maintenance Underway

Elsewhere across the Lower 48, forward markets posted moderate declines through the summer, with small gains beginning next winter and continuing further out the curve.

On the pipeline front, during the first week of May, Texas Eastern Transmission (Tetco) is set to conduct several outages along its southern 36-inch diameter Line in the M3 zone. On Friday (May 1), the pipeline planned to conduct cleaner tool runs on Line 2 in Pennsylvania from Chambersburg to Marietta. Flows from Chambersburg to Marietta could be impacted by as much as 608 MMcf/d compared to the two-week max and 411 MMcf/d compared to the two-week average for the one-day event, according to Genscape analyst Josh Garcia.

On Sunday (May 5) and Wednesday (May 8), Tetco is scheduled to conduct cleaner tool runs on Lines 1 and 2 from Uniontown to Bedford, impacting flows from Bedford to Heidlersburg by as much as 350 MMcf/d compared to the two-week max but only by 108 MMcf/d compared to the two-week average, Garcia said. The pipeline also is set to conduct separate cleaner tool runs on the same segment and lines on Monday (May 6) and on May 13, which could impact 199 MMcf/d of flows compared to the two-week max, but they were not impactful compared to the two-week average.

Meanwhile, Tetco also declared a force majeure from an unplanned outage on Line 10 between its Berne, OH, and Holbrook, PA, compressor stations. This was only five days after the force majeure on Line 25 between the same two compressors was lifted, Garcia said.

"The notice specifically states that as a result, North to South capacity through Berne will be set to 1.51 Bcf/d, which is unusual as a normal operating capacity is reported as 1.28 Bcf/d, meaning capacity has been raised by the force majeure." Furthermore, scheduled flows through Berne are much higher than operating capacity regardless, averaging 2.06 Bcf/d over the last month, according to Genscape data.

"Reported operating capacity has not been changed at the time of writing, although flows through Berne and the Berne 30-inch line fell by 204 MMcf/d day/day," Garcia said. Although there is no estimated date of a return to service, the last force majeure on this segment was first declared on March 13 and lasted about six weeks.

Also of note, Entergy Corp.'s 1,100 MW Indian Point nuclear generating facility In New York was set to retire Thursday (April 30). The move is said to reduce the amount of zero-emissions power consumed in downstate New York and increase demand for gas-fired plants in the short run. ■

Coronavirus Heaps Ill-Timed Pressure on Oil, Natural Gas Supply Chains

The confluence of demand shock, oversupply and ongoing disruption imposed by the coronavirus pandemic is weighing heavily on crude oil and natural gas prices, while important components of the supply chain are handicapped as well — fueling concerns about roadblocks when demand does recover.

Factories and production facilities are closed or operating under strict protocols to safeguard workers. The limits are intended to slow the virus' spread, but they are impeding output of needed parts and supplies. Travel limitations also hurt companies' abilities to transport service personnel.

With companies' output and travel expected to only gradually return as restrictions lift in stages, analysts are concerned that lasting supply chain challenges could hamper natural gas and oil operations into 2021.

This "comes at a bad time for upstream services and equipment suppliers who are still recovering from the last downturn," Wood Mackenzie researchers said in a report this week. "Just as the upstream supply chain was starting to clamber back to its feet, it now faces the very real threat of collapse." This, by extension, "poses major challenges for the entire sector."

Already, Wood Mackenzie notes, "margins are thin and balance sheets stretched with high probability of further consolidation, restructuring and insolvency in the supply market."

Immediately, the greatest impact on both suppliers and operators is expected curtailment of final investment decisions (FID), given the economic uncertainty and strained budgets. Wood Mackenzie said these decisions could fall back to the levels of 2014-2016. "Most projects being considered for FID in 2020 will be pushed back to 2021 or beyond, at best."

The wildcard, of course, is the duration of the pandemic and its impact on activity. Protracted pressure would hasten investment cuts in technology, equipment and services. Upstream oil and gas would likely emerge lean and hindered by stubborn supply chain interruptions.

"It will have less capacity to respond to demand growth when the market recovers," Wood Mackenzie said. While "there may be opportunities for operators to extract minor price concessions in this lean period, the stability of the global upstream supply chain represents a major risk."

Rystad Energy analysts shared similar concerns. They noted that expense reductions and efficiency initiatives during the last commodities downturn "left little room for further cuts."

Overall, Rystad expects total cost compression in 2020 to reach 12%, with 9% relating to service prices and only 3% tied to efficiency improvements. "We expect cost improvements within shale of around 16%, in offshore of about 12% and in other onshore of 10%, leaving the cost competitiveness between these segments little changed." As such, operators "will not be able to rely on the supply chain to help bring down the breakeven costs of expensive projects."

Declining GDP

At the same time, the macroeconomic picture shows few signs of brightening. The U.S. Department of Commerce said Wednesday U.S. gross domestic product (GDP) shrank at a 4.8% annual rate in the first quarter — the first decline since 2014 and the most severe since the financial crisis of 2008. Most economists expect a much steeper GDP drop in the second quarter before the beginnings of a recovery later in 2020.

Chief economist Scott Brown at Raymond James & Associate Inc. pointed to jobless levels as the most glaring example of weakness. About 26.5 million U.S. workers — or roughly one out of seven Americans in the labor force — filed a claim for unemployment benefits in the last five weeks, according to the U.S. Department of Labor, despite trillions of dollars in federal fiscal aid.

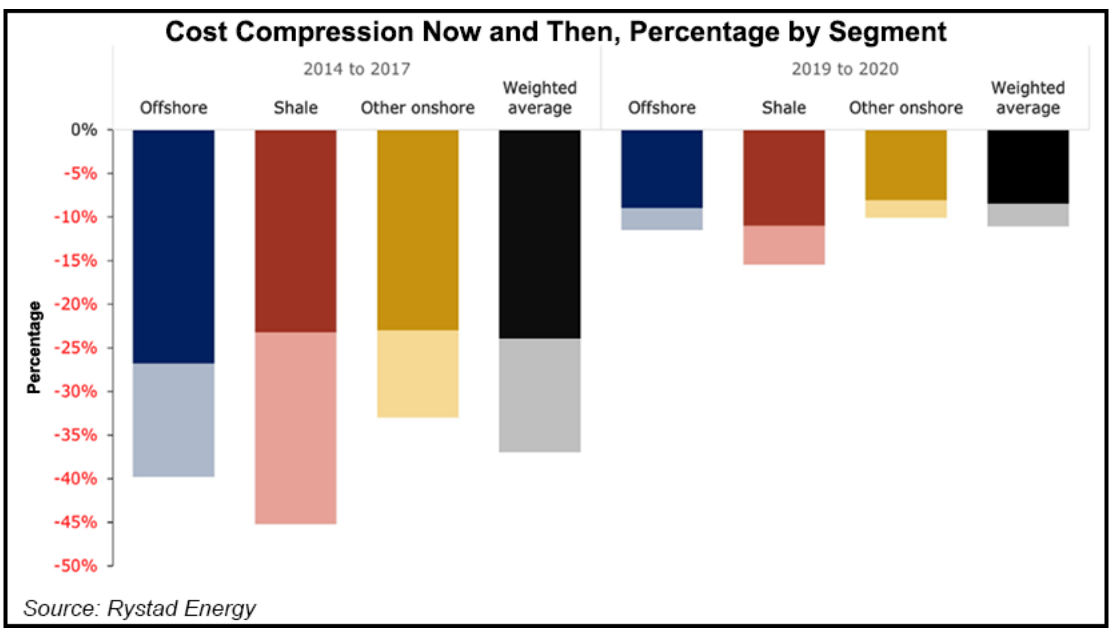
"The government will provide extended unemployment benefits and expand eligibility, but the loss of income will, in turn, reduce spending — and that spending is someone else's income," Brown noted in a report. While stimulus programs will help, over time, "second- and third-round effects" of layoffs "will add to economic weakness in the near term and hinder the recovery process."

The speed at which the unemployment ranks have mounted, Brown told *NGI*, "is unprecedented and staggering."

A global recession is also underway, analysts said.

Moody's Investors Service said in a report this week that it expects the advanced economies of the Group of 20 countries, aka G-20, to contract by 5.8% in 2020, with a plunge in GDP during the current quarter. Business failures are likely to mount.

"The contraction in economic activity in the second quarter *(continued on page 8)*



will be severe and the overall recovery in the second half of the year will be gradual," said Moody's Vice President Madhavi Bokil. "Many businesses will struggle to stay afloat in these conditions, and eventually some will close regardless of policy support to the economy."

Overall demand for fuel likely will slowly improve in the second half of the year in tandem with an assumed relaxation of social distancing measures, Moody's said. ■

As 1Q Results Await, U.S. E&Ps Facing Investors on Responses to Covid-19, from Capex Cuts to Shut-ins

Oil and natural gas development began to fall off a cliff in March from Covid-19 and the poorly timed price war, but initial earnings results for the first quarter point to an even sharper downturn through June, at a minimum.

The exploration and production (E&P) sector in general isn't set to unveil final first quarter results for another week or so. However, Schlumberger Ltd., Halliburton Co. and Baker Hughes Co., along with a slew of specialty oilfield services operators, including Patterson-UTI Inc., foresee a slump in spending by E&P customers through at least mid-year.

"Preserving liquidity and cash will be the primary focus for E&P companies over the coming months," said *NGI*'s Patrick Rau, director of Strategy & Research. "Expect to hear a lot of 'we are controlling the things we can control' from producers this quarter."

Investors likely want to hear about near-term debt maturities, he said, "and there is little doubt banks are using a more conservative forward price deck for oil and gas these days. For that reason, any success in maintaining the borrowing base on credit revolvers, or the ability for producers to refinance debt at acceptable terms, would be a significant positive for the industry, especially in this commodity pricing environment."

The message from E&Ps won't only focus on cutting capital expenditures (capex), but rather, how quickly can they reduce their spending, Rau said.

"Similarly, this quarter might be the first time during the shale revolution that E&P companies bend over backward to tell you how quickly they are getting wells offline, instead of the other way around."

The oil-focused producers might sound a bit more cautious during the quarterly conference calls because they have borne the brunt of the plummet in the U.S. rig count. Since March 6, said Rau, rigs in the major oil-focused basins of the Lower 48 have declined by almost three times more than the combined rig total in the gassy Appalachian Basin and in the Haynesville Shale.

Gas-focused E&Ps have dealt with stagnant prices for a while, so they "have had more time to adjust their drilling activity lower."

Wait, Wait, Do Tell Me

U.S. Capital Advisors' Becca Followill, head of equity research, said everyone is in a "waiting mode" for now, "to see when schools, offices, places of worship and restaurants will reopen," as well as to hear about "the second, third and fourth round of E&P capex cuts and how deeply they will curtail/shut in production…"

It's also a wait-and-see for how "fast and hard" production is going to roll over, as well as to determine which E&Ps may succumb to bankruptcy.

"Oil's loss is natural gas' gain, but with gas-levered E&Ps still with wounded balance sheets, we see the nice move in the gas forward curve more as staving off bankruptcy and providing some free cash flow to pay down debt through 2021, rather than as a signal to increase activity," Followill said.

[*Want to see more earnings? See the full list of NGI's 1Q2020 earnings season coverage.*]

Evercore ISI analysts led by Stephen Richardson said the first quarter is going to be an ugly one as the "shine" wears off from the agreement to reduce oil production by members of the Organization of the Petroleum Exporting Countries and its allies (OPEC-plus).

"While we haven't found anyone that is 'back up the truck' bullish, global oil price reaching shut-in economics for marginal barrels is constructive as this is about as bad as things get for the oil patch," Richardson said.

Oil-directed ConocoPhillips, Continental Resources Inc. and Cimarex Energy Co. were among the first to begin shutting in oil wells across the Lower 48, which has "helped assuage concerns that producers would run the car off the tracks here."

The upstream sector, however, faces likely two more quarters of pain, Richardson said, but "plenty of unknowns likely remain."

The "elephant in the room is how much will be voluntarily and involuntarily (continued on page 9)

U.S. Oil & Gas Drilling Rig Count Since 3/6/20

	Weekly Rig Count Date							Chg Since 3/6/20	
	03/06/20	03/13/20	03/20/20	03/27/20	04/03/20	04/09/20	04/17/20	Rigs	%
Oil Focused									
Permian	415	418	405	382	351	316	283	132	-31.8%
EF	68	68	67	63	57	51	42	26	-38.2%
Bakken	52	52	51	49	43	41	34	18	-34.6%
DJ Niobrara	20	20	20	19	18	16	16	4	-20.0%
Cana Woodford	18	19	18	13	11	9	7	11	-61.1%
Total	***573***	***577***	***561***	***526***	***480***	***433***	***382***	***191***	***-33.3%***
Appalachia/Haynesville									
Marcellus	37	39	39	39	39	38	35	2	-5.4%
Haynesville	43	43	43	40	39	38	35	8	-18.6%
Utica	11	9	9	9	9	9	9	2	-18.2%
Total	***91***	***91***	***91***	***88***	***87***	***85***	***79***	***12***	***-13.2%***
Other	129	124	120	114	97	84	68	61	-47.3%
Total U.S.	**793**	**792**	**772**	**728**	**664**	**602**	**529**	**264**	**-33.3%**

Source: NGI calculations, Baker Hughes curtailed and for how long as supply chains adjust to the evaporation of product demand and growing inventories," he said.

Merge Lane

When West Texas Intermediate prices plunged below zero on Monday (April 20), it likely was a wakeup call for E&Ps, said Goldman Sachs analysts.

The price rout compartmentalized the need for U.S. oil curtailments, and it reinforced Goldman's view that "a fragmented shale market structure based on boom-bust cycles and volume growth harms shareholder value."

The oil and gas industry's best corporate returns have come during periods of consolidation, financial squeezes and barriers to entry, according to Goldman.

"We believe this environment (and shareholder pressure for decarbonization) could engender a similar phase of consolidation and capital discipline, as in the late '90s," the Goldman analysts said.

"The only oil and gas development area that has not yet meaningfully consolidated is U.S. shale oil...In our view, fragmentation and largely scattered, noncontiguous shale acreage is preventing the industry under the current market structure from moving into its next phase of growth moderation, free cash flow generation and deflation through efficient logistics management, infrastructure layout, 'Big Data' and advanced analytics."

Breakevens among the unconventional onshore E&Ps haven't improved since 2016, Goldman's analysts noted, while the rest of the industry has moved lower on the cost curve."

Global gas is emerging as a long-term beneficiary in this period of underinvestment in our view, both in the U.S. (less associated gas production from shale oil)" and worldwide, as "all new" liquefied natural gas (LNG) developments have been postponed, leading to a constructive export market from 2022 through 2024.

Barclays Commodities Research analyst Amparpreet Singh said shutting in production from wells online is difficult. "But something's gotta give, and sustained low prices might not leave producers with any other viable option."

Smaller, private E&Ps stand to bear the brunt of the pain, as they control nearly "40% of the combined Texas, North Dakota and New Mexico production, according to data from Evenrus, and have relatively limited flexibility in marketing ability," Singh noted.

"Smaller scale and less efficient operations mean these producers generally have cash costs of production in excess of the average $10-12/bbl for Lower 48 onshore output; spot prices in the Permian and Bakken regions are already below that level."

A reversal in high oil storage levels at the Cushing hub is inevitable, but when that may happen, i.e. when demand returns, remains a question.

The analyst team at Tudor, Pickering, Holt & Co. (TPH) expects the next few weeks "to be more about getting through the next few months rather than looking back on first quarter results."

The quarterly calls give E&Ps an opportunity to flesh out the "capex cadence and production impacts" through the rest of the year, but "the collapse in near-term crude price should also prompt conversations around shut-ins.

"What's negative for oil can be positive for gas," though, said the TPH analysts, with 6-7 Bcf/d estimated to be associated gas with oil cuts, "and we see the natural gas forward curve rising higher through the year," measured by a "capital-discipline mantra from gas operators." ■

Moody's Maintains Natural Gas Price Outlook, but Cuts Oil Forecast Amid Coronavirus Fallout

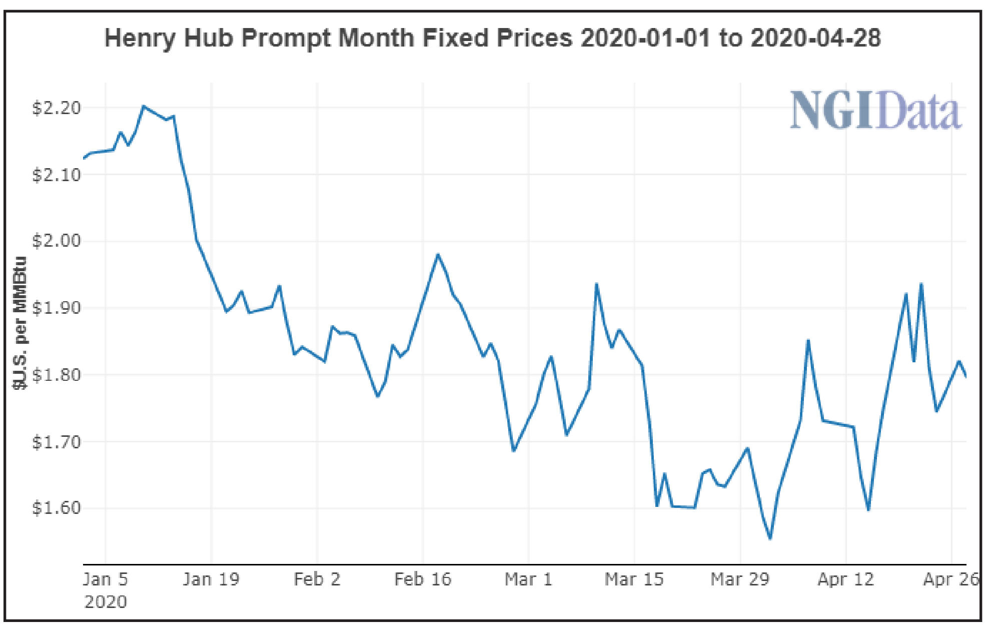
Moody's Investor Service this week maintained its forecast for North American natural gas prices, saying that declining production will help to bring the oversupplied market to balance.

The credit ratings agency left unchanged its Henry Hub natural gas price outlook of $2.00/MMBtu in 2020 and $2.25 in 2021.

Moody's said U.S. natural gas oversupply will gradually taper off through 2021, as key producers scale back capital investment and production this year and next — primarily in Appalachia, North America's largest producing region, where reductions are already underway.

The current glut will strain prices over the summer, but lower supplies by later in the year "will support a recovery in natural gas prices to our medium-term price range in 2020," Moody's said. It forecasts Henry Hub prices recovering to the $2.00-3.00 range this coming winter.

Second quarter demand has waned amid fallout from (continued on page 10)



the coronavirus pandemic — notably among industrial consumers whose operations are closed or below capacity because of stay-at-home orders and other government restrictions.

But the secular shift from coal to natural gas bodes well for prices when businesses start to emerge from partial economic shutdowns.

"Because natural gas prices started to decline in mid-2019, demand and supply responses are now well underway," Moody's said. "The North American electricity sector has accelerated its switching to natural gas from coal, even with an overall leveling off in gas demand from utilities in the second quarter of 2020."

The prospects for oil, however, worsened.

Moody's cut its outlook for oil prices through 2021, citing excess supply and light demand as the economy stalled and travel ground to a crawl because of the pandemic. It now expects West Texas Intermediate (WTI) will average $30/bbl in 2020 — a level it previously considered a downside pricing scenario — and $40 in 2021. The forecast for each year equates to $5 below Brent, the international crude benchmark.

"Delayed but now robust supply responses" that include the recent agreement by the Organization of the Petroleum Exporting Countries and its allies, aka OPEC-plus, to reduce production by almost 10% starting in May, as well as "an accelerating production decline in the U.S. and Canada — have not kept pace with falling demand to date," Moody's wrote.

Economic activity is expected to recover into 2021, but Moody's said oil demand may return only gradually because of an expected sluggish recovery in transportation. High inventories could also delay price recovery.

"Exceptionally weak short-term prices will persist until enough production curtailments can ease the strain on storage facilities already operating at or close to full capacity," Moody's said.

In the most recent Short-Term Energy Outlook by the U.S. Energy Information Administration, government analysts pegged WTI at an average $29.34, down 23% from its previous forecast. ■

IEA Forecasts Record Drop in Natural Gas, Oil Demand Amid 'Historic Shock' from Coronavirus

Global energy demand could plunge 6% this year, including a 5% drop for natural gas, marking the steepest declines in 70 years, the International Energy Agency (IEA) said in a new report Thursday.

The projected overall energy tumble — hastened by falloff in commercial and industrial demand as 4.2 billion people around the world are living in some form of lockdown to slow the spread of the coronavirus — would dwarf by seven-fold the drop caused by the 2008 financial crisis.

"This is a historic shock to the entire energy world," IEA Executive Director Fatih Birol said. "Amid today's unparalleled health and economic crises, the plunge in demand for nearly all major fuels is staggering, especially for coal, oil and gas.

"It is still too early to determine the longer-term impacts, but the energy industry that emerges from this crisis will be significantly different from the one that came before," he added.

The natural gas decline would end 10 years of uninterrupted growth, and it would mark the largest recorded year-on-year drop in consumption since natural gas demand developed at scale during the second half of the 20th century, the IEA said in its Global Energy Review.

Downward Pressure On Gas

The IEA expects 2020 electricity demand to fall 5%, marking the largest decline since the Great Depression and driving the downward pressure on natural gas.

Coal demand could decline by 8% this year, largely because of reduced electricity needs. Oil demand could drop by 9%, returning consumption to 2012 levels.

The decline in natural gas "is less than the anticipated fall in oil demand, reflecting the fact that natural gas is less exposed to the collapse in demand for transportation fuels," said IEA researchers. "But it nonetheless represents a huge shock to a gas industry that is used to robust growth in consumption."

As earnings season got underway in April, energy company executives reported pullbacks in demand and planned investments that generally align with the IEA's bleak outlook. Midstream transportation giant Kinder Morgan Inc., for example, slashed capital expenditures for expansion by $700 million in response to what CEO Steven Kean, speaking on an earnings call, labeled a "crushing" collapse in demand.

The collective plummet in energy use projected by the IEA would drive down the world's carbon dioxide emissions by 8% this year, a decline six times greater than in 2009, when the fallout from the financial crisis crippled the global economy. The projected rate of decline for this year would be unprecedented and about twice that of all declines in emissions since World War II.

The projections assume a deep recession between April and June, with shelter-in-place and social distancing measures gradually

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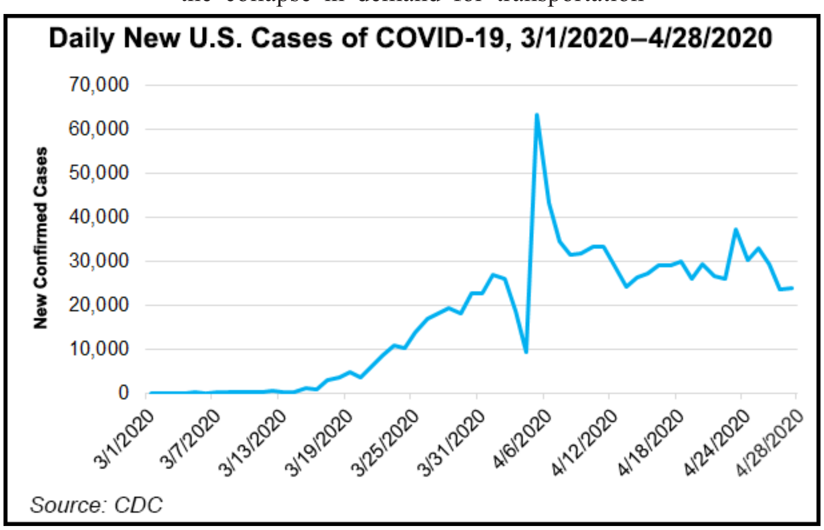


loosening over the summer months, followed by a slow economic recovery.

‘Lost Year’

“It’s the lost year for energy,” trader Mike Matousek of U.S. Global Investors told *NGI*.

Should the global economy gather momentum faster than anticipated, the IEA said overall energy demand loss could narrow to 3.8%. For natural gas, the drop could be about 2.7%.

The only increase in demand this year is likely to develop in renewables, IEA said, because of low operating costs and preferential access to many power systems.

Recent growth in capacity, along with new wind and solar projects coming online in 2020, could also boost output.

Lockdown measures are propelling the shift to low-carbon sources of electricity, including nuclear, hydropower, wind and solar, the report said. After taking the lead for the first time in 2019, low-carbon sources this year could reach 40% of global electricity generation — 6 percentage points ahead of coal.

“This trend is affecting demand for electricity from coal and natural gas, which are finding themselves increasingly squeezed between low overall power demand and increasing output from renewables,” said researchers. “As a result, the combined share of gas and coal in the global power mix is set to drop by 3 percentage points in 2020 to a level not seen since 2001.”

Natural gas consumption had eased early in 2020, prior to the severe coronavirus impacts in major markets, largely because of mild temperatures in the northern hemisphere, IEA noted. In the United States, 1Q2020 demand fell by an estimated 4.5% from a year earlier, pushed down by an 18% drop in residential and commercial demand.

European and mature Asian markets also experienced first-quarter contractions.

Data covering half of global demand indicate overall natural gas consumption fell by more than 3% in 1Q2020, the IEA report said.

The estimated 5% full-year decline for natural gas would be the first in annual consumption since 2009, when it fell by 2%. During the economic depression in the early 1930s, gas demand in the United States dipped by 13% in 1931 and by 7% in 1932.

“At that time, however, the United States was the only major producer and consumer of natural gas in the world,” IEA said. “Now gas is a global commodity accounting for well over 20% of global primary demand.” ■

Enterprise ‘Creating Value,’ Cutting Costs Amid Coronavirus Uncertainty

Enterprise Products Partners LP (EPD) has yet to see a “material change” to volumes across its system, but given the “highly uncertain” impacts of the coronavirus for the remainder of 2020, it has reduced planned growth capital investments by $1 billion and sustaining capital expenditures (capex) by $100 million.

The cost-cutting measures include the cancellation or deferral of spending on 13 projects, including a natural gas pipeline to Carthage that was targeted for in-service by the end of the year and the Gillis Lateral, which is an extension of the Acadian natural gas system in the Haynesville Shale.

EPD also is in negotiations on six joint ventures, which could lead to a further reduction of capex, according to Co-CEO Jim Teague.

“I’ve been through many cycles in my life, but I have never seen anything like what we’re going through now,” Teague said Wednesday on the first quarter earnings call.

EPD expects natural gas, natural gas liquids (NGL) and crude oil production to decline more rapidly than in previous supply shock cycles. “We have not yet seen a material change to volumes across our system. However, we will not be immune,” Teague said.

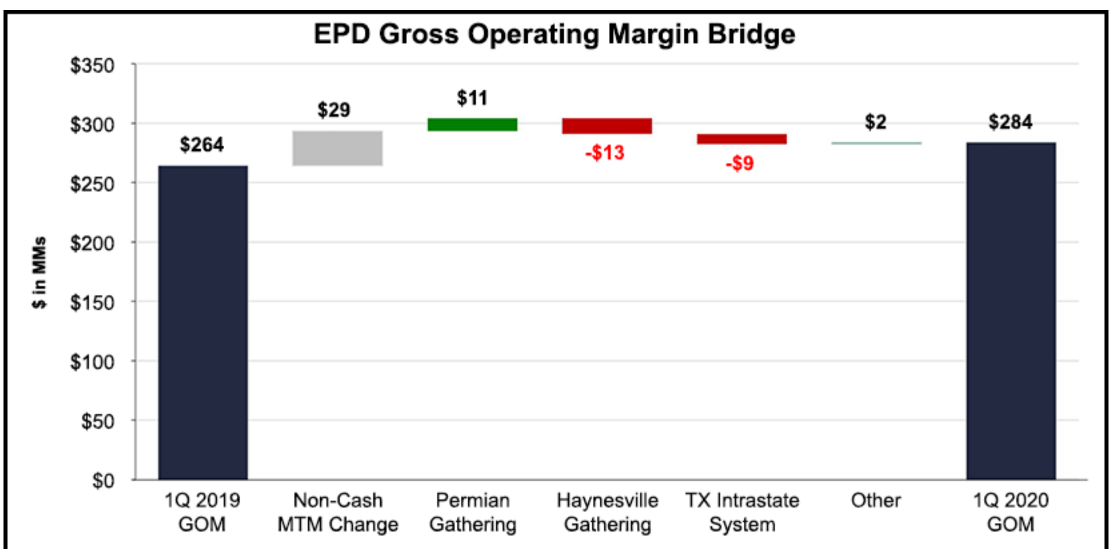
EPD continues to see “good demand pull” from petrochemical customers and in liquefied petroleum gas (LPG) exports, however, “the key to a recovery for the energy industry will be the restart of the global economy, the timing of which is unknown at this time,” Teague said.

In the meantime, three NGL wells at EPD’s Mont Belvieu, TX, complex have been converted to refined products. Tanks also have been converted to crude oil services.

“Our people have found places to store crude oil that two months ago we didn’t even know existed,” Teague said.

EPD management continues to review and “prudently” reduce operating expenses. It also boosted liquidity to around $8 billion at the end of the first quarter.

“All of this and much more is being done to succeed in this environment,” according to the company chief.



Source: Enterprise Products Partners LP

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EPD reported increased earnings in the first quarter across its natural gas, NGL, and petrochemical and refined products segments, but decreased earnings in the crude oil pipelines segment.

Total natural gas transportation volumes were 13.9 trillion Btu/d for the quarter, compared to 14.2 TBtu/d for 1Q2019. However, EPD's Haynesville gathering system saw a 245 billion Btu/d decline in gathering volumes during the quarter.

"Natural gas throughput on our Texas and Louisiana intrastate pipelines have been full, while our natural gas processing has suffered," Teague said. However, "this is a business that I believe has potential upside in the second half of the year. Opportunities around our assets are abundant. Our storage is worth its weight in gold as there is contango on every hydrocarbon, and we've even seen some cases of backwardation and they're all location differentials around our pipelines."

With the "material decrease" in demand for octane enhancement products expected to continue, EPD expects its octane enhancement facility to operate at low utilization rates during the second quarter until shelter-in-place mandates and travel restrictions are broadly rescinded.

However, its NGL fractionators are full and are expected to remain so as EPD's NGL pipelines overall haven't seen a downturn. The company's Permian crude lines also are fully contracted.

[*Want to see more earnings? See the full list of NGI's 1Q2020 earnings season coverage.*]

On Wednesday's call, Co-CEO Randy Fowler noted that EPD's top 200 customers represented 96% of 2019 revenues, with the vast majority of the revenues from investment-grade customers.

EPD's earnings are typically 80-90% fee-based depending on the commodity price and spread environment, Fowler said. Take-or-pay contracts comprise 45-55% of EPD's fee-based earnings, while durable fee earnings from storage throughput and wholesale residential deliveries make up another 20-30%. Certain "demand-based" volumes make up the balance.

"Even within our volumetric-based earnings, we have a high degree of confidence," Fowler said, noting that earnings "capture the many ways our commercial and operational teams have hustled to keep our assets full, such as repurposing storage and pipeline assets."

More than 90% of EPD's LPG and crude oil contracts are take-or-pay, while 95% of its ethylene capacity is contracted under that structure, according to management. Like Kinder Morgan Inc., EPD management is "pretty comfortable" that it won't have any issues with producers using force majeure declarations on its contracts.

However, given the uncertainty over the timing and level of economic recovery, EPD management is looking "at all aspects of how we operate our systems in terms of overall cost reduction," according to Chief Operating Officer Graham Bacon.

Management is "hyper-focused" on variable cost reductions, "whether it be how much power we use for pump station operation, if there's declining volumes from fixed cost. We have a number of strategies that we use to reduce and extend our maintenance cost. We don't put a lot of targets out there, but certainly I think from a standpoint of where we're looking sustainable, we can go 10% or lower for some period of time."

EPD has long embraced volatility and "has a 20-year track record of creating value," according to Teague. "We have a footprint that lends itself to having opportunities that in normal circumstances aren't there, and that's been the case through hurricanes and financial meltdowns and now through coronavirus."

EPD's capital investments for the first quarter were $1.1 billion, which included $69 million of sustaining capital expenditures. For 2020, EPD currently expects growth capital investments to range between $2.5 billion to $3.0 billion. Sustaining capex for the year is projected to be $200 million.

Based solely on sanctioned projects, EPD currently expects growth capital investments for 2021 and 2022 to be approximately $2.5 billion and $1.5 billion, respectively. These amounts do not include capital investments associated with the proposed Sea Port Oil Terminal, which remains subject to governmental approvals, which are not expected this year.

First quarter net income was $1.4 billion (61 cents/share), up from $1.3 billion (57 cents) in 1Q2019. Net cash flow from operations was $2.0 billion for the quarter, up from $1.2 billion a year ago. Free cash flow increased 78% to $3.4 billion for the 12 months ending March 31, while distributable cash flow for the quarter was unchanged year/year at $1.6 billion. ■

National Oilwell CEO Sees 'Two Difficult Years Ahead,' with Strongest Operators Surviving Coronavirus Impacts

Houston-based National Oilwell Varco Inc. (NOV), whose expertise is plowed into every major global oilfield worldwide, on land and offshore, in drilling and in production, may be facing historic challenges, but the company will be one of those left standing when all is said and done, its CEO said Tuesday.

Clayton Williams helmed a microphone to discuss the company's first quarter results, offering hope for the future but holding nothing back about the challenges facing the oil and gas industry.

"NOV is persevering through a pandemic that is presenting historic and extraordinary challenges to the oil and gas industry on several fronts," said Williams. "We expect this downturn to get much worse during the second quarter, so we are intensifying our cost-cutting efforts to position NOV appropriately for the challenges ahead."

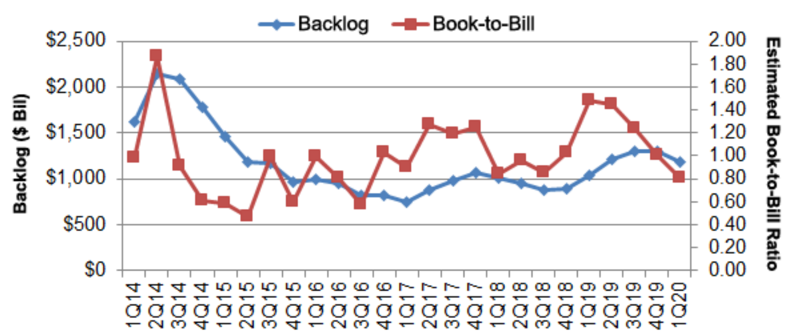
Planned 2020 capital expenditures have been cut by 25% to $250 million. Cost-cutting initiatives have reduced spending by another $395 million. Cash generation is the focus, with an eye on shrinking the inventory and improving collections. The workforce has been reduced, the facilities footprint shrunk and management compensation cut.

Members Only

The lifeblood of any oilfield services firm is its technology offerings. And on that front, investments may slow but they will continue, Williams *(continued on page 13)*

National Oilwell Varco Completions & Production Solutions Estimated Book-to-Bill Ratio, 1Q14–1Q20

Quarter	Net New Orders ($ Mil)	Rev Out of Backlog ($ Mil)	Ending Backlog ($ Mil)	**Estimated Book-to-Bill**	Quarterly U.S. Rig Count
1Q14	$485	$492	$1,627	**0.99**	1,779
2Q14	$1,117	$599	$2,145	**1.86**	1,852
3Q14	$609	$667	$2,087	**0.91**	1,903
4Q14	$469	$776	$1,780	**0.60**	1,905
1Q15	$327	$563	$1,463	**0.58**	1,343
2Q15	$255	$538	$1,189	**0.47**	894
3Q15	$466	$472	$1,171	**0.99**	862
4Q15	$272	$460	$969	**0.59**	749
1Q16	$328	$330	$994	**0.99**	551
2Q16	$269	$333	$947	**0.81**	422
3Q16	$184	$319	$812	**0.58**	479
4Q16	$370	$358	$818	**1.03**	589
1Q17	$323	$359	$751	**0.90**	742
2Q17	$501	$393	$881	**1.27**	895
3Q17	$463	$388	$974	**1.19**	946
4Q17	$501	$401	$1,066	**1.25**	921
1Q18	$324	$384	$1,010	**0.84**	966
2Q18	$398	$418	$955	**0.95**	1,039
3Q18	$372	$439	$880	**0.85**	1,051
4Q18	$470	$456	$894	**1.03**	1,073
1Q19	$470	$316	$1,041	**1.49**	1,043
2Q19	$548	$379	$1,215	**1.45**	989
3Q19	$535	$431	$1,298	**1.24**	920
4Q19	$502	$499	$1,305	**1.01**	820
1Q20	$335	$416	$1,185	**0.81**	785



Source: NGI's Shale Daily calculations, NOV company documents, Baker Hughes

told analysts.

"Although we have trimmed and slowed spending on certain technologies, we continue to invest in new products and technologies that will shape our organization and extend our competitive leads as the market emerges from the current downturn," he said. "By making the right moves now, NOV will exit this downturn stronger and leaner and with the capital necessary to take advantage of strategic opportunities that will emerge.

"Capital in the oil and gas space gets more valuable every day, and NOV will be in the small club of oilfield service companies that have it."

One thing is crystal clear, Williams said.

"This virus is not going to keep the global economy down forever. And when the world wakes up from this, we're going to need oil and gas again and we are going to need it for decades to come. This massive historic contraction in a critical industry will affect the future supply curve dramatically.

"When demand recovers, this industry will find itself short of capital, of people, of equipment — a huge opportunity for those of us in the oilfield services industry still left standing. To our employees listening around the world, we have a very difficult two years ahead of us."

New Opportunities

Out of the turmoil, NOV found some positives.

"Interestingly, the threat of disrupted supply chains has presented NOV with the opportunity to introduce new ways of doing business," Wiliams said. For example, a proprietary tracker vision system permitted one customer to perform a factory acceptance test of equipment remotely by satellite link-up with augmented reality, keeping the project on schedule despite the disruptions.

Tracker vision also enables efficient remote troubleshooting and support of ongoing operating equipment.

Select businesses also out performed expectations as a result of the pandemic, the CEO noted.

"Orders for spare parts for rig equipment actually increased 4% sequentially, increasing in February and March as concerns began to grow around the supply chain disruptions from customers that did not want to be caught short of a critical spare part with no way to access it." Demand for some industrial products for pharmaceuticals and consumer products also rose in response to the effort to defeat the virus.

[*Want to see more earnings? See the full list of NGI's 1Q2020 earnings season coverage.*]

However, the pandemic has affected NOV and its customers, with the impacts presenting "longer term challenges," Williams said.

"Well prices have been crushed, and prices in many regions are now below cash operating costs, meaning producers spend more to produce oil from existing wells than they make in revenue. This will lead to shut-ins by their owners to conserve cash. In other regions, pipelines and transportation companies have refused acceptance of crude regardless of its lifting costs because there is simply no place for it to go, which will lead to additional force shut-ins.

"In the aggregate, we are on the precipice of forced well shut-ins totaling 15-to-20 million b/d, a scale never before seen in this industry," Williams said. "Rig and well servicing activity around the world, particularly in North America, is plummeting as it is difficult to make an economically rational argument that we should be drilling a new well against the current commodity backdrop."

The international markets have reacted more slowly to the coronavirus but "they are not immune to *(continued on page 14)*

the stark realities of this price collapse and will significantly curtail their spending later in the

Year," he said. "This will likely be the worst downturn that any of us in the oil and gas industry will experience in our lifetimes."

While many companies may not survive, "NOV will," he said, as it has a strong balance sheet and $3.1 billion in liquidity. "Nevertheless, to ensure that we survive now and prosper later, we must continue to take measures and maximize cash flow, avoid consuming cash and protect, defend and strengthen our enterprise through this downturn."

Net losses in 1Q2020 totaled $2.05 billion (minus $5.34/share), versus a year-ago net loss of $77 million (minus 20 cents). The first quarter of 2020 included one-time charges of $2.25 billion after it evaluated the carrying value of its long-lived assets, as well as for inventory, severance and facility closure charges.

81% Book-to-Bill

Orders booked during 1Q2019 totaled $335 million, representing a book-to-bill of 81% when compared to the $416 million of orders shipped from backlog. At the end of March, backlog for capital equipment orders for the Completion & Production Solutions (CPS) segment was $1.19 billion.

CPS generated revenues of $675 million in the first quarter, up 16% year/year but down 16% sequentially.

Wellbore Technologies generated revenues of $691 million in the quarter, off 14% from a year ago and down 10% from 4Q2019. In the Rig Technologies segment, revenue totaled $557 million, down 8% from a year ago and 27% sequentially.

Orders booked in the Rig Technology segment totaled $146 million, representing a book-to-bill of 70% when compared to the $208 million of orders shipped from backlog. Backlog for capital equipment orders at the end of March was $2.93 billion.

In the past several weeks, NOV has "sought to both protect the health of our employees and to serve our customers who are facing daunting challenges and are relying on NOV to keep their operations running," Williams said.

"This has been no easy task, as of today, 64 NOV facilities around the world remain shut down due to government mandates, which means approximately 3,300 of our valued employees globally or unable to come to work. This number varies daily, with evolving government restrictions, and it was as high as 4,000 employees a few weeks ago."

Additionally, thousands of other NOV employees are working from home or are working reduced hours.

"The rest of our facilities remain operational although challenged. Many are short-handed and some working flex shifts. We are committed to operating in as safe a manner as possible and we've been able to do that, thanks in large part to the multitude of social distancing measures implemented by our management and the careful adherence to these measures by our employees."

Social distancing at NOV includes modified scheduling, staggered lunch breaks, mandatory periodic hand-washing, incremental facility cleanings, as well as working from home when possible. Telephone and video conferences have taken the place of in-person meetings and there is increased spacing on shop floors.

Regarding Covid-19, employees are working to help "support our communities during this pandemic," Williams said, by donating personal protective equipment and cleaning supplies to frontline emergency personnel and delivering portable generation systems from NOV's WellSite Services business to provide critical power and air conditioning to quarantine testing and distribution centers.

"In fact, an NOV engineer helped design a low-cost mechanical ventilator and is now working with the Massachusetts Institute of Technology to validate the design and create a 3-D model that will be used to print the ventilator using additive manufacturing," Williams noted. ■

DTE Sees Shoots of Growth for Natural Gas and Weathering Coronavirus Impacts

Even as DTE Energy is implementing cost-cutting measures to help navigate the economic downturn brought on by the coronavirus, the natural gas storage and pipelines (GSP) assets in the Lower 48 are creating a path for long-term success.

"Our assets are well positioned and are supported by strong contracts, and our producers are drilling according to their original schedules," CEO Jerry Norcia told investors Tuesday on a first quarter earnings call.

The GSP business is beating guidance year to date, with targeted earnings of $665-703 million for 2020, Norcia said. The company chief said the fixed fees outlined in contracts are supported by 85% hedges by most of the producer customers at around $2.75/MMBtu for 2020. "A big percent" of producers are hedged in 2021 at $2.65.

DTE management also is "encouraged" by strengthening gas prices forecast for 2020, 2021 and 2022. "Eighty-five percent of the company's gas storage and pipelines segment revenue is covered by fixed revenue contracts and flowing gas over a three-year period," Norcia said.

However, DTE is continuing due diligence and reviewing producer credit metrics, modeling liquidity and ensuring they are playing their bills, he said.

[*Want to see more earnings? See the full list of NGI's 1Q2020 earnings season coverage.*]

Meanwhile, the company is eyeing a third quarter startup for the Leap natural gas gathering pipeline in the Haynesville Shale in northwestern Louisiana. Longer term, gas supply and demand fundamentals "remain attractive," Norcia said. The supply correction for natural gas has started with reduced drilling activity, "especially in the oil basins with associated gas" and future supply is expected to come from "areas where our assets are located, including the Northeast and Gulf Coast."

Nevertheless, "supply will be pressured to remain flat." However, given the decline profiles of flowing wells, Norcia estimated that "19 Bcf/d of new production is needed just to keep supply flat." That said, DTE is focused on "organic growth and value creation from these and our other well-positioned platforms." *(continued on page 15)*

First quarter earnings for the GSP segment increased by $24 million year/year to $72 million. For the year, GSP profits are estimated at $277-293 million.

Cutting Costs

Despite the success of the GSP business, DTE is pulling the trigger on a slew of one-time cost-cutting measures to achieve earnings guidance amid the economic downturn.

In sticking to guidance of $6.47-6.75/share, Norcia said DTE is aiming to slash $2.5 billion in operations and maintenance spending. This includes pausing new hires, minimizing overtime, reducing contract and consulting spend, deferring banked maintenance work, decreasing travel, fast forwarding automation and work from home projects, and reducing materials and support expenses.

"We have spent a lot of time over the last few weeks understanding the potential financial impacts of the pandemic, building and implementing a plan for reacting to these challenges," Norcia said. "This is a conservative plan."

The measures are part of efforts to build a contingency of around $120-130 million to make up for a projected $60 million hit to 2020 earnings as well as potential further delays in returning to work and unfavorable weather. DTE is targeting earnings of $1.25-1.3 billion for 2020 and a 7% dividend increase this year and in 2021.

"We've faced recessionary pressures before in 2008 and 2009. We came through that stronger than ever, achieved operating EPS and cost reduction targets and exceeded cash from operations guidance. We are facing similar pressures. I'm confident that we have built a robust plan to respond to these challenges," he said.

DTE has taken additional measures to further strengthen its liquidity position. The company issued $1.7 billion of long-term debt at its electric utility business, and has secured bank term loans for additional liquidity, which "significantly mitigates commercial paper and capital markets risk," management said.

Construction and maintenance activities are set to resume in early May for the Detroit-based operator following state-level plans for restarting Michigan's economy in the wake of the coronavirus pandemic. The company plans to slowly ramp up construction activities throughout May, although office employees are expected to remain at home into the summer as management determines when it is safe to return, Norcia said.

DTE is assuming a slow start scenario that would see the state's industrial sector resuming in late summer, nonessential offices closed through year-end and schools/universities operating virtually through year-end. The slow start scenario also assumes a staggered restart of nonessential retail, restaurants and lodging throughout the summer.

Amid stay-at-home mandates, DTE has seen its residential/commercial loads increase by around 10% in April, while commercial loads have declined by around 17% and industrial loads have fallen by up to 46%.

"We believe we have seen the bottom for our loads at this point," Norcia said.

DTE reported first quarter earnings of $340 million ($1.76/share), down from $401 million ($2.19) in 1Q2019. ■

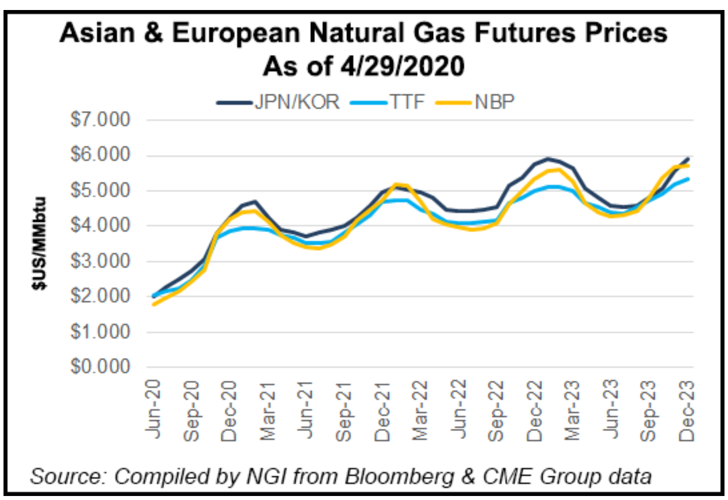
LNG Supply Glut Likely to Outlast Demand for Years, Says IGU

Following a record year of low prices driven by increasing liquefied natural gas (LNG) production in 2019, the global supply glut is likely to persist for at least another two years, according to the International Gas Union (IGU) in its annual report this week.

"This will mean continued depressed prices," IGU said. "This is then likely followed by a period of recovery, with renewed uncertainty around the middle of the decade."

Prices have been falling since last year, but have only recently hit record lows in key markets across the world as an abundance of supplies has permeated a market where demand has been crushed by the Covid-19 pandemic.

The first quarter "has proven to be very challenging for natural gas and LNG producers, as historically low gas prices have prevailed throughout the winter season," IGU added. "First, the increase in LNG exports combined with a mild winter across the Northern Hemisphere led to a counter-cyclical drop in international gas prices. The bearish tone continued throughout February and March as markets around the world started to announce lockdowns in order to control the spread of the Covid-19 virus."



Source: Compiled by NGI from Bloomberg & CME Group data

Still Climbing

IGU said the supply glut has mainly resulted from export growth in Australia, Russia and the United States, as well as Algeria and Egypt. Despite the outbreak's impact on the global economy and energy demand, LNG supplies are poised to continue climbing this year, IGU said.

The global LNG trade increased by 13% year/year in 2019 to reach 354.7 million tons (Mt), the sixth consecutive year of growth. The United States led the way by adding 13.1 Mt of capacity last year, while Russia added 11 Mt and Australia added 8.7 Mt. The United States is now the world's third largest exporter, behind Qatar and Australia, with Russia in the fourth spot.

About 24 million metric tons per year (mmty) of liquefaction capacity is expected to be added worldwide in 2020, pushing overall liquefaction capacity to 454.85 mmty by the end of the year. In the coming years, North America has by far the most capacity that is pending final investment decisions.

(continued on page 16)

"The record volume of sanctioned liquefaction projects is underpinned by the expectation of growing LNG demand globally, creating the need for additional liquefaction capacity," IGU said. The group also noted that this would lead to increasing competition for engineering, procurement and construction contracts "as project developers aim to enter the market by the mid-2020s in order to capture growing demand."

In terms of imports, Europe saw the largest increases last year, as the continent brought in 37 Mt more LNG than in 2018. The UK, France, Spain, Italy, Belgium and the Netherlands accounted for the largest increases. Sellers last year dumped cargoes in Europe, which has a healthy wholesale market, along with robust storage and regasification infrastructure, as they grappled with lower prices. IGU noted that global re-exports, or those that were first imported and then shipped to other countries, declined by 59% year/year as price differences between the Atlantic and Pacific basins fell.

The Asia Pacific and Asia regions remained the key centers of demand and together accounted for 70% of global LNG imports.

While no new consumers joined the existing 37 global LNG markets, newer players including Bangladesh, Pakistan, Poland, and Panama, increased their intake, IGU said. At the same time, mature markets, like India, are adding floating regasification capacity.

IGU said the use of floating storage regasification units (FSRU) are on the rise. FSRUs are a special type of ship, or offshore installation, used to transfer LNG. They provide flexibility in receiving and processing LNG shipments, particularly where such infrastructure doesn't exist onshore.

As of February, IGU said of the 37 existing LNG import markets, 19 imported LNG with FSRUs, and six of those had onshore terminals as well. ■

CNX Curtailing Wet Gas Production in Plotting Course Through Market Chaos

Appalachian pure-play CNX Resources Corp. said Monday that it would shut-in some of its wet gas production next month in response to low prices and could ultimately defer some new wells depending on how the market recovers from the oil rout and Covid-19 pandemic.

The strategy is part of a broader seven-year plan to help the company manage through the chaos that's been created in energy markets by the coronavirus outbreak and a price war between the Organization of the Petroleum Exporting Countries, its allies and Russia that's left the world swimming in crude oil.

"As we sit here at the end of April, it's hard not to think back to where we were at the end of January on our last quarterly call and consider just how much the world has changed in three short months," CEO Nicholas Deluliis said during a conference call with analysts.

As rigs and crews drop in the oil patch, associated gas production is expected to eventually decline. But the oil glut and lack of demand caused by the pandemic has had severe impacts on other commodities, like condensate and natural gas liquids. The value of Appalachian condensate fell below zero earlier this month before bouncing back. The oil storage overhang and questions about energy demand are "huge wildcards" that have found CNX trying to keep its plans for the future as flexible as possible, said COO Chad Griffith.

"To us, the biggest question is how much oil will be shut-in as we work our way out of the crisis," he said. If oil and associated gas continue to flow through the summer, then low gas prices are expected until winter, but if oil wells are shut-in faster, then gas prices could see a more immediate lift as associated gas output declines, Griffith said. For now, the company is "assuming rock bottom prices" through the remainder of summer and anticipates a "modest recovery" in the fourth quarter.

Griffith added "that the current dynamics are so extreme and the price curve so steep," that it makes sense to shut-in wet production soon and wait for better prices, especially considering that those wells have higher operating costs.

"We do not currently have any wells shut-in today due to economic reasons," Griffith said. "That is something we are still assessing. We look at commodity prices every day, and we are looking at the exact right way to optimize that. We do assume that we will be curtailing a certain amount of our wet production, probably beginning in May" and lasting two or three months.

As a result, the company has cut its 2020 production guidance to 490-530 Bcfe from the previous level of 525-555 Bcfe. Capital expenditures (capex) have also been cut for the year in what management said was primarily related to lower oilfield services costs. The company now expects to spend $830-900 million, compared to a previous range of $885-950 million.

Next year, the company said it would cut costs significantly and spend $440 million to produce 550 Bcfe. If gas prices improve, it could produce 600 Bcfe. After that, the company would pivot toward production maintenance through the duration of its seven-year plan, which continues to anticipate U.S. gas prices of under $3.00/MMBtu.

The 2022-2026 plan has a "very manageable and very modest activity pace tied to it," Deluliis said. It would require annual capex of roughly $300 million to turn 25 wells to sales each year. The company would average 560 Bcfe of annual production.

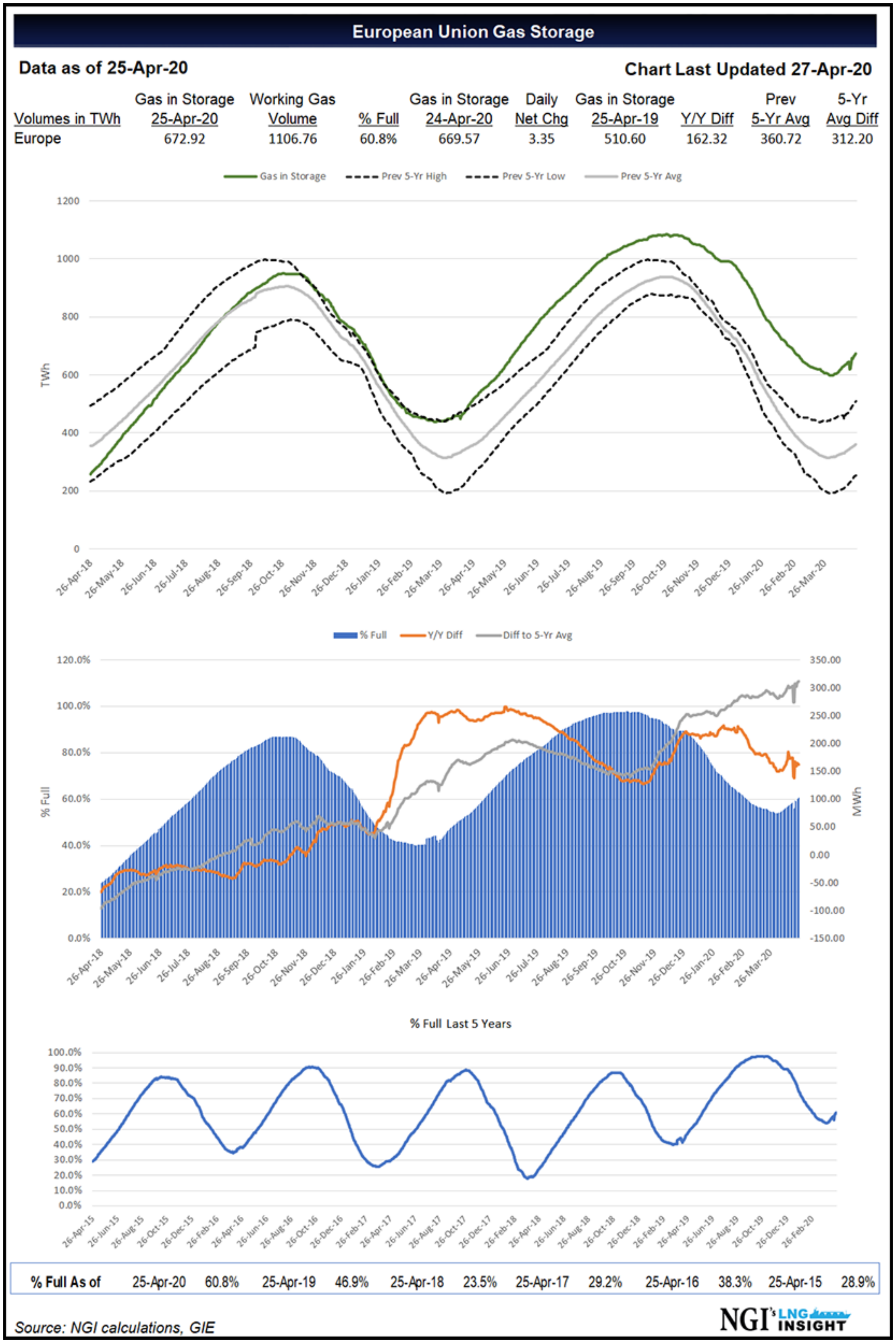
Deluliis added that the seven-year plan is aimed at generating positive free cash flow (FCF) and continuing to deleverage the balance sheet. Over the period, the company expects to generate $3 billion of FCF. It is currently FCF positive after reporting $129 million in the first quarter.

CNX produced 134.4 Bcfe in 1Q2020, compared to 133 Bcfe in the year-ago period. Average first quarter realized prices were $2.59/Mcfe, compared to $2.97/Mcfe in 1Q2019.

The company reported a first quarter net loss of $329 million (minus $1.76/share), compared to a net loss of $87 million (minus 44 cents) in the year-ago period. The first quarter loss was primarily related to noncash impairment charges of $473 million associated with the company's midstream unit and $62 million of charges related to its southwestern Pennsylvania coalbed methane operations. ■

(continued on page 16)

Eni Reports Sharp Declines in 1Q Natural Gas, LNG Sales from Coronavirus



Italian supermajor Eni SpA reported a steep drop in natural gas sales during the first quarter as the Covid-19 outbreak began destroying demand in Asia and Europe.

The international oil and gas producer also has stakes across the liquefied natural gas (LNG) value chain, from liquefaction and shipping to regasification and trading.

Eni said 1Q2020 gas sales declined by 21% year/year (y/y) to 16.75 billion cubic meters (Bcm). LNG sales also slid by 7% year/year to 2.50 Bcm.

"The period since March has been the most complex period the global economy has seen for more than 70 years," said CEO Claudio Descalzi. "For the energy industry, and in particular for oil and gas, the complexity is even greater given the overlap of the effects of the pandemic with the collapse in oil prices."

The oil rout has prompted a global response from producers who have announced spending and production cuts as the virus has crushed demand. Global gas prices have also converged to unprecedented lows and squeezed the margins of sellers as demand has been impacted by lockdown measures aimed at fighting the pandemic across the world.

Eni said it would cut its capital spending this year by 30% and possibly more next year. First quarter oil and gas production was also down 3.6% year/year to 1.77 million boe/d, and the company has lowered its guidance for the year to 1.75-1.80 million boe/d due to spending cuts and impacts of the coronavirus on demand. Eni said it is assuming a gradual recovery in global consumption of oil, natural gas and power in the second half of this year.

Natural gas sales in Italy, among the nations hardest hit by the virus, declined 17% y/y to about 9 Bcm in the first quarter, "mainly due to weaker seasonal sales and the impact of an ongoing economic downturn following the containment measures in *(continued on page 18)*

Italy and Europe as a result of the spread of Covid-19," Eni said. Sales across European markets, where restrictions in some countries are only now beginning to ease, also declined 16% year/year to about 6 Bcm, primarily as a result of lower volumes marketed in Germany and Turkey.

Warmer winter weather was already pushing worldwide gas prices lower and supplies up when the coronavirus took hold and devastated fundamentals even more. But LNG arrivals into Europe in particular stayed strong throughout the first quarter, holding near record levels that were set late last year.

Even still, Eni said its LNG business took a hit during the fourth quarter and was "negatively affected by a downturn in Asian economies," where the virus first took hold earlier in the year, "with fallout on LNG demand and prices." ■

U.S. Rigs Drop by 60-Plus for Fourth Straight Week as Pandemic Decimating Oil Activity

The freefall in the U.S. rig count showed no signs of letting up during the week ended Friday (April 24) as yet another steep drop-off in oil-directed activity sent the overall domestic tally tumbling below the 500-unit mark, according to the latest figures from Baker Hughes Co. (BKR).

What was once extraordinary has now become routine, as the weekly domestic count declined by more than 60 units for the fourth week in a row, shedding 64 rigs to end at 465. Losses for the week included 60 oil-directed units and four gas-directed. The U.S. count has fallen by 327 units since March 13 and now sits 526 units behind its year-ago total, BKR data show.

All of the declines in the United States for the week were for land rigs, with the Gulf of Mexico holding steady at 17 rigs. Five directional units and two vertical units joined 57 horizontal units in exiting the patch.

The Canadian rig count ended the week at 26, down four, with a one-rig increase in oil-directed drilling partially offsetting the departure of five gas-directed units.

The overall North American rig count finished at 491 rigs, less than half of the 1,054 rigs active at this time a year ago.

Among major plays, oil-focused drilling regions unsurprisingly posted the heaviest losses on the week. This was especially true for the Permian Basin, which lost 37 rigs to fall to 246, well off of 460 rigs in the year-ago period. The (continued on page 19)

Baker Hughes Drilling Rig Count in U.S. Unconventional Production Basins for the Week Ended 4/24/2020

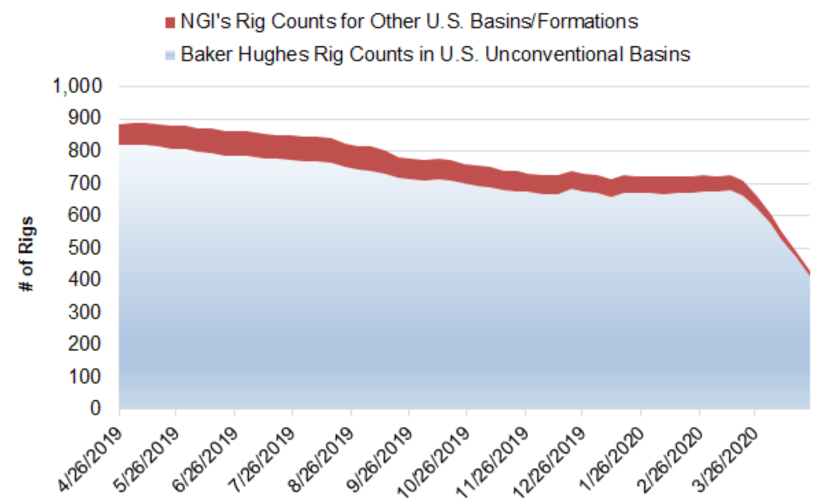
Basin/Formation	4/24/20	4/17/20	% Change Last Week	4/26/19	% Change Last Year
Ardmore Woodford	4	4	0%	5	-20%
Arkoma Woodford	0	1	-100%	1	-100%
Barnett	2	2	0%	1	100%
Cana Woodford	4	7	-43%	46	-91%
SCOOP	*2*	*4*	*-50%*	*19*	*-89%*
STACK	*2*	*3*	*-33%*	*26*	*-92%*
Other Cana Woodford	*0*	*0*	*N/A*	*1*	*-100%*
DJ-Niobrara	15	16	-6%	29	-48%
Eagle Ford	35	42	-17%	73	-52%
Fayetteville	0	0	N/A	0	N/A
Granite Wash	2	2	0%	8	-75%
Haynesville	34	35	-3%	54	-37%
Marcellus	32	35	-9%	62	-48%
Mississippian	0	0	N/A	5	-100%
Permian	246	283	-13%	460	-47%
*Delaware Basin**	*140*	*163*	*-14%*	*263*	*-47%*
*Midland Basin**	*105*	*119*	*-12%*	*188*	*-44%*
Other Permian	*1*	*1*	*0%*	*9*	*-89%*
Utica	9	9	0%	17	-47%
Williston	27	34	-21%	58	-53%
TOTAL	**410**	**470**	**-13%**	**820**	**-50%**

Note: Basins as designated by Baker Hughes. Permian likely includes rigs drilling more conventional formations. Delaware Basin, Midland Basin, SCOOP, and STACK are NGI estimates based on Baker Hughes data.
*Andrews, Crane, Crockett, Ector, Gaines, Pecos, Ward, and Winkler Counties, Texas as well as Lea County, NM also overly the Central Basin Platform. For the purposes of NGI's Drilling Rig Counts these counties are included in either the Delaware or Midland Basins.

NGI's Rig Counts For Other U.S. Basins/Formations For the Week Ended 4/24/2020

Basin/Formation	4/24/20	4/17/20	% Change Last Week	4/26/19	% Change Last Year
California	5	8	-38%	12	-58%
Eaglebine	1	1	0%	8	-88%
Green River Basin	0	0	N/A	11	-100%
Piceance Basin	1	1	0%	4	-75%
Powder River Basin	5	5	0%	20	-75%
San Juan Basin	0	0	N/A	2	-100%
Tuscaloosa Marine Shale	0	0	N/A	1	-100%
Uinta Basin	5	5	0%	7	-29%
TOTAL	**17**	**20**	**-15%**	**65**	**-74%**

Note: These figures represent the total number of oil & gas rigs working in the counties that NGI believes contain each particular basin/formation. All figures in this NGI table were calculated by NGI using Baker Hughes data. For more on these county definitons, please refer to natgasintel.com/shaleplays



Source: Baker Hughes, NGI's Shale Daily calculations

Eagle Ford Shale and Williston Basin each dropped seven rigs week/week.

Elsewhere among plays, the Cana Woodford and Marcellus Shale each dropped three rigs, while the Arkoma Woodford, Denver Julesburg-Niobrara and Haynesville Shale each dropped one rig.

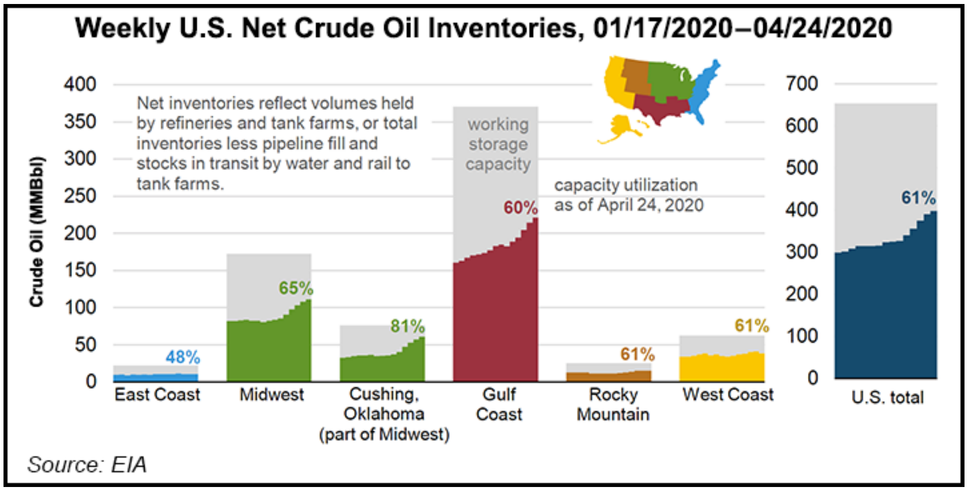
Among states, Texas shed 31 rigs during the period, followed by New Mexico, which dropped 14. North Dakota posted a seven-rig decline on the week, while Oklahoma saw a net decrease of four rigs. California and West Virginia each dropped three rigs, while Colorado and Louisiana each dropped one.

It was another wild week for oil markets. The May West Texas Intermediate (WTI) contract made history when it settled deep into negative territory to open the work week, reflecting an unprecedented surplus of oil and lack of demand amid the Covid-19 pandemic.

Rystad Energy's Louise Dickson, oil markets analyst, called the WTI plunge "unprecedented and seemingly unreal" following the historic collapse. "The most simple explanation for negative oil prices is that midstream players are now paying 'buyers' to take oil volumes away" as available storage capacity runs out.

This means "pricey shut-ins or even bankruptcies could now be cheaper for some operators, instead of paying…to get rid of what they produce." ■

Trump Administration Nearing Plan to Assist Oil, Natural Gas Industry Through Pandemic



Federal government agencies continue to plan some form of assistance, possible including bridge loans, to help the oil and natural gas industries shoulder the impacts of the global coronavirus pandemic and resulting economic slowdown, President Trump said Tuesday.

"We're not going to let our oil companies go and get in trouble," Trump said at a roundtable of corporate leaders at the White House. "It's not their fault that they got hit by 50% less volume in one day…

"We're saving other companies and industries…I think the oil industry is one of the top on the list." A plan is likely to be announced "shortly," Trump said.

Last week, Trump instructed Treasury Secretary Steven Mnuchin and Energy Secretary Dan Brouillette "to formulate a plan which will make funds available so that these very important companies and jobs will be secured long into the future," referring to the oil and gas industry.

A dedicated team composed of officials from both the Department of Treasury and Department of Energy (DOE) are "looking at a lot of different strategies," Mnuchin said at the roundtable.

"As I've said before, this is not going to be a bailout of shareholders, but this is going to be supporting the national security issue…We're looking at lots of different options. We're in touch with lots of people around the world. And the president is determined that we protect the national security interest and the jobs."

The potential plan was part of a discussion Brouillette and Sen. Kevin Cramer (R-ND) had Tuesday with members of the North Dakota Petroleum Council. The proposal could include bridge loans for ailing energy companies, Brouillette said.

"North Dakota's oil and gas producers provide thousands of good paying jobs and contribute to our national security, but Covid-19 and the oil price ware has created a lethal combination aimed at this sector," Cramer said. "With President Trump directing his administration to craft an oil and gas industry support plan, there is no better place to look for solutions than the North Dakotans on the front lines of this fight."

In March, Trump ordered DOE to purchase 77 million bbl of U.S. crude to fill the Strategic Petroleum Reserve to its maximum capacity. Mnuchin said DOE is "being paid for the storage capacity in oil," and the agencies are "exploring potentially having the ability to store another several hundred million barrels."

The Labor Department on Thursday reported 3.8 million new jobless claims in the week ending April 25, bringing the total to 30.3 million since the coronavirus shutdown began six weeks ago. ■

Mexico Natural Gas Prices Touch Historic Lows in March

Mexico's IPGN monthly natural gas price index averaged $2.22/MMBtu in March, the lowest price recorded since its inaugural publication in July 2017.

The price was down from $3.15/MMBtu in the year-ago month, according to the Comisión Reguladora de Energía (CRE), an average price that at the time was also a record low. *(continued on page 20)*

CRE used 292 transactions reported by 22 marketers to calculate the average price in March 2020, versus 311 transactions from 23 marketers in March 2019. Transacted volumes averaged 5.57 Bcf/d, down from 6.44 Bcf/d.

The IPGN breaks Mexico into six regions, with regions 3 and 5 accounting for the highest volumes traded in April at 1.677 Bcf/d and 1.685 Bcf/d, respectively.

Region 3, which encompasses the northeastern border states of Nuevo León and Tamaulipas, contains the industrial hub of Monterrey, while Region 5 contains capital Mexico City and several surrounding states.

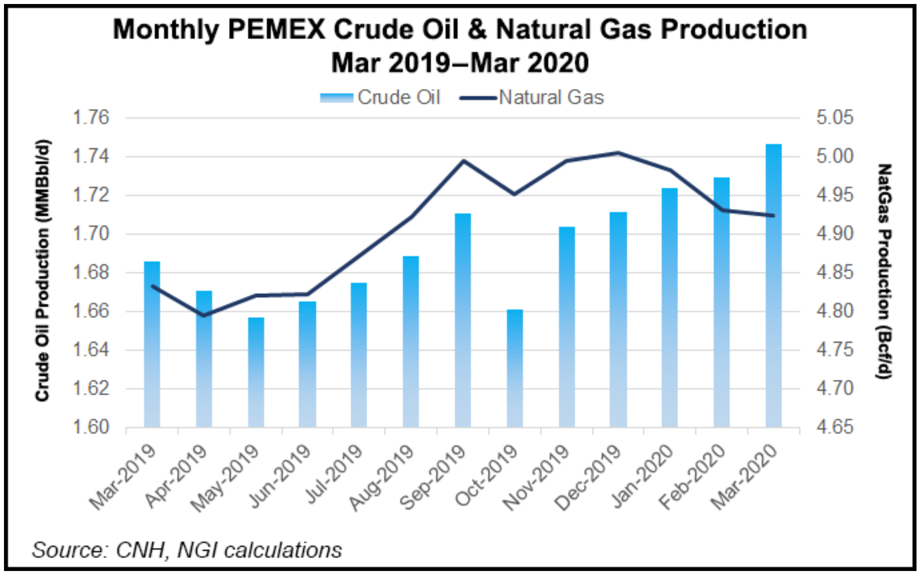
The low prices come amid tremendous uncertainty in natural gas markets, with analysts suggesting U.S. prices rising later this year into 2021 as the economic toll from the coronavirus leads to lower gas production.

Sustained $3-plus prices are likely "in our view, as the oil price collapse is set to drive 5.5 Bcf/d of supply declines" from the end of 2019 to the end of 2020, "putting the market 4-5 Bcf/d undersupplied heading into 2021," Tudor, Pickering, Holt & Co. analysts said earlier this month.

This would likely translate to an increase in prices in Mexico, as most prices are "really just U.S. prices with a cost element added to move gas from the U.S. to wherever it lands in Mexico," said NGI's Patrick Rau, director of strategy and research.

The monthly Henry Hub spot price and the IPGN monthly natural gas price index for example each fell 29% year/year in February, to $1.91/MMBtu and $2.71/MMBtu, respectively.

Gas demand is also being hit in Mexico, with deliveries on the Sistrangas national pipeline system down 10-30% this month as the country's citizens adhere to stay-at-home measures and industry slows and goes offline.



Oil, Gas Production Continues Rise

Crude oil production in Mexico meanwhile rose for a fifth straight month in March, according to data from upstream regulator Comisión Nacional de Hidrocarburos (CNH).

Total output in Mexico averaged 1.75 million b/d last month, compared to 1.69 million b/d in March 2019.

Natural gas production averaged 3.9 Bcf/d, up from 3.7 Bcf/d in March 2019.

Crude output from state oil company Petróleos Mexicanos (Pemex) rose to 1.69 million b/d, compared to 1.65 million b/d in March of last year, while production from private sector operators rose to 50,232 b/d, from 31,450 b/d.

Pemex production of natural gas reached 3.9 Bcf/d, up from 3.7 Bcf/d a year ago, while private sector natural gas output rose to 227 MMcf/d from 165.5 MMcf/d.

Mexico's rise in production comes just weeks after it agreed to curtail oil production by 100,000 b/d in May and June in a global bid to halt falling oil prices.

Prices however have continued to fall. Mexico's crude oil export basket price, for which the Maya heavy/sour grade is the main component, stood at $8.53 as of Friday, after averaging $56.01 in 2019.

President Andrés Manuel López Obrador, while insisting that Pemex will not cut back on its spending plans for 2020, has said that due to the low-price environment, Mexico will give priority to "the fields where it costs us the least to extract crude."

This weekend Pemex said that it was taking workers off rigs in the Gulf of Mexico as a means to combat the coronavirus. Some 259 rig workers disembarked at docks in the Ciudad del Carmen on Sunday. The company said that it has 248 confirmed cases of workers across its operations with the virus.

Pemex releases its 1Q2020 earnings on April 30. ■

Mexican Natural Gas Business, Smartly Played, Could Help With Economic Recovery

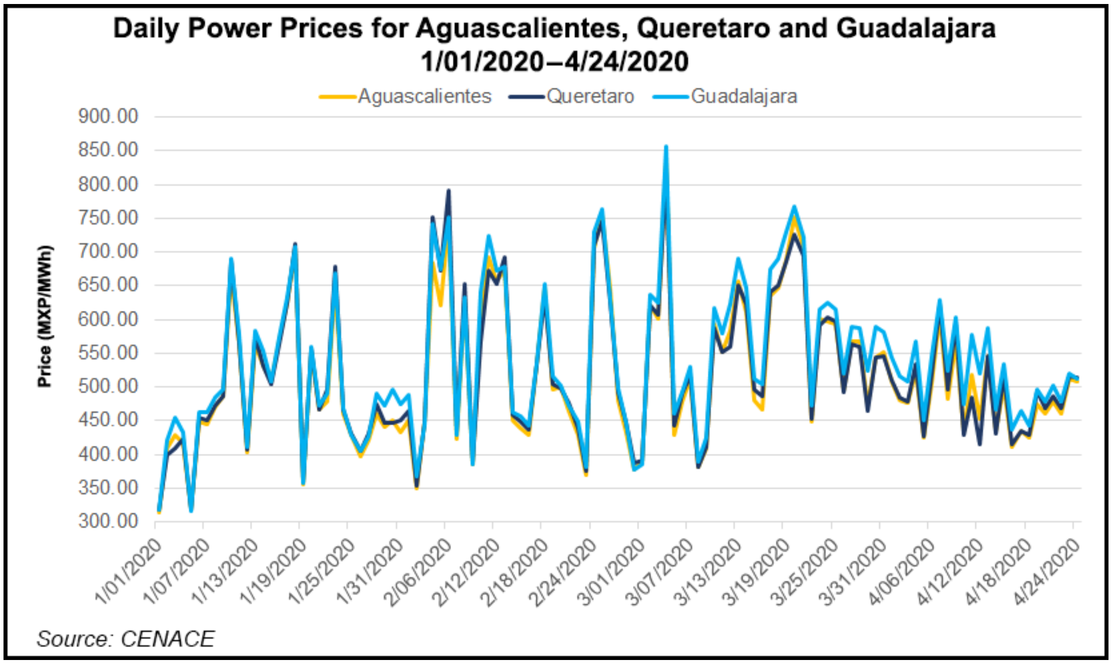
Editor's Note: NGI's Mexico Gas Price Index, a leader tracking Mexico natural gas market reform, is offering the following column as part of a regular series on understanding this process, written by Eduardo Prud'homme.

Prud'homme was central to the development of Cenagas, the nation's natural gas pipeline operator, an entity formed in 2015 as part of the energy reform process. He began his career at national oil company Petróleos Mexicanos (Pemex), worked for 14 years at the Energy Regulatory Commission (CRE), rising to be chief economist, and from July 2015 through February served as the ISO chief officer for Cenagas, where he oversaw the technical, commercial and economic management of the nascent Natural Gas Integrated System (Sistrangas).

The opinions and positions expressed by Prud'homme do not necessarily reflect the views of NGI's Mexico Gas Price Index.

A month has *(continued on page 21)*

passed since the start of phase 2 of the Covid-19 pandemic response in Mexico, during which time the government has promoted measures of social distancing and limited nonessential economic activity. The truth is that even before that, many companies and schools began the practice of working from home. As a result, the patterns of economic production and consumption have been gradually changing, and their effect on the energy sector is beginning to be significant.



Source: CENACE

With the start of the second quarter in Mexico, economic activity usually leaves behind the sluggishness of the colder start of the year. In a typical year, once the Easter holiday period has ended, the demand for electricity begins to rise and this leads to a higher gas consumption used for generation because of warmer weather.

Cenace data on electricity demand is reported with a couple weeks of lag, so it is not yet possible to fully quantify the demand effect attributable to the Covid-19 restrictions. However, by contrasting the available data from last year, it's possible to estimate a drop of around 5% in power consumption. This decrease is already notable in the gas system.

The measurement data for March is not yet available in the Cenagas electronic bulletin, but confirmed volumes for the extraction points are. The behavior of the nodes associated with electricity generation plants is not uniform, but consumption centers where gas decreased from March to April is around 20%. In addition, electricity demand in Sistrangas is 12% lower than the levels normally observed since the capacity reserve regime began.

To measure effects on the integrated system, it is important not to lose sight of the fact that the South Texas-Tuxpan marine pipeline has been replacing transportation within Sistrangas, but significant volumes enter Sistrangas through the Montegrande interconnection. Even with these considerations, demand for gas from the electricity sector has decreased, and this is attributable to the pandemic.

The decrease in gas demand is also evident in the industrial sector. On average, the central areas of the country and in the Bajío, where there are numerous industrial users, show a downward trend compared with last year, and in comparison to the previous quarter. In the industrial area from Puebla to Querétaro, consumers have stopped taking 10-20% of their normal gas from the Sistrangas. Since such volumes are small at each extraction point, the added effect is not as pronounced, and its operational consequences are minimal. An example of this situation is the extraction associated with the Fermaca-owned pipeline, Tejas Gas Toluca, which supplies the city of Toluca, west of Mexico City. The volume transported this month has fallen 12 MMcf/d from March, a small volume but significant for a gas pipeline that usually transports 70 MMcf/d.

Similar data can be found when analyzing other areas of the country. In the city of Saltillo, gas consumption in April is down 17% from March. Gas deliveries to an industrial profile distribution zone in Monterrey have decreased 12% in the same period. In the southeastern part of the country, within the Minatitlán and Pajaritos area, the decreases are around 30%. The volume transported in one of the systems of Sistrangas, Gasoductos del Bajío, is almost 10% off. The explanation is very simple: companies have decreased their gas consumption because they have reduced their production.

The coronavirus has exaggerated the sluggishness of the economic performance since the start of the government of President López Obrador. The partial closure of activities implies a reduction in the income of many companies, which leads to layoffs and even bankruptcies in some instances. Private initiative has clamored for a plan for economic reactivation by the government, but such a plan does not appear to be happening. In the last week, the president has said he is sticking to his original investment plans, which include converting a military base into a commercial airport serving Mexico City; constructing a rail system through a tourist corridor in the Yucatan peninsula; and the constructing the Dos Bocas refinery.

The controversy around continuing these projects has grown as the public would like to see financial resources committed to medical equipment to attend to the pandemic, as well as to alleviate the effects of the shutdown that may extend through May.

That being the case, energy demand will remain stagnant and could even drop further. Ironically, in a year in which the gas infrastructure conditions have improved substantially, the use of the new transport capacity will not be used as planned. The economic consequence is serious, although its implications are still not being felt. The fact that volumes are lower does not change the financial obligations of the pipelines in operation, however. Fixed costs will be diluted on a lower rate basis, and they will have to be paid. *(continued on page 22)*

In terms of medium-term effects, the disruption from the pandemic may see a rebound "J" curve in consumption. The question is the magnitude of the recovery. The Finance Ministry will see less collections from the drop in economic activity and in oil revenues. Meanwhile, social demands for health and rehabilitation will mount.

In this framework, and in the prevailing logic of astringency in spending, the López Obrador government has tools available to improve the energy outlook.

CFE has a contracted capacity to transport natural gas that far exceeds its requirements associated with electricity generation. It has more than 9 Bcf/d capacity, but demand of only about 3.5 Bcf/d. State oil company Petroleos Mexicanos (Pemex) mainly markets gas that is not produced in its fields. CFE and Pemex, in their oligopolistic intermediation, appropriate an income to the detriment of the well-being and productive capacity of gas users. The commercial margins charged by both companies do not always reflect the opportunity cost of supply at all points of consumption in the country. Hoarding capacity on import pipelines is a major barrier to entry that prevents gas users from effectively reaping the benefits of being a neighbor to Texas, the cheapest gas-producing area in the world.

CFE and Pemex have served as anchor clients for most of the existing gas pipelines in the country. However, in a scenario that is shaping up to be difficult for public finances, it is sensible to understand contractual commitments not only as a source of long-term liabilities but as an opportunity to take advantage of the value of the assets acquired.

Part of the transport capacity in Sistrangas, in the marine pipeline, together with the pipelines that make up the Wahalajara line and in other private systems, may well be placed into a secondary market. That would provide liquidity to the natural gas market and provide state companies with economic resources to alleviate their spending pressures. In a secondary market, with adequate rules and limited periods, both Pemex and CFE can obtain margins above the conventional rates paid to the owners of the pipelines and at the same time retain the ownership of the capacity by giving a temporary character to assignments. This exercise, with due foresight, can also contribute to improving energy security to Mexico, providing of course the nebulous concept of "energy sovereignty" publicized by the government is seen in a new light.

The Mexican government can broaden the discussion regarding the regional energy balance in North America. The press and social networks spent much time debating Mexico's participation in the agreement to reduce crude output by the Organization of the Petroleum Exporting Countries and their allies. Supporters and opponents of the government clashed in their interpretation of the events. Removing the political noise, it is clear that Mexico has a different geopolitical weight in global energy markets if it participates as a solitary agent, or if it plays together with its partners in the North American region.

In this context, CFE's excess capacity may be used to improve the economic recovery of the region. Ports on the Mexican coast may be the gateway to move Waha gas from West Texas to the Pacific Rim. The contracted capacity, which today is a liability for being idle, could inject dynamism into Mexico's coffers and the natural gas industry. The use of the pipelines, and with it their amortization, can improve their performance in the long term by not being limited to internal consumption and their respective fluctuations.

Put like this, the gas network's medium and long-term future may continue to be operationally and financially viable without being a fiscal burden in an environment of recovery from the economic crisis. The opportunities are waiting to be seized. A little less ideology and more imagination can create a lot of value for the economy, but it is important to change the nuance of energy policy. An opening of this type would give access to more and new players, and would undoubtedly receive the applause of many, inside and outside the country. ■

Mexico Worries Mount as Coronavirus Cases Rise and Lockdown Extends Through End-May

Mexico has now entered into Phase 3 of the coronavirus lockdown, the highest level mandated by the government as the spread of the virus intensifies, with non-essential businesses shuttered and social distancing measures and movement restrictions in place until May 30.

Cases have soared in Mexico, to 16,752 as of Wednesday, from barely 1,000 at the start of April. It's the fourth highest case count in Latin America behind Brazil (74,493), Peru (33,931), and Ecuador (24,258), according to Johns Hopkins University. Mexico's death toll of 1,569 is second only to Brazil's 5,158 in Latin America.

But officials have suggested the true number could be many times that; some private hospitals in Mexico City have reportedly reached capacity, and have had to turn away patients due to a lack of ventilators.

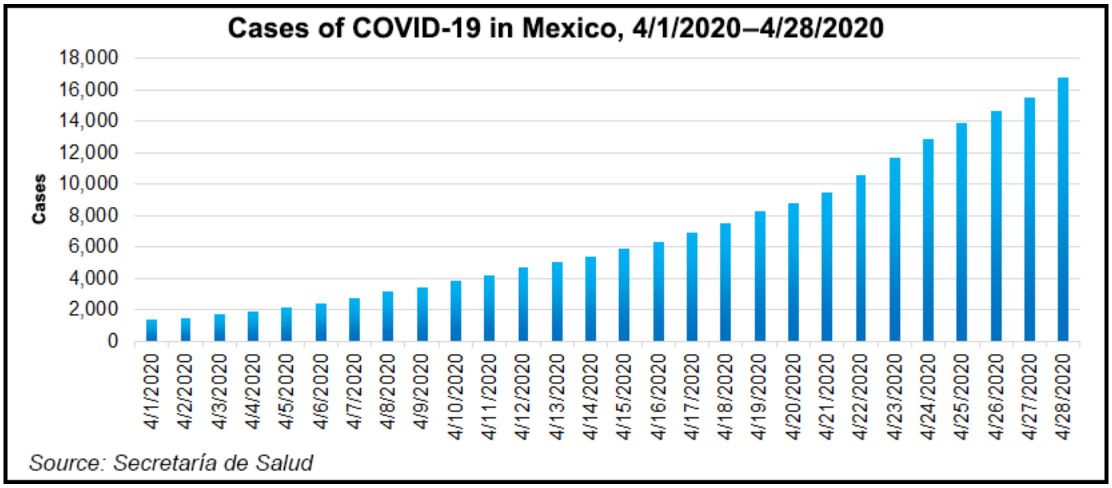
Meanwhile economic projections for the country are dire. Already in a recession, the International Monetary Fund (IMF) expects Mexico's gross domestic product (GDP) to contract by 6.6% in 2020, second worst in Latin America behind only Venezuela.

On Wednesday, the U.S. Commerce Department said that GDP in the United States fell by 4.8% in the first quarter, and Mexico's economy is deeply intertwined with its northern neighbors. Mexico sends some 75% of its exports to the United States.

The U.S.-Mexico border has been shut to all non-essential travel since April 20 and the bilateral order is set to remain in place until May 19.

With this as a backdrop, Mexico's Consejo Coordinador Empresarial (CCE) this week organized a virtual meeting with representatives of the government, businessmen and industry groups to discuss the importance of slowly reopening closed supply chain industries while keeping strict social distancing and hygiene measures in place.

The president of Mexican industrial group Confederación de Cámaras Industriales de los Estados *(continued on page 23)*



Source: Secretaría de Salud

Unidos Mexicanos (Concamin), Francisco Cervantes Díaz, said that it was crucial to understand and maintain Mexico's key role in the supply chain in the global economy.

"We are the eleventh largest economy in the world, the fourth largest auto producer, the fifteenth largest export economy and the leading trading partner of the United States," he said, adding that it was also an essential source of labor for Mexico's workforce.

Opposition Senator Verónica Martínez García of the Partido Revolucionario Institucional (PRI) said that confusion existed around what was considered as an 'essential' business. "Many activities which have been classified as nonessential really are indispensable."

Shuttered industries have also taken their toll on the natural gas market, with gas demand on the Sistrangas national pipeline system down 10-20%, and natural gas imports from the United States off some 500 MMcf/d, or about 10%.

Since early April, immediately after Phase 1 of the coronavirus contingency plan began, Mexican imports from the United States have dropped to below the 4.7 Bcf/d mark, according to Genscape Inc., compared to a year-to-date average as of late March, or right before stay-at-home measures were put in place, of slightly above 5.2 Bcf/d.

"Yes, other factors were at play during the April 2-17 period, such as programmed maintenance works and the Semana Santa holiday week," Genscape analyst Ricardo Falcon told *NGI's Mexico GPI*. "However, from April 18 onward, the weakness we see in total imports can be largely attributed to demand destruction caused by the pandemic."

During an earnings call last week, Infraestructura Energética Nova (IEnova) CEO Tania Ortiz said that some industrial customers receiving gas in Mexico had indicated difficulties due to the economic impacts of the coronavirus shutdown and that IEnova wanted to "work together with our customers through this hard time."

Mexico's president Andrés Manuel López Obrador, sticking to his pledge of austerity, meanwhile has been criticized for not doing enough to bolster the economy during unprecedented times. The IMF has said that of all the countries in Latin America and the Caribbean, only the Bahamas is spending less than Mexico on economic stimulus in the face of Covid-19.

During his daily press conference Wednesday morning, López Obrador said that there were sufficient hospital beds in the country and that 700 additional ventilators would arrive by the end of May.

He added that his administration "had begun discussions" with private industry and representatives from the United States and Canada on plans for economic reopening. ■

Mexico's Pemex Stabilizes Production in 1Q, but FX Losses, Low Prices Hammer Bottom Line

Mexico's heavily indebted state oil company Petróleos Mexicanos (Pemex) couldn't catch a break in the first quarter as hard-fought oil and gas production gains were completely undone by the depreciation of the peso and the tumbling price of oil.

Liquids production rose 2.7% year/year to 1.76 million b/d, compared with 1.67 million b/d in the first quarter of 2019. Natural gas production also stabilized, averaging 3.74 Bcf/d, up 1.9% from a year earlier.

These gains, welcome news after years of falling oil and gas production in Mexico, did little to soften the blow of collapsing prices and a depreciating currency in part because of the global economic impacts of the coronavirus.

The Mexican crude oil basket averaged $40.9/bbl in the quarter, down 38% compared from a year ago.

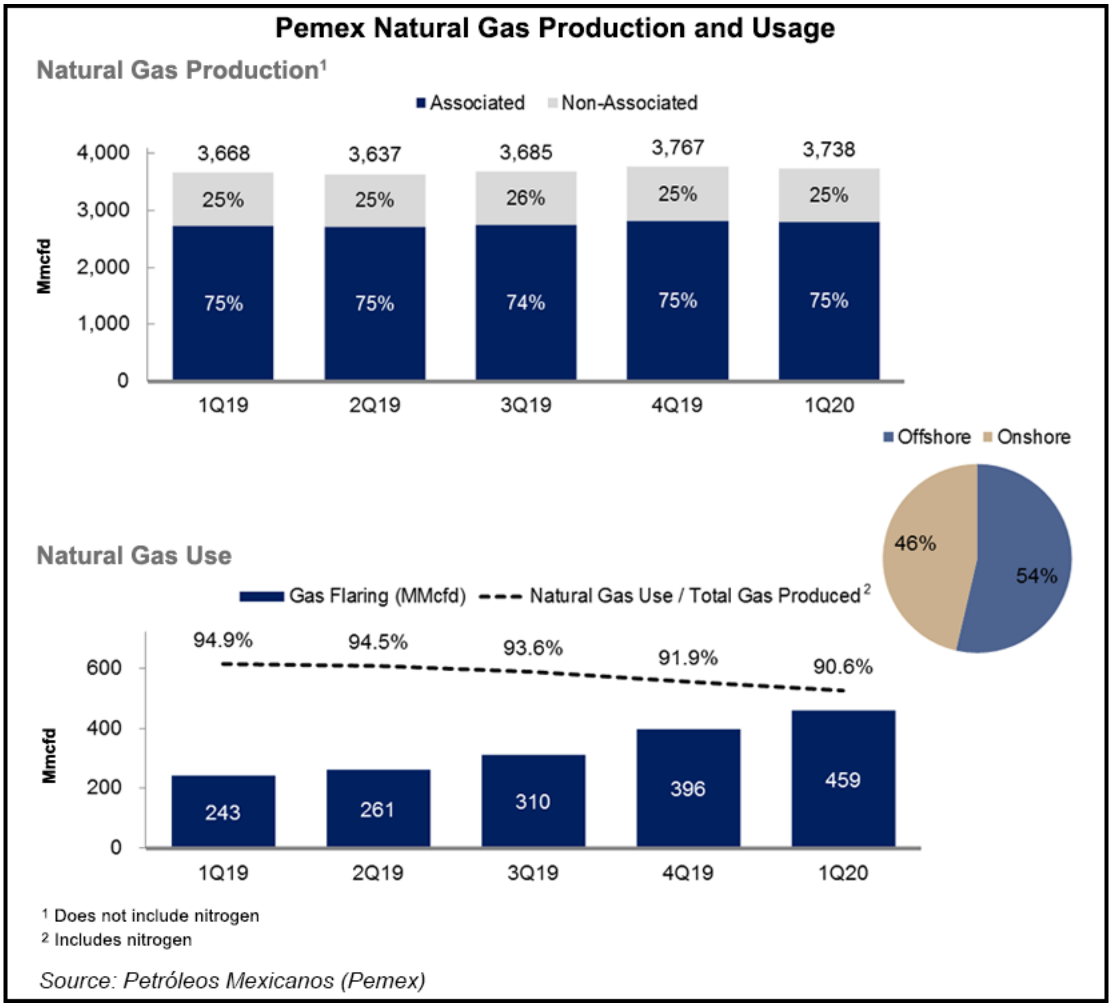
"This decrease in the price of crude oil is the most relevant variable that affected the company's export sales in the first quarter," said CFO Alberto Velázquez in an earnings call.

Crude exports fell by 66,000 b/d to 1.17 million b/d. Meanwhile, the Mexican peso depreciated by 27.4% against the dollar. This foreign exchange loss amounted to a 469 billion-peso ($19.5 billion) blow to the bottom line.

As a result, Pemex reported a staggering loss of 562 billion pesos ($23.4 billion) in the quarter, compared with a loss of 35.7 billion pesos ($1.5 billion) in the year-ago period.

While the valuation of debt balances is impacted by the depreciation, it does not impact cash flow, Velázquez said.

Executives also highlighted the support given by the government to strengthen the oil company's financial position, including a new fiscal relief decree pertaining to the profit-sharing duty, or DUC by its Spanish acronym, which accounts for 80% of Pemex's direct fiscal *(continued on page 24)*



burden. It should amount to 65 billion pesos ($2.7 billion) in savings this year.

The company also reduced 2020 capital expenditures (capex) by 45.5 billion pesos ($1.9 billion), of which 40.5 billion ($1.7 billion) will be in the upstream segment. Planned capex for 2020 was originally set at around $10 billion.

Pemex expects it will receive 7.5 billion pesos ($311 million) for its oil hedge contracted for 2020.

In total, measures instituted by the government to mitigate the impact of falling oil prices on the balance sheet and liquidity amount to 156 billion pesos ($6.5 billion), executives said.

In exploration and production, the so-called "priority fields" touted by Pemex as being key to new production added a total of only 46,000 b/d of new output by the end of March. The slow going was attributed to delays in needed infrastructure, bad weather and operation problems in well drilling.

Additionally, according to the terms of the recent agreement with the Organization of the Petroleum Exporting Countries, Mexico will have to reduce production by 100,000 b/d in May and June.

Gas flaring was also up in the first quarter, with natural gas use falling to 90.6%, compared with 94.9% in the first quarter 2019, attributed partly to a higher nitrogen content in gas production.

In addition, Mexico's refining sector continued to underperform, even as it charges ahead in building the $8 billion Dos Bocas refinery in Tabasco. Crude oil processing at the nation's six refineries fell to 542,000 b/d from 559,000 b/d in the year-ago quarter. Executives attributed the fall to ongoing maintenance works at the refineries.

As to the impact of a recent ratings downgrade on Pemex debt to "junk" status, Velázquez said that it was because of the "repercussions of the worldwide health crisis caused by Covid-19."

He added: "It's worth reiterating that Pemex has the absolute support of the Mexican government." ■

Range Resources Maintaining NGL Differential Guidance, Says Marcus Hook Exports Fetching Premium to Mont Belvieu

Range Resources Corp. said Monday it has continued to see positive price premiums this year on natural gas liquids (NGL) exported from the Marcus Hook export terminal in Pennsylvania compared to the Mont Belvieu hub in Texas.

Although global NGL prices have declined amid the Covid-19 pandemic, Range said the impact has largely been offset by lower freight rates.

The Fort Worth, TX-based natural gas and oil producer recorded an average realized NGL price before hedges of $14.87/bbl, at the higher end of guidance and representing a $1.30/bbl premium to the Mont Belvieu-equivalent barrel.

"Additionally, some of Range's long-term NGL marketing arrangements are structured to insulate Range from lower prices, including physical price floors within certain sales contracts," management said, adding that the company is maintaining its 2020 NGL premium differential guidance of 50 cents-$1.50/bbl.

"NGL prices have also significantly outperformed oil prices in recent weeks, leading to material improvements in pricing as a percent of" the West Texas Intermediate crude oil price.

Range said it is also maintaining guidance for natural gas and condensate differentials, and that more detailed information will be provided upon *(continued on page 25)*

release of its 1Q2020 earnings on Thursday.

Range, which operates mainly in the Marcellus, Utica and Upper Devonian formations, produced 1.6 Bcf/d of natural gas, 9,542 b/d of oil, and 105,858 b/d of NGLs during the first quarter. These figures compare with 1.56 Bcf/d, 8,951 b/d and 106,806 b/d, respectively, in the year-ago period.

The company also has operations in Northern Louisiana, which supplied 183 MMcfe/d of production in 4Q2019.

Raymond James & Associates, Inc. analysts said last week they expect NGL prices to stay at historic lows at least through end-2020. ■

Ohio Cracker FID Said Likely Delayed Due to Coronavirus

The sanctioning of a multi-billion dollar ethane cracker in Ohio is again likely to be delayed after the partnership behind the project said the Covid-19 pandemic has hindered the process.

Before the outbreak, affiliates of Thailand's PTT Global Chemical pcl and South Korea-based Daelim industrial had been targeting a final investment decision (FID) by the end of June. It's not the first time the FID has been delayed, but it appears matters are out of management's hands.

"While there are factors resulting from this health crisis that have kept us from acting as quickly as we would like, we continue to move as quickly as we can," the partnership said late last week, adding that the cracker remains a top priority.

"While due to circumstances beyond our control related to the pandemic, we are unable to promise a firm timeline for a final investment decision, we are working hard toward that decision."

Major energy projects across the world have been delayed because of the economic hardships and uncertainties that have been created by the response to the coronavirus. PTTGC America and Daelim Chemical USA have completed the first phase of site preparation and engineering work for the cracker. Other demolition jobs remain around the site in Belmont County on the Ohio River.

All of the nearly 500 acres required for the plant have been purchased, and Ohio has contributed more than $70 million in revitalization and economic development grants and loans.

PTT said in 2015 it was interested in constructing the facility to utilize low-cost feedstock from the Marcellus and Utica shales. The company budgeted $100 million for preliminary design work and later partnered with Daelim to advance the project.

The plant, which has secured all major regulatory approvals, would use six ethane cracking furnaces and manufacture ethylene, high-density polyethylene and linear low-density polyethylene, which are used in plastics and chemical manufacturing.

The project is similar in size to an ethane cracker that's being constructed by Royal Dutch Shell plc in western Pennsylvania. Most work on that project, however, has been suspended since the state ordered non-essential businesses and operations to halt last month to stop the spread of the virus. ■

Wave Goodbye to Fracking in 2020 as Coronavirus Devours Demand, Says Liberty Oilfield

Denver-based Liberty Oilfield Services Inc. is expecting to see "very little" completions activity through the rest of the year across North America as Covid-19 continues to consume energy demand.

The completions services specialist undertook swift retaliatory actions early in March and again in early April in response to the gnawing pandemic. While confident it can continue to be free cash flow positive through the year, CEO Chris Wright warned Wednesday of painful conditions overall across the oil and gas sector.

The year began well, Wright noted, with the number of fracture (frack) stages and sand volumes pumped exceeding previous quarterly records. All of the 24 frack fleets were active until mid-March, when everything came to a standstill.

Holding back the rippling impacts of the devastating pandemic has been nearly impossible.

"Regrettably, for the first time in the company's history we undertook a reduction of our personnel and staffed fleet count by approximately 50%," Wright said. Variable compensation plans and the company's 401(k) match were suspended. Capital spending was slashed, not once but twice, while base salaries were reduced, and the quarterly dividend was suspended.

A company-wide furlough plan now is in place to flex the cost structure and align with an "uncertain level" of frack demand in the coming months. Since the start of April, close to 330 people have lost their jobs.

"The toll on separated and present Liberty employees has been significant," Wright said.

[Want to see more earnings? See the full list of *NGI's* 1Q2020 earnings season coverage.]

On a positive note, "our balance sheet and Liberty culture will allow us the necessary flexibility to navigate this industry disruption," Wright said. "We are working closely with customers to bring innovative engineering to their completion strategies to maximize their return for each precious investment dollar."

The duration and depth of the oil demand contraction "remains uncertain," but Liberty is "well positioned to react quickly to a rebound in oil demand, commodity prices and producer appetite for frack services."

Net income was $2 million (2 cents/share) in 1Q2020, versus a year-ago net loss of $18 million (minus 15 cents). Revenues grew 19% sequentially to $472 million but were down from a year ago, when they totaled $535 million. Available liquidity at the end of the quarter was $259 million. ■

Marathon Petroleum Warns Coronavirus Causing 'Significant Financial Constraints' on Producers

Marathon Petroleum Corp. (MPC), which operates the nation's largest refining system and a bundle of midstream assets across the Lower 48, said Covid-19-related travel restrictions and social distancing measures have created increased risks that its customers may not be able to fulfill their obligations on time, if at all.

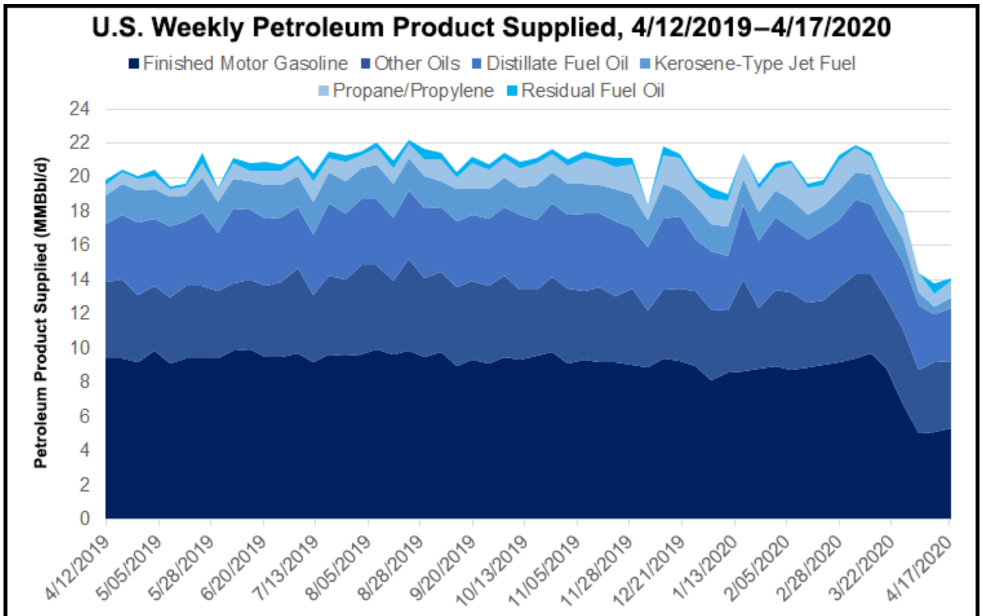
In a Securities and Exchange Commission Form 8-K filing, the Findlay, OH-based refiner said the decline in market prices for products held in inventory would lead to a "charge that is likely to be material" in 1Q2020 results.

MPC is scheduled to issue its quarterly report on May 5.

If crude prices were to remain low for a sustained period, there could be "significant financial constraints on certain producers from which we acquire our crude oil, which could result in long-term crude oil supply constraints for our business. Such conditions could also result in an increased risk that our customers and other counterparties may be unable to fully fulfill their obligations in a timely manner, or at all."

[*NGI has been and will continue to cover the effects that Covid-19 is having on natural gas markets and have grouped that coverage here for your ease of use. All NGI article content regarding the coronavirus will be free until further notice.*]

Several of the nation's largest oil producers have begun shutting in oil wells, including ConocoPhillips, Continental Resources Corp. and Cimarex Co. The Energy Information Administration said petroleum product demand in the United States fell to 13.8 million b/d in the week ending April 10, the lowest level since at least the early 1990s, when the agency began publishing such data.



Source: EIA, NGI calculations

MPC has more than 3 million b/d of crude capacity in 16 refineries. MPC also owns the general partner and majority limited partner interest in MPLX LP, has midstream operations across the Lower 48, including the Permian Basin, and with MarkWest Energy Partners LP, it owns a mix of midstream and natural gas liquids assets.

In March and through April, MPC has reduced the amount of crude it processes in response to the decreased demand for products. It also has idled "portions of refining capacity to further limit production."

MPC expects to "defer or delay" some capital expenditures that were expected this year and is reducing operating expenses across its operations. It also has deferred common stock purchases for now.

"Many uncertainties remain with respect to Covid-19, including its resulting economic effects, and we are unable to predict the ultimate economic impacts from Covid-19 and how quickly national economies can recover once the pandemic ultimately subsides," MPC said.

"However, the adverse impact of the economic effects on MPC has been and will likely continue to be significant. We believe we have proactively addressed many of the known impacts of Covid-19 to the extent possible and will strive to continue to do so, but there can be no guarantee the measures will be fully effective." ■

BP, Hilcorp Revamp $5.6B Alaska Sale on Decline in Oil Prices, Market Volatility

BP plc still expects to offload its legacy Alaska portfolio to Houston-based Hilcorp Energy Co., but terms of the $5.6 billion agreement have been renegotiated in response to market volatility.

Hilcorp, one of the largest private exploration and production companies in the country and a big investor in Alaska, last August agreed to take over the massive BP operations in the state. The deal includes the entire upstream and midstream business, including BP Exploration (Alaska) Inc., which owns all of the upstream oil and gas interests, and BP Pipelines (Alaska) Inc.'s stake in the Trans Alaska Pipeline System, aka TAPS.

The transaction is expected to be completed in June. However, "reflecting recent significant market volatility and oil price falls," the parties revamped the financial terms.

"We have worked closely with Hilcorp to reconfirm our commitment to completing this deal," said BP's William Lin, COO of Upstream. "The agreed revisions respond to market conditions while retaining the overall *(continued on page 27)*

consideration. We look forward to progressing swiftly to completion and for Hilcorp to take over the operation of this important business. We are confident that completion of this sale is the right thing for both parties, for the business and for Alaska."

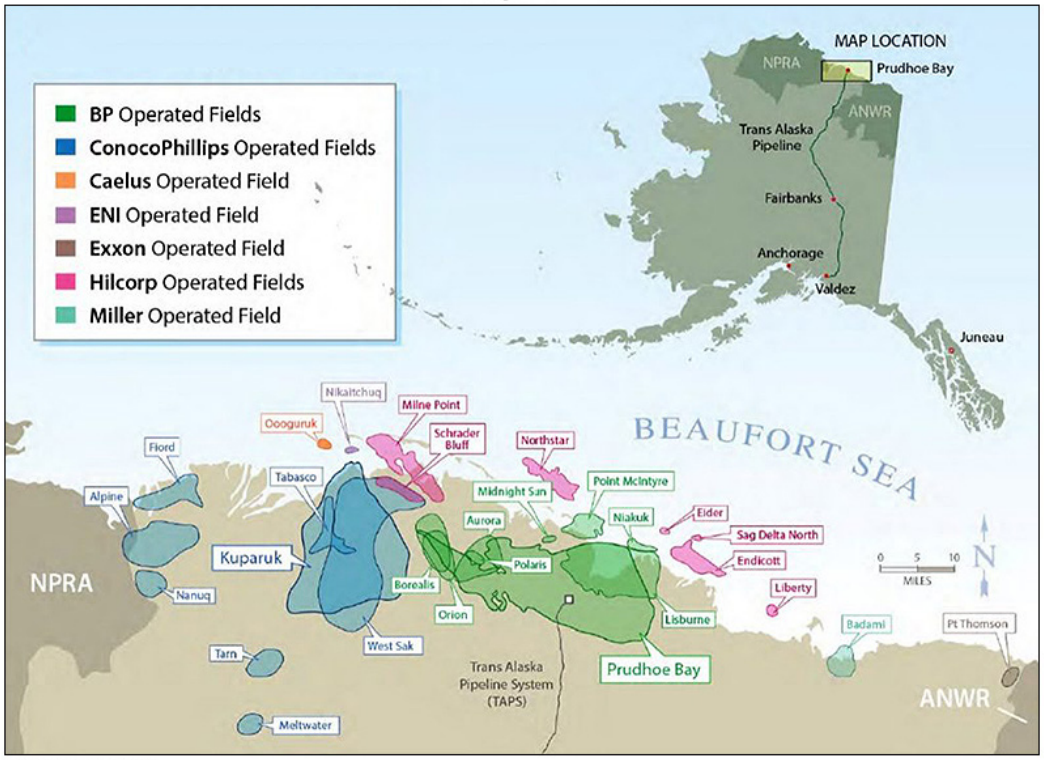
Under the revised agreement, the sale price remains unchanged but the structure of payments has been modified. Originally, Hilcorp was to pay $4 billion near term and $1.6 billion through an earnout thereafter. Hilcorp had paid BP a $500 million deposit when the transaction was signed last year.

Under the revamp, the deal has lower completion payments in 2020, new cash flow sharing arrangements over the near term, interest-bearing vendor financing and, potentially, an increase in the proportion of the consideration subject to earnout arrangements.

"The revised agreement is expected to maintain the majority of the value of the transaction," BP said. "It is also structured with flexibility to phase and manage payments to accommodate current and potential future volatility in oil prices."

The parties also have developed a transition plan "to deliver a smooth handover of operations upon completion to allow Hilcorp to focus on embedding planned operating efficiencies as rapidly as possible."

North Slope of Alaska



Source: BP plc

BP, which is scheduled to issue its first quarter results on Tuesday, noted that the Hilcorp transaction is part of its divestment program to deliver $15 billion by mid-2021.

BP had more than $20 billion in cash at the end of 2019, and it has an undrawn $8 billion revolver, which means there is no "immediate need for the cash," analysts with Tudor, Pickering, Holt & Co. said Monday.

Still, "Hilcorp's ability to finance any significant near-term payment is likely to continue to draw questions," analysts said, "as the company originally wished to fund the deal entirely with debt, which seems challenging in a seized up junk market and the company's publicly traded debt trading at 52-57 cents." ■

Diamond Offshore to Restructure Under Chapter 11

Houston-based Diamond Offshore Drilling Inc., caught in the web of low commodity prices and budget cutbacks by customers brought on in part by the coronavirus, plans to reorganize under Chapter 11 after filing a petition in the U.S. Bankruptcy Court for the Southern District of Texas.

The offshore contract driller, 53% owned by Loews Corp., has a global fleet of 15 rigs, consisting of 11 semisubmersibles and four dynamically positioned drillships. In the U.S. Gulf of Mexico, it has four available to work in ultra-deepwater at depths of more than 7,500 feet.

"After a careful and diligent review of our financial alternatives, the board of directors and management, along with our advisers, concluded that the best path forward for Diamond and its stakeholders is to seek Chapter 11 protection," CEO Marc Edwards said. "Through this process, we intend to restructure our balance sheet to achieve a more sustainable debt level to reposition the business for long-term success."

Clients and vendors "should expect business as usual across our organization."

As a result of filing, Loews said Diamond would be deconsolidated from the consolidated financial statements.

"In connection with the deconsolidation, Loews expects to record, in the second quarter of 2020, a significant noncash loss to recognize the difference between the carrying value and estimated fair value of its interest in Diamond as of the filing date," it said in a Securities and Exchange Commission Form-8K filing.

Loews said the carrying value of its Diamond stake was $1.5 billion at the end of 2019.

For 4Q2019, Diamond's net losses totaled $74.77 million (minus 54 cents/share), compared to sequential losses of $95.13 million (minus 69 cents). Revenue increased to $276 million from $254 million.

During 2019, Diamond secured $620 million of backlog. As of January, total contracted backlog was $1.6 billion, excluding a $100 million *(continued on page 28)*

margin commitment from one customer. Diamond expects to file its 1Q2020 results on May 4.

In a credit note about Diamond, Moody's Investors Service said Monday the "rapid and widening spread of the coronavirus outbreak, deteriorating global economic outlook, falling oil prices, and asset price declines are creating a severe and extensive credit shock across many sectors, regions and markets. The combined credit effects of these developments are unprecedented.

"The oilfield services and drilling sector is one of the sectors most significantly affected by the shock given its sensitivity to demand and oil prices. Diamond is vulnerable to the outbreak continuing to spread and oil prices remaining weak."

Paul, Weiss, Rifkind, Wharton & Garrison LLP is acting as Diamond's legal counsel and Alvarez & Marsal is serving as the restructuring adviser. Lazard Frères & Co. LLC is serving as financial adviser. ■

Covid-19 Impacting Everything Except 1Q Bottom Line, Portland General Reports

Portland General Electric (PGE) is cutting capital investments by $175 million and expecting more pressure in the months ahead, but the utility's 1Q2020 financial results avoided negative economic impacts of the coronavirus lockdown.

PGE's reality has changed significantly, causing the company to revise most of its guidance downward, according to CEO Maria Pope. "All sectors of the economy are facing unprecedented challenges," Pope said during a conference call last Friday.

Pope said most of the capital projects affected by the reduction will be picked up by PGE next year.

"The economy we have and the outlook for customers for growth in the region will determine the timing of capital projects, first making sure we are operating a safe and reliable system. Bringing back capital expenditures will depend upon their economic outlook," she said.

Pope said residential use has increased about 5% during the coronavirus-related stay-at-home measures, while small commercial businesses' electricity use has dropped by about 10%. The industrial sector, led by high tech, grew about 9.5% during the first quarter.

PGE expects its overall sendout for the year to be down by about 1-2%, said Pope.

The push continues to be toward non-thermal sources of power in PGE's hydro-rich region to meet the state's decarbonization goals. PGE still has some thermal power additions in its latest integrated resource plan (IRP), but since last year it has focused on de-emphasizing gas use longer term. PGE is re-evaluating the timing for releasing bids for added power supplies under the IRP, given the impacts of the pandemic, Pope said.

PGE reported 1Q2020 net income of $81 million (91 cents/share), compared to $73 million (82 cents) for the same period last year. ■

California Energy Legislation Said Frozen in Midst of Covid-19

In hibernation with the coronavirus lockdown, the California legislature has been frozen in place since mid-March, and the prospects for passing any meaningful energy bills in this session are dim.

When legislators return to Sacramento, now scheduled for Monday (May 4), observers expect the focus to be on recovering from stay-in-place and social distancing measures.

"While we continue to monitor a number of pending energy related bills, it appears the legislature will be largely prioritizing legislation critical to Covid-19 issues and recovery," said Western States Petroleum Association spokesperson Kevin Slagle.

The oil and gas industry faces a "tough, unprecedented time" that is historic in its scope and impact, he said. "We've seen significant reductions in production and refining operations, and layoffs among small businesses supporting our industry."

A veteran energy lobbyist told *NGI* that few bills are likely to move forward in the energy space. Reportedly, a plan is being considered to have each Assembly policy committee hold one hearing on issues deemed appropriate by each chair. Hearings would have limited public testimony.

Aside from wildfires and climate change, the fate of bills dealing with utility rates that impact some renewables and renewable natural gas bills is unknown.

Spokesperson Garo Manjikian for Assemblymember Chris Holden, who chairs the Utilities and Energy Committee, said a committee meeting scheduled May 20 would be limited to "urgent/necessary" topics. "We don't have the final list of bills, but it will likely be small."

California Independent Petroleum Association (CIPA) CEO Rock Zierman recommended lawmakers take a pause in terms of energy bills as the state has extensive energy regulations.

"Even if the legislature focuses its sole attention on responding to the Covid-19 crisis and economic fallout, California will still remain on track with its aggressive climate goals with the strict laws already in place," said Zierman.

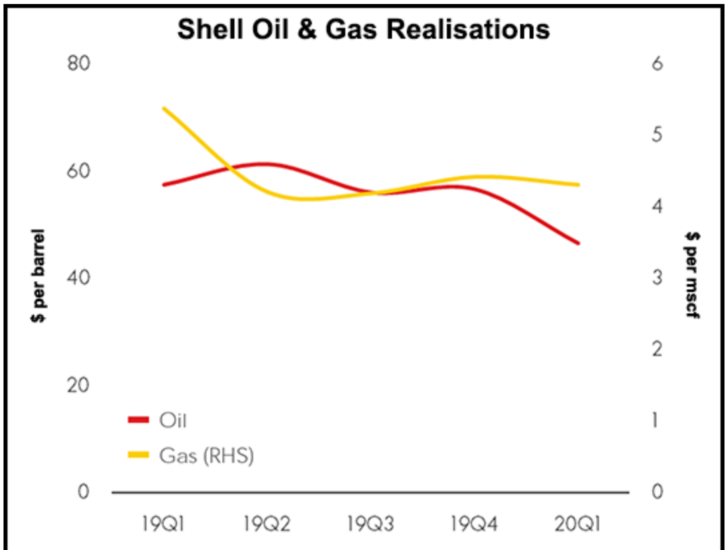
CIPA is concerned with a budget proposal by the California Geologic Energy Management Division (CalGEM) to increase staffing by 40%. "With oil production on the decline, a staff that has doubled over the last decade, and a 20% vacancy rate on already approved positions, this seems like an overreach by the department," Zierman said.

CalGEM spokesperson Don Drysdale said recent growth has come as the regulatory role has broadened, with staff growing to 300 from 150 positions. The current vacancy rate is 13%; a proposal would add 128 positions over the next three years.

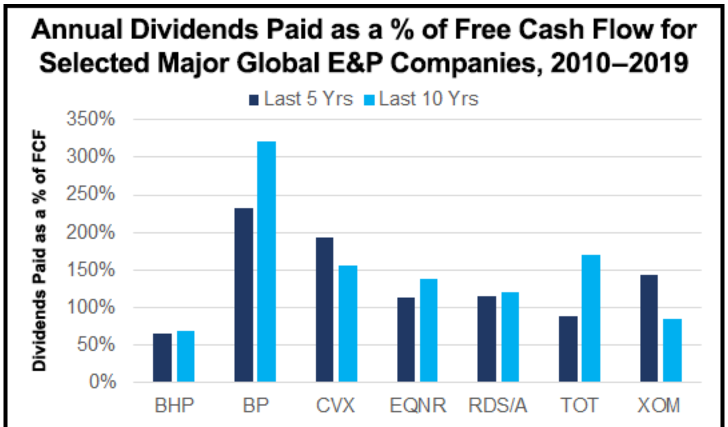
Drysdale said the proposals "are subject to review and modification due to the Covid-19 pandemic's impact on California's economy," and the impact "could be immediate." ■

Shell CEO Says Covid-19 May 'Capitalize Society' to Reduce Long-Term Oil, Natural Gas Demand

(continued from page 1)



Source: Royal Dutch Shell



Source: Bloomberg, NGI calculations

the short and medium term. In addition, the company is seeing "recessionary trends in many of the markets and countries that we operate in, and this volatility presents a unique challenge for oil and gas produced."

Recovery will come, but as to when is uncertain. For now, the immediate priority is to support the workforce, van Beurden told investors. Ensuring business continuity is second.

Underlying operating costs are coming down by $3-4 billion year/year, with capital expenditures cut to $20 billion, off from initial guidance of $25 billion. Group performance bonuses across the board have been scuttled.

Shell had high expectations as the year began, Uhl said. By the end of March, however, Shell had withdrawn from the proposed Lake Charles LNG export project in Louisiana. In Australia Shell and its partners delayed a final investment decision on a natural gas field project. Sanctioning of a deepwater project in the Gulf of Mexico also has been shelved.

Also taking a hit is the U.S. business overall, where Shell has reduced the rig count. The operator in 4Q2019 had taken a $2.3 billion impairment charge because of the decline in U.S. gas and oil prices.

"We're effectively pulling all levers that touch our cash sources...to preserve the short term as well as the longevity of our cash flow," Uhl said. "We need to manage value and risk in the near and long term."

Questioning Demand

"Two real big problems" are facing the industry," van Beurden said. "One is that, of course, everything has become much more challenging macro-wise, and we know it's going to get worse before it gets better. The biggest challenge we find ourselves is this crisis of uncertainty that we have...It's not just the oil price, that's just one aspect. What will happen to demand?"

Demand, he said, "will come down massively...The reduction in demand that has been predicted just for April is going to be 29 million b/d. We don't know what that may bring. So there's a lot of challenges coming from that.

"The margins in downstream refining margins, who knows where that will go, who knows actually where the viability of our assets will go in many cases? We have seen people having to shut-in simply because they do not have the logistics inbound or outbound...It is that level of uncertainty that you cannot model scenarios."

[*Want to see more earnings? See the full list of NGI's 1Q2020 earnings season coverage.*]

Shell is working its way through the financial modeling on a day-by-day basis, but it's not a simple task. The modeling is the "key thing that we have been grappling with and everybody is grappling with, and the only sensible thing to do," van Beurden said. "In my mind, when these things happen to you, take very decisive action; take the countermeasures that are needed to protect financial resilience because that's what it will ultimately come down to."

A few pundits have suggested that the supermajors will be able to swoop in and grab distressed assets as Lower 48 producers and others succumb to low prices. However, merger and acquisition activity "is not a priority for the moment," Uhl said. "Perhaps this does not necessarily need to be said to everyone. But just the scale and scope of the issues at play that are affecting the company today cannot be overstated."

No Sharp Recovery

Beyond the incredible health issues and the economic implications, "the knock-on effects from a commodity price perspective have been some of the most dramatic impact on the company in recent history," Uhl said. "That's affecting us today, and we are uncertain about how that will affect us for the coming years. But we're expecting more of an 'L'-shaped recovery than certainly a 'V' or sharp recovery."

What's happening, she said, is an "unusual type of dislocation that...is not just while the oil prices are down because we have a supply demand mismatch...Here, we are looking not just at that.

"We are looking at a major demand destruction that we don't even know will come back," Uhl said. "So the oil price may come back, but if the volumes are significantly lower, we still have a major dislocation" in Shell's cash margins.

It's uncertain whether there may be a "major recession coming" to permanently destroy some oil and gas demand by impacting consumer behavior. "At this stage, the relatively disorderly way in which all systems start to shut down is also going to affect us in *(continued on page 30)*

ways that are very hard to predict," Uhl said.

The direction of the pandemic is equally uncertain, said the financial chief. There could be clearer direction by July — or not.

Shell stands ready to "curtail or reduce oil and/or gas production, LNG liquefaction, as well as utilization of refining and chemicals plants," through June, which could impact sales volumes.

Integrated Gas production in 2Q2020 is expected to be 840,000-890,000 boe/d. LNG liquefaction volumes are forecast at 7.4-8.2 million metric tons.

"More than 90% of the term contracts for LNG sales are oil price-linked," Uhl noted, "with a price lag of typically three-to-six months." Upstream production between April and June is expected to be 1.75-2.25 million boe/d.

Refinery utilization in the current quarter is forecast at 60-70%, while Oil Products sales volumes are expected to be 3- 4 million b/d. Chemicals manufacturing plant utilization is forecast at 70-80%, with sales volumes of 3.5-4.1 million metric tons.

'Different Way of Thinking'

Some priorities are not being pushed aside, including a goal to become a net zero emissions energy business by 2050 or sooner. Once the world is on the "other side" of the pandemic, "it is indeed very likely that there will be a few areas that will continue to feel pressure," van Beurden said.

"We are facing an overhang in the market" likely to pressure oil and gas prices "for some time to come. Of course, those businesses that are sitting behind challenged infrastructure, those businesses that have a high breakeven price...have a very high carbon footprint." The fossil fuels industry "will be increasingly challenged" because of emissions.

"I think a crisis like this has the potential to capitalize society into a different way of thinking, much as the Paris Agreement has had. So, things like oil could be a challenge," as well as landlocked operations with high carbon emissions.

"That, by the way, has also very much been the lens through which we have been looking at our portfolio," van Beurden said. "We have made the choice to get out of high breakeven, high carbon projects…" Across the industry, "I think more of that may still be to come going forward."

Shell's current cost of supplies in 1Q2020 fell by 46% year/year to $2.86 billion (35 cents) from $5.30 billion (65 cents). Cash flow from operating activities was $7.4 billion. Revenue plunged to $60 billion from $84 billion.

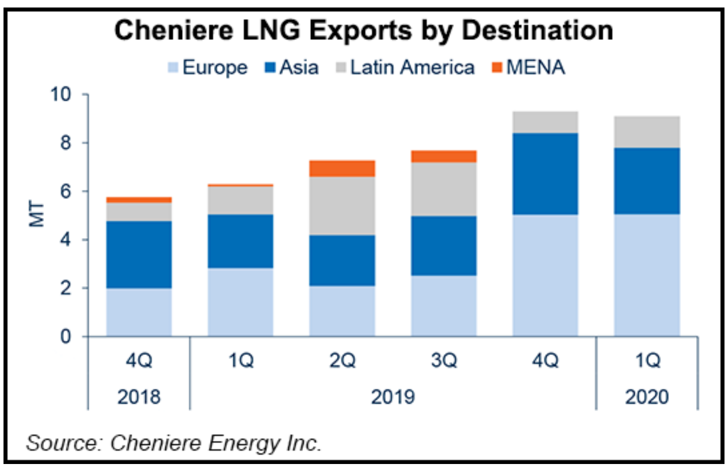
In the Upstream segment, Shell recorded a $776 million charge on impairments mainly for assets in the United States and Brazil from lower commodity prices. Total production was 5% lower year/year, mainly because of divestments, field decline and lower production in a North American joint venture, partly offset by field ramp-ups in the Permian Basin, Gulf of Mexico and Santos Basin. Excluding the portfolio impacts, production was flat. ■

Cheniere Chief Says Price Negotiations, Force Majeures Off the Table During Pandemic

(continued from page 1)

year/year in the first quarter to an average of $3.35/MMBtu, while the Japan Korea Marker in North Asia declined 40% over the same time to average $4.82. Henry Hub also traded well below $2.00 during the quarter.

Global prices have hit new lows since then and more U.S. cargoes are expected to be canceled in the months ahead as the spread between key markets in Asia and Europe offers little incentive to deliver LNG from the United States.



[*Want to see more earnings? See the full list of NGI's 1Q2020 earnings season coverage.*]

Given the dynamics, Chief Commercial Officer Anatol Feygin said global final investment decisions (FID) for new capacity are likely to be impacted. Cheniere now expects 65 million metric tons/year (mmty) of capacity to be sanctioned in 2020 and 2021, or about half of what it had forecast before the coronavirus outbreak.

"We do include our Corpus Christi stage three expansion in these expected FIDs, which will be dependent on, among other things, obtaining sufficient commercial agreements to support the project." he added.

The expansion project, approved by federal regulators last year, would include up to seven midscale liquefaction trains with a total capacity of around 10 mmty. Stage three, with the three trains operating or under construction, would boost total capacity to around 25 mmty at Corpus Christi LNG in South Texas. Construction is not expected to begin until supply agreements have been executed, something Fusco said requires "face-to-face combat," which is challenging given the travel restrictions in place globally to help fight the pandemic.

A third train under construction at Corpus is 84% complete and expected to come online next year, while a sixth train at Sabine Pass LNG in Louisiana is 54% complete and expected to come online in 2023.

The company also said it's taken additional measures to protect workers against the virus throughout its operations. In April, Cheniere began utilizing temporary on-site housing for workers at its facilities and implemented marine operations with "zero contact" during loading activities, among other things. The company said it has spent $30 million *(continued on page 31)*

NGI's Weekly Spot Price Market Summary
Apr 30 - May 01

Location	Range	Average
S. TX Regional Avg.	1.450-1.710	1.590
E. TX Regional Avg.	1.440-1.800	1.585
W. TX/SE NM Regional Avg.	1.050-1.580	1.400
Midwest Regional Avg.	1.480-2.020	1.615
Midcontinent Regional Avg.	1.370-1.625	1.530
N. LA Regional Avg.	1.500-1.650	1.545
S. LA Regional Avg.	1.430-1.720	1.620
Southeast Regional Avg.	1.400-1.825	1.605
Appalachia Regional Avg.	1.050-1.560	1.355
Northeast Regional Avg.	1.250-2.250	1.530
Rocky Mtns. Regional Avg.	0.500-1.585	1.455
California Regional Avg.	1.350-2.480	1.625
National Avg.	**0.500-2.480**	**1.545**
Henry Hub	**1.620-1.720**	**1.670**

Notes: Prices in US$/MMBtu for dry gas. These regional price ranges include prices at citygates and other market area delivery locations as well as delivered to pipeline prices for gas in producing areas. The National Average is a simple average of all of the individual regional averages. For more information see NGI's Price Index Methodology.

responding to the outbreak.

Loaded LNG volumes increased in the first quarter to 455 TBtu, up from 309 TBtu in the year-ago period, but flat from 462 TBtu in the fourth quarter. Year/year volumes jumped as the company brought more trains online.

Cheniere reported net income of $375 million ($1.48/share), compared with net income of $141 million (55 cents) in the year-ago period. ■

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Calendar 1Q20 Earnings Conference Call Dates for Selected Publicly Traded Oil & Gas, and Related Companies

Last Updated: May 1, 2020

Ticker	Company	Coverage	Date	Time (ET)	IR Site	Business Specialty
SLB	Schlumberger	Daily GPI	17-Apr	8:30 AM	IR Site	Oil Services
HAL	Halliburton	Daily GPI	20-Apr	9:00 AM	IR Site	Oil Services (Pressure Pumping)
BKR	Baker Hughes	Daily GPI	22-Apr	9:00 AM	IR Site	Oil Services
NEE	NextEra		22-Apr	9:00 AM	IR Site	Power
KMI	Kinder Morgan	Daily GPI	22-Apr	4:30 PM	IR Site	Pipelines, Gathering & Midstream (NGLs)
FTI	TechnipFMC		23-Apr	8:00 AM	IR Site	Oil Services
PTEN	Patterson UTI	Daily GPI	23-Apr	10:00 AM	IR Site	Onshore Drilling
IENOVA* MM	Infraestructura Energetica Nova (IEnova)	Mexico GPI	23-Apr	11:00 AM	IR Site	Midstream
POR	Portland General Electric	Daily GPI	24-Apr	11:00 AM	IR Site	Power
CNXM	CNX Midstream	Shale Daily	27-Apr	10:00 AM	IR Site	Midstream
DTE	DTE Energy	Daily GPI	28-Apr	9:00 AM	IR Site	Pipelines, Utilities
NOV	National Oilwell Varco	Shale Daily	28-Apr	11:00 AM	IR Site	Rig Construction
RES	RPC		29-Apr	9:00 AM	IR Site	Oil Services
EPD	Enterprise Products Partners	Daily GPI	29-Apr	10:00 AM	IR Site	Gathering & Midstream (NGLs)
LBRT	Liberty Oilfield Services	Shale Daily	29-Apr	10:00 AM	IR Site	Oilfield Services
OKE	ONEOK	Daily GPI	29-Apr	11:00 AM	IR Site	Gathering & Midstream (NGLs)
QEP	QEP Resources		30-Apr	9:00 AM	IR Site	E&P
RIG	Transocean		30-Apr	9:00 AM	IR Site	Offshore Drilling
VAL	Valaris PLC		30-Apr	10:00 AM	IR Site	Offshore Drilling
LNG	Cheniere Energy	Daily GPI	30-Apr	11:00 AM	IR Site	LNG
COP	ConocoPhillips	Shale Daily	30-Apr	12:00 PM	IR Site	E&P
SO	Southern Company		30-Apr	1:00 PM	IR Site	Power
PD	Precision Drilling		30-Apr	2:00 PM	IR Site	Onshore Drilling
EIX	Edison International		30-Apr	4:30 PM	IR Site	Power
NFG	National Fuel Gas		1-May	8:30 AM	IR Site	E&P, Pipelines
SLCA	U.S. Silica Holdings		1-May	8:30 AM	IR Site	Proppant
CXO	Concho Resources	Shale Daily	1-May	9:00 AM	IR Site	E&P
RRC	Range Resources		1-May	9:00 AM	IR Site	E&P
COG	Cabot Oil & Gas	Shale Daily	1-May	9:30 AM	IR Site	E&P
XOM	ExxonMobil/XTO Energy	Daily GPI	1-May	9:30 AM	IR Site	E&P
SWN	Southwestern Energy	Shale Daily	1-May	10:00 AM	IR Site	E&P
CVX	Chevron		1-May	11:00 AM	IR Site	E&P
HP	Helmerich & Payne		1-May	11:00 AM	IR Site	Onshore Drilling
TRP	TC Energy		1-May	3:00 PM	IR Site	Pipelines
PEG	Public Service Enterprise Group		4-May	11:00 AM	IR Site	Power
SRE	Sempra		4-May	12:00 PM	IR Site	LDC, Power, LNG
VST	Vistra Energy		5-May	8:00 AM	IR Site	Power
CEQP	Crestwood Equity Partners		5-May	9:00 AM	IR Site	Gathering & Midstream (NGLs)
FANG	Diamondback Energy		5-May	9:00 AM	IR Site	E&P
HPR	HighPoint Resources		5-May	9:00 AM	IR Site	E&P
PE	Parsley Energy		5-May	9:00 AM	IR Site	E&P
WMB	Williams Companies		5-May	9:30 AM	IR Site	Pipelines, Midstream
D	Dominion Energy		5-May	10:00 AM	IR Site	Gathering & Midstream
BKH	Black Hills Corporation		5-May	11:00 AM	IR Site	E&P, Utilities
MPLX	MPLX LP		5-May	11:00 AM	IR Site	Midstream
VNOM	Viper Energy Partners		5-May	11:00 AM	IR Site	E&P
PAA	Plains All-American Pipeline		5-May	5:00 PM	IR Site	Oil Pipelines
NEX	NexTier Oilfield Solutions		6-May	8:30 AM	IR Site	Well Services
AEP	American Electric Power Co.		6-May	9:00 AM	IR Site	Power
NI	NiSource		6-May	9:00 AM	IR Site	Utilities
ENBL	Enable Midstream Partners		6-May	10:00 AM	IR Site	Midstream
SND	Smart Sand Inc.		6-May	10:00 AM	IR Site	Proppant
DVN	Devon Energy		6-May	11:00 AM	IR Site	E&P
OXY	Occidental Petroleum		6-May	11:00 AM	IR Site	E&P
TCP	TC Pipelines		6-May	11:00 AM	IR Site	Pipelines
CPG	Crescent Point Energy		6-May	12:00 PM	IR Site	E&P
NBR	Nabors Drilling		6-May	2:00 PM	IR Site	Onshore Drilling
EQNR	Equinor		7-May	N/A	IR Site	E&P
XEL	Xcel Energy		7-May	3:00 AM	IR Site	Power
LPI	Laredo Petroleum		7-May	8:30 AM	IR Site	E&P
AES	AES Corporation		7-May	9:00 AM	IR Site	Power
CRK	Comstock Resources		7-May	9:00 AM	IR Site	E&P
ENB	Enbridge		7-May	9:00 AM	IR Site	Pipelines
MRO	Marathon Oil		7-May	9:00 AM	IR Site	E&P
MUR	Murphy Oil		7-May	9:00 AM	IR Site	E&P
NE	Noble Corp.		7-May	9:00 AM	IR Site	Offshore Drilling
NRG	NRG Energy		7-May	9:00 AM	IR Site	Power
OGE	OGE Energy Corp		7-May	9:00 AM	IR Site	Power
APA	Apache		7-May	10:00 AM	IR Site	E&P
ATO	Atmos Energy		7-May	10:00 AM	IR Site	Utilities, Pipelines
HES	Hess Corporation		7-May	10:00 AM	IR Site	E&P
NINE	Nine Energy Service		7-May	10:00 AM	IR Site	Oil Services
PXD	Pioneer Natural Resources		7-May	10:00 AM	IR Site	E&P
SM	SM Energy		7-May	10:00 AM	IR Site	E&P
WPX	WPX Energy		7-May	10:00 AM	IR Site	E&P

Ticker	Company	Coverage	Date	Time (ET)	IR Site	Business Specialty
EQT	EQT Corporation		7-May	10:30 AM	IR Site	E&P
CNP	CenterPoint Energy		7-May	11:00 AM	IR Site	Power, Utilities
XEC	Cimarex Energy		7-May	11:00 AM	IR Site	E&P
DCP	DCP Midstream Partners		7-May	11:00 AM	IR Site	Gathering & Midstream (NGLs)
GDP	Goodrich Petroleum		7-May	11:00 AM	IR Site	
TRGP	Targa Resource Corp.		7-May	11:00 AM	IR Site	Gathering & Midstream (NGLs)
TALO	Talos Energy		7-May	11:30 AM	IR Site	E&P (Offshore)
HESM	Hess Midstream Partners		7-May	12:00 PM	IR Site	Midstream
ICD	Independence Contract Drilling		7-May	12:00 PM	IR Site	Onshore Drilling
EPM	Evolution Petroleum Corp.		7-May	2:00 PM	IR Site	E&P
GPOR	Gulfport Energy		8-May	8:00 AM	IR Site	E&P
NBL	Noble Energy		8-May	9:00 AM	IR Site	E&P
SR	Spire Energy		8-May	9:00 AM	IR Site	Utilities, Pipelines
EOG	EOG Resources		8-May	10:00 AM	IR Site	E&P
EXC	Exelon		8-May	10:00 AM	IR Site	Power
MR	Montage Resources		8-May	10:00 AM	IR Site	E&P
BCEI	Bonanza Creek		8-May	11:00 AM	IR Site	E&P
ERF	Enerplus Corp.		8-May	11:00 AM	IR Site	E&P
MDU	MDU Resources		8-May	11:00 AM	IR Site	Pipelines, Utilities
NBLX	Noble Midstream Partners		8-May	11:00 AM	IR Site	Midstream
NWN	NW Natural		8-May	11:00 AM	IR Site	Utilities
OVV	Ovinitiv (Encana)		8-May	11:00 AM	IR Site	E&P
PNW	Pinnacle West		8-May	12:00 PM	IR Site	Power
ETR	Entergy		11-May	11:00 AM	IR Site	Power
CLR	Continental Resources		11-May	12:00 PM	IR Site	E&P
ET	Energy Transfer		11-May	5:00 PM	IR Site	Pipelines, Gathering & Midstream (NGLs)
CHAP	Chaparral Energy		12-May	10:00 AM	IR Site	E&P
DUK	Duke Energy		12-May	10:00 AM	IR Site	Utilities
EQM	Equitrans Midstream		14-May	10:30 AM	IR Site	Midstream

*All companies listed are traded on either the New York Stock Exchange, the American Stock Exchange, or NASDAQ with the exception of PEMEX and IEnova. Dates and times subject to change. Note: NGI will re-run this chart over the next several Monday editions, and will add other conference call dates as they become available.

Source: Compiled by NGI from Bloomberg and company press releases