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December 6, 2019

Oil & Gas EIS Project  
Mr. Robert Potts  
Natural Resources and Planning Team Leader  
National Forests and Grasslands in Texas  
2221 North Raguet  
Lufkin, Texas 75904

Dear Rob,

The Houston Regional Group and Lone Star Chapter of the Sierra Club (Sierra Club) provide this seventh set of comments for scoping for the U.S. Forest Service (FS) oil/gas leasing environmental impact statement (OGLEIS) under the National Environmental Policy Act (NEPA) for the National Forests and Grasslands in Texas (NFGT).

Although the official scoping period is over, the Sierra Club will continue to send the FS documents and articles that relate to the OGLEIS. The Sierra Club has been told in the past that although there is an official scoping comment period, that scoping extends from the beginning of the scoping comment period until the draft EIS is released. There are additional articles that the Sierra Club provides to the FS with this letter.

1. Climate change accelerating, scientists say," Henry Fountain, New York Times, Houston Chronicle, December 5, 2019.

This article states that climate change is accelerating and its effects are happening quicker than scientists thought. All the more reason for the FS to reduce or eliminate oil/gas exploitation from the NFGT.

2. "Frak to the future: It's looking like 1980s". Erin Douglas, Houston Chronicle, December 6, 2019.

The article notes the economic outlook for a "boom and bust" industry like oil/gas is not good. "Fracking Bust: The Sequel. At least, that's how Greater Houston Partnership's lead economist Patrick Jankowski sees Houston right now. With an oversaturated real estate market, an overbuilt industrial market and a bleak outlook for oil and gas, history may not be repeating itself, but it looks pretty close, Jankowski wrote in his annual economic forecast report for the region."

"When we try to pick out anything by itself, we find it hitched to everything else in the universe." *John Muir* <sup>1</sup>

3. "Crude prices hang in the balance as OPEC meets", Jordan Blum and Sergio Chapa, Houston Chronicle, December 5, 2019.

This article states "The fate of crude oil prices and the health of the U.S. energy sector heading in 2020 may be determined this week in Vienna when OPEC and its allies meet to determine whether to extend or deepen production cuts that have kept the market from crashing ... With crude supplies expected to keep outpacing waning demand growth in the months ahead, inaction from OPEC or even a decision to extend the existing cutbacks could send oil prices plunging toward \$40 a barrel by mid-2020, a level at which few U.S. companies could make money and likely leading to layoffs in Houston and across the industry. With prices stuck in the \$50-to-\$60 range, energy companies already are cutting back and eliminating jobs." "Boom and bust" oil/gas has economic consequences that are also negative, not just positive, and must be revealed in the OGLEIS analysis and EIS.

4. "U.S. hits a milestone as petroleum exporter", Dino Grandoni, Washington Post, Houston Chronicle, December 4, 2019.

This article states that more oil will be on the market. This means the price will be driven down further.

5. "Gas flaring is under fire", Sergio Chapa, Houston Chronicle, December 4, 2019.

This article states that flaring wastes product and money and should not be allowed, in many cases.

The Sierra Club appreciates this opportunity to provide these additional initial scoping comments about the OGLEIS. Thank you.

Sincerely,



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# BUSINESS

HOUSTON CHRONICLE • FRIDAY, DECEMBER 6, 2019 • SECTION B \*\*

• **DOW:** 27,677.79, up 28.01 (+0.1%) | • **S&P:** 3,174.3, up 4.67 (0.2%) | • **OIL:** \$58.43, no change 0.0¢ (0.0%) | • **NATURAL GAS:** \$2.427, down 0.028¢ (-1.2%)

## Frack to the future: It's looking like 1980s

Houston's economy following similar pattern to last major oil bust, forecast report suggests

By Erin Douglas  
STAFF WRITER

**Fracking Bust: The Sequel.**  
At least, that's how Greater Houston Partnership's lead economist Patrick Jankowski sees Houston right now. With an over-saturated real estate market, an overbuilt industrial market and a bleak outlook for oil and gas, his

tory may not be repeating itself, but it looks pretty close, Jankowski wrote in his annual economic forecast report for the region.

"There was a downturn in the '80s, and things got better in '85, and then another downturn in '86," he said. "We had a downturn (in 2005), then 2007, 2008 looked pretty good, and now we're seeing another downturn. It's a very simi-

lar pattern."

The good news: Houston's banking sector isn't about to collapse (as it did in the 1980s). And the rest of the nation is doing fine, which is likely to continue to propel Houston's economy forward.

"The U.S. economy is performing better (right now) than everyone thought it would," Jankowski said.

The Houston economy will likely add 42,300 jobs in 2020, according to the GHP forecast. That would be a slowdown of more

than 22,000 jobs from what Houston is on track to add by the end of 2019, at 64,400.

Houston's economy is tied to the energy market, and the energy market is not doing so hot. Energy makes up 9 percent of the local economy, and the sector is set to lose a net 4,000 jobs next year, according to Greater Houston Partnership's forecast.

Wall Street investors have tightened capital spending for exploration and production companies, oil prices are stuck between \$50-

\$60 per barrel (not horrible, but also not enough to make a lot of money), and a slowing global economy has hurt demand for fuel products. Fewer wells are being drilled and the rig count is down to its lowest level since March 2007.

And while the reasons for the bust might be different this time, the way Houston's economy is responding looks eerily similar to how it did more than 30 years ago, Jankowski said.

*Economy continues on B7*

## OPEC seeking to curtail pumping

By Jordan Blum  
STAFF WRITER

OPEC and its allies are recommending a production cut of an additional 500,000 barrels of crude per day in early 2020 to help head off an oil supply glut, but the plan may not have much of an impact on global markets and prices because the cartel's output already is well below existing quotas.

Details of the potential agreement were scarce Thursday after OPEC canceled a scheduled news conference as a closed session between energy ministers continued late into the evening in Vienna.

The proposed deal, though, likely translates into Saudi Arabia, which has kept its output well below its allowance, maintaining those lower production levels while requiring better compliance from frequent quota violators such as Iraq, Nigeria and key OPEC ally Russia.

In practice, the 500,000-barrel cutback might equal about a 100,000-barrel reduction from current output levels, energy analysts said. The proposal was first confirmed by Russian Energy Minister Alexander Novak to reporters after OPEC ministers met prior to the full OPEC meeting Thursday.

The Organization of the Petroleum Exporting Countries and its allies, known collectively as OPEC+, are scaling back production again because of the ongoing U.S. shale boom — the U.S. has more than doubled its oil output since 2010 — and a wave of new oil coming online from non-OPEC nations such as Norway, Brazil, Canada and Guyana.

The concern among OPEC+ members — and other producers

Q&A

## Funding the greatest needs as strategy shifts



Steve Gonzales / Staff photographer

After 14 years at the helm of United Way of Greater Houston, Anna Babin plans to step down in March to devote more time to her family. The charity plans to emphasize one issue — helping working, low-income families achieve financial stability.

United Way of Greater Houston's CEO talks about the organization's narrowing focus

By Erin Douglas  
STAFF WRITER

Amid declining revenues across the nonprofit sector driven by new donor preferences and changing tax incentives, the

The United Way of Greater Houston, which runs the largest 24/7 helpline in the country and provides grants to more than 100 local organizations, is narrowing its focus, attempting to emphasize one issue — helping work-

ing families.

More than \$50 million that Houston area nonprofits receive from the organization is under review as a result. That means that grants that local nonprofits rely on each year may be at risk if their program doesn't meet the United Way's new investment standards.

In the midst of the transition,

as well – is that the new supplies could send crude prices tumbling without intervention by the cartel.

*OPEC cuts continues on B7*

Houston affiliate of the largest nonprofit in the country is about to make a big change.

ing, low-income families achieve financial stability – rather than a broad array of issues in the tradi-

United Way of Greater Houston CEO Anna Babin plans to step  
*United Way continues on B7*

## Couriers soon may get OK to deliver alcohol

By Paul Takahashi  
STAFF WRITER

The Texas Alcoholic Beverage Commission will start issuing new permits later this month allowing third-party couriers such as Favor and Instacart to deliver alcohol to consumers.

"For years, Texans have relied on third-party services to deliver everything from clothing to vehicles," TABC Executive Director Bentley Nettles said in a statement. "Now, at long last, alcohol can be delivered as well."

The consumer delivery permits, which will be issued starting the third week of December, are a result of the passage this year of Senate Bill 1450, which amended the alcoholic beverage



Jenny Kane / Associated Press

AmazonFresh has begun delivering alcohol to select customers. Third-party couriers could start to do the same this month.

code to allow third-party companies to deliver alcohol from restaurants, bars, liquor stores and grocers licensed by the TABC.

Beer and wine must be delivered in their original, sealed containers and must be ordered with food. Customers must be of age and located in an area where liquor sales are legal.

Restaurants, bars and retailers with beer and wine permits as well as food and beverage certificates have been able to deliver alcohol to consumers without a

permit since the law went into effect Sept. 1. The law expands alcohol deliveries to third-party delivery companies with a permit.

Several retailers have taken advantage of the new law already. AmazonFresh began delivering beer and wine to select customers, and Walmart followed with beer and wine curbside pickup at 70 Houston-area stores.

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## TECHBURGER

### T-Mobile's 5G feels just like 4G, but sometimes it's slower and worse

By Dwight Silverman  
STAFF WRITER

T-Mobile turned on its 5G network earlier this week in Houston and nationwide; smartphones that support it go on sale Friday. But when early adopters jump onto the network, they're likely to be disappointed.

Tests conducted using a 5G-capable Android phone since Monday show both download and upload speeds can be inconsistent – sometimes within matter of a few yards – and sometimes are much slower than what a 4G device gets at the same spot.

When T-Mobile's 5G network is fast, it's not a jaw-dropping experience. A top T-Mobile engineer said that users can expect about a 20 percent in-

crease over average 4G LTE speeds, and when I saw fast speeds, they matched those expectations. But as a T-Mobile customer with an iPhone 11 Pro Max, I sometimes got speeds just as zippy on that 4G device.

T-Mobile's 5G network uses the 600-megahertz spectrum, part of which is also used for its 4G service. That's a frequency that's much lower than that being used by the two biggest carriers in the United States, AT&T and Verizon. They're using a high frequency known as millimeter wave, or mmWave, that's capable of carrying data at much faster speeds.

For example, when Verizon demonstrated what they've branded as UltraWideband 5G after turning it on in Houston

*5G continues on B7*

## BUSINESS

### UNITED WAY

From page B1

down March 31. Babin spoke with the Houston Chronicle about the new strategic vision and the challenges of not only mitigating financial challenges, but growing the organization's services at the same time.

**Q:** You've been at United Way for 14 years. Why are you stepping down?

**A:** As you would expect it's very demanding. My husband's already retired and I want to spend some time with him and my grandchildren. So it is the right time.

**Q:** United Way has been struggling with declining revenues. How have you tried to mitigate the impact to your organization?

**A:** In our community, 62 percent of our corporate gifts and employee giving comes from the energy sector. We decline when oil prices decline. Over the years it was a higher percentage, but we've worked to diversify our relationships.

We have a relationship with the health care industry, like Memorial Hermann. H-E-B is a \$1.1 million campaign. It's about creating a relationship with those CEOs, but going deeper down into the organization with the employees.

**Q:** What are some other issues that Houston's United Way has adapted to?

**A:** You can't talk about that without thinking about the fact that we are in a disaster-prone area. We have experienced a lot of donor fatigue (for disaster relief) after Harvey. So many people upped their gifts during Harvey, they had nothing in their budget to increase their giving

the next year.

**Q:** How has the organization changed its donor strategy since you've been there?

**A:** We have really focused on our next generation of donors. About five or six years ago, we invested in a 30 and under (program) for young professionals. After a year of volunteering, we asked them to give at a minimum of \$250 a year, and we had over 850 donors. That's been steadily growing.

**Q:** How did the "Second Century Vision," the new strategic plan, come about?

**A:** A good board and a good organization will always look at how it can be better. We determined that the needs in the community were going to basically be the same. We see a growing population, a growing need for food and shelter. A need for employment, workforce development, quality child care, after school programs, and behavioral and physical health care. We decided that we would focus our attention there.

**Q:** What are the major goals?

**A:** It's really focused on a population that is most vulnerable. Forty percent of our households are struggling to make ends meet. How do we best invest in programs to get families on a pathway of financial stability? We really believe that the well-being of Houston is dependent upon the well-being of every person.

**Q:** How is the way in which you're investing donor funds changing?

We're looking at every policy that we have around our investments and what our expectations would be with an agency when they receive United Way dollars. We are going to invest in those programs that align with financial

stability.

Let's face it, some programs may not fit as part of our new direction. But we will work on a transition plan on how to taper down investments. It's going to be a difficult thing.

**Q:** Will that coincide with a decrease in the distribution of funds?

**A:** The prayer is that money grows. It will be taking the same money and redistributing it.

**Q:** How did the 211 helpline come into existence and how has it grown?

**A:** When I arrived in 2005, we were answering 245,000 calls per year, and next year, we will probably answer 1.2 million calls. Demand grew after every hurricane. In 2013, we launched a capital campaign and we built a building to house about 85 full-time individuals to run the 24/7 helpline.

**Q:** What are you most proud of?

**A:** I'm most proud of United Way THRIVE. I'm proud that we stepped out of the box to collaborate to create the opportunity for families to achieve financial stability. Every family wants a good job, good wages, financial security, affordable housing and success for their children.

**Q:** How did you get into this work?

**A:** I am from Texas. I really love math and I didn't think I was patient enough to teach. I got an accounting degree and I thought I was going to be a rich CPA. But, I always say, "God has other plans for you." I just fell into nonprofit work and I was able to use my financial experience and my financial background.

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### OPEC CUTS

From page B1

Crude prices ended the trading day in New York unchanged at \$58.43 barrel, a sign that markets don't yet know how to react, analysts said.

"We need details. We need to know who is cutting and by how much," said Matt Reed, vice president of Foreign Reports, a Washington consulting firm focused on Mideast oil politics. "To really enhance its credibility, OPEC needs the slackers to step up now."

On paper — if the proposal is finalized — OPEC would increase its existing production cuts of 1.2 million barrels a day to 1.7 million barrels in the first three months of 2020. The group would meet again in March to decide what, if any, adjustments are needed.

But Saudi Arabia already is more than 300,000 barrels a day below its quota, and Angola is well below its allowance because of its depleting oilfields. Better compliance from the violating countries essentially would push OPEC to the new 500,000-barrel threshold.

**"We need details. We need to know who is cutting and by how much. To really enhance its credibility, OPEC needs the slackers to step up now."**

Matt Reed, vice president of consultant firm Foreign Reports

OPEC oil production to the tune of an additional 2.25 million barrels per day — more than twice the expected global oil demand growth next year.

The U.S. would account for less than half the surge, while Norway and Brazil each would add close to 500,000 barrels per day.

Without additional OPEC cuts, the world again could be awash in oil, causing a collapse in crude prices and a major hit to the Texas energy sector and economy.

Even with OPEC cuts, supplies still could overwhelm the weaker demand growth forecast for the first half of 2020, energy analysts said, and push crude prices into the \$40 range.

The world consumes more than 100 million barrels of crude per day.

Saudi Arabia is seeking market stability and stronger crude prices in part because it's finalizing a limited initial public offering for

its available shares at \$25.6 billion, giving Aramco a total valuation of \$1.7 trillion.

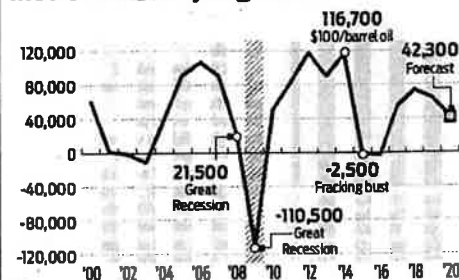
Another wild card is Iraq, which has stated a desire for OPEC to adopt deeper production cuts, even though it keeps violating its own quotas.

Adding to the uncertainty is a leadership void in Iraq after the recent resignation of its prime minister amid political unrest and protests.

Meanwhile, OPEC nations Iran and Venezuela, which are exempted from the quotas, are near decades-low production levels because of U.S. sanctions and, in the case of Venezuela, its own geopolitical turmoil and economic free fall.

During the beginning of the Thursday meeting, OPEC President Manuel Quevedo of Venezuela criticized the U.S. for its "nefarious" practices of weaponizing oil in the form of sanctions against the socialist nation.

### Metro Houston job growth



Sources: Texas Workforce Commission; Greater Houston Partnership

Staff graphic

### ECONOMY

From page B1

In the aftermath of the 1980s bust, Houston had a glut of office space, an overbuilt industrial market and a surplus of apartments and single-family homes. While the local market may only have a surplus of office space right now, industrial and residential real estate markets will soon be overbuilt if developers don't pull back, Jankowski said.

Typically, Houston can absorb one apartment unit for every six new jobs. But as of early November, 23,000 apartment units were under construction and another 28,000 were in the planning stages. That means Houston would have to create more than 300,000 jobs, or the number of jobs the region created in the last six years.

Jankowski said builders may be reading the market wrong. Monthly government employment statistics, based on a limited survey, notoriously overestimate job growth at the regional level during times of expansion. The figures are often revised downward in the spring when more data is available.

"If you're basing your decisions on what (the government) is reporting, and they're over-reporting," Jankowski said, "you're going to make some bad business decisions."

Health care is projected to add the most jobs to the region of any other sector, according to Greater

Houston Partnership forecasts. But that growth is slowing. The health care sector added on average 8,500 jobs per year over the last 10 years.

The partnership forecasts the sector will add 7,900 jobs in 2020. A number of factors — health care politics in 2020, pressure from consumers to lower prices and new competition from online health care providers — will contribute to weaker job growth next year, according to Jankowski.

"The health care industry is getting it from both sides," Jankowski said. "The Republicans want to do away with the Affordable Care Act and the Democrats want to totally remake U.S. health care. How do you plan for that?"

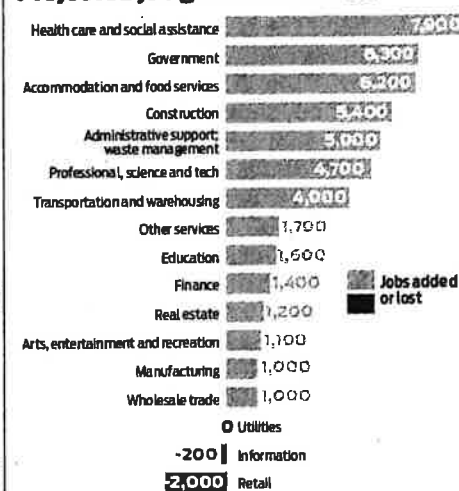
Another one of Houston's most important sectors, manufacturing, is set to slow down next year. Manufacturers have struggled to recover from the last oil bust in 2015, and the sector was still 21,000 jobs short of its December 2014 peak in October.

Since August, the sector has lost 1,800 jobs, and the sector is forecast to create only 1,000 jobs next year.

The U.S.-China trade war has hit manufacturing particularly hard, disrupting supply chains, increasing costs and stoking uncertainty among customers. At the same time, the energy sector slowdown is weighing on manufacturers as well, since more than a quarter of the sector's jobs are tied to oil and gas.

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### Projected Job gains and losses 2020



Kystad Energy, a Norwegian consultancy, estimates that 2020 will bring record-high, non-

its massive state energy company, Saudi Aramco. On Thursday, Aramco announced that it priced

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-4,000 Energy

Source: Greater Houston Partnership

Staff graphic

## LIFE TRIBUTES

### REGINALD GLENN WILSON

1975-2019



Reginald Glenn Wilson, expired (Thursday) November 28, 2019. Visitation will be held (Saturday) December 7, 2019 from 10-10:55 a.m. Service at 11:00 a.m. Both services will be held at Mt. Vernon B.C., 3618 Stassen St. Rev. Kenneth Rose, officiating. Interment Houston Memorial Gardens.



### CEMETERY LOTS

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## 5G

From page B1

last month, I saw download speeds of up to 1.7 gigabit per second. I watched as a 15-minute Netflix movie was downloaded in about 5 seconds.

But the downside of mmWave 5G is that it can't travel far and is easily blocked. It won't pass through buildings or even dense foliage; even the glass and steel of a moving car is problematic. By contrast, T-Mobile's 600-MHz network, while nowhere near as fast as its competition's, reaches through walls and into vehicles. It also travels farther from each transmitter, so T-Mobile can boast about using it to get 5G into rural areas often neglected by carriers.

T-Mobile's proposed merger with Sprint would allow the two carriers to combine their 5G spectrum. Sprint uses frequencies above T-Mobile's and below AT&T and Verizon's, in a region known as mid-band. It would give the merged company, which is being called "the New



Dwight Silverman / Staff

T-Mobile says its 5G speeds are about 20 percent faster than those of 4G LTE.

T-Mobile," more speed, greater range and better barrier penetration.

When I reviewed Sprint's 5G network shortly after its unveiling in May, I found inconsistent speeds much of the time, but impressive results occasionally. The Sprint 5G signal was not great inside buildings unless I was close to a window. Upload speeds were awful, mainly because Sprint is still using its 4G network for uploads, and its 4G uploads are notoriously bad in Houston.

Unfortunately, Verizon would not loan me a device to test its mobile network — I've seen only a brief demo. And despite multiple requests, I've not even gotten a demonstration of AT&T's 5G service. (And no, AT&T's "5G E" service doesn't count, it's just LTE with a faster-sounding name.)

Here are some highlights of my tests of T-Mobile's 5G:

- The best download speed I saw was 87 Mbps on Monday evening near the intersection of Welch and Shepherd in the Montrose/

River Oaks area.

- The worst download speed was 3.1 Mbps at the intersection of Spann Drive and San Felipe, in River Oaks (and not far from the Welch/Shepherd spot, where I saw the fastest).

- Near the intersection of Interstate 10 and Studemont in the Heights, I got about 30 Mbps download on the 5G phone, but my 4G iPhone got more than triple that with a 92-Mbps result at that location.

- The best upload speed was 51 Mbps at the southwest corner of Discovery Green downtown, with a decent download speed of 79 Mbps.

- At my desk in the Mighty Houston Chronicle building at the Southwest Freeway and Loop 610, I've averaged around 50 Mbps downloads. On my iPhone, it runs between 30-35 Mbps.

I sent my results to T-Mobile, asking about some of slower instances, and the company responded with this statement:

"In some places, 600 MHz 5G will be a lot faster than LTE. In others, customers won't see as much difference. On average,

customers with a 600 MHz 5G phone should see a 20 percent download speed boost on top of what T-Mobile's LTE network delivers, and with the New T-Mobile they can expect that to get exponentially faster over time, just like we saw when 4G was first introduced."

The smartphone T-Mobile loaned me was the OnePlus 7T Pro 5G McLaren, a \$900 Android device. It's remarkably fast, with decent cameras and no junkware. It's close to a pure Android interface, has decent battery life and doesn't seem to get as hot as other 5G phones I've tried. I'd buy this phone if I was in the market for a 5G device on T-Mobile's network.

But if you do grab it, or the Samsung S10+ Note 5G, which also works on the T-Mobile network, don't expect blazing fast speeds ... or even speeds that are consistently faster than 4G. Those may come with time, but for now, T-Mobile's 5G network still needs some work.

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# BUSINESS

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## Electric era zaps auto workers, industry

80,000 jobs being cut amid upheaval

By Christoph Rauwald,  
David Welch  
and Anurag Kotoky  
BLOOMBERG NEWS

It's turning out to be one of the worst years ever for auto workers across the globe amid shrinking demand and a tectonic shift in vehicle technology, with Daimler and Audi announcing almost 20,000 job cuts in just the past week.

All told, carmakers are eliminating more than 80,000 jobs during the coming years, statistics compiled by Bloomberg News indicate.

Although the cuts are concentrated in Germany, the United States and the United Kingdom, faster-growing economies haven't been immune and are seeing automakers scale back operations there.

The German companies joined General Motors Co., Ford Motor Co. and Nissan Motor Co. in massive retrenchments put in motion over the past year. The industry is sputtering as trade tensions and tariffs raise costs and stifle investment, and as manufacturers reassess their workforce in an era of electrification, autonomous driving and ride-on-demand services.

The global auto industry will produce 88.8 million cars and light trucks this year, an almost 6 percent drop from a year ago, according to researcher IHS Markit. German auto industry lobby VDA predicted Wednesday that the decline will continue next year, forecasting global deliveries of 78.9 million vehicles, the lowest level since 2015.

The pace of job cuts in the home of Mercedes-Benz, Porsche and BMW is expected to be "more pronounced in 2020," VDA President Bernhard Mattes said at a news conference in Berlin. The technology shift alone is expected to put 70,000 jobs at risk over the next decade.

"A fundamental structural change with enormously high investments at a time of deteriorating market dynamics — the tension is being felt at many companies," Mattes said.

Cuts also are being carried out in China, which employs the larg-

## Crude prices hang in the balance as OPEC+ meets

Bloc's decision comes as energy sector faces job cuts, stock losses

By Jordan Blum  
STAFF WRITER

The fate of crude oil prices and the health of the U.S. energy sector heading in 2020 may be determined this week in Vienna when OPEC and its allies meet to determine whether to extend or deepen production cuts that have kept the market from crashing.

With crude supplies expected

to keep outpacing waning demand growth in the months ahead, inaction from OPEC or even a decision to extend the existing cutbacks could send oil prices plunging toward \$40 a barrel by mid-2020, a level at which few U.S. companies could make money and likely leading to layoffs in Houston and across the industry. With prices stuck in the \$50-to-\$60 range, energy companies already are cut-

ting back and eliminating jobs.

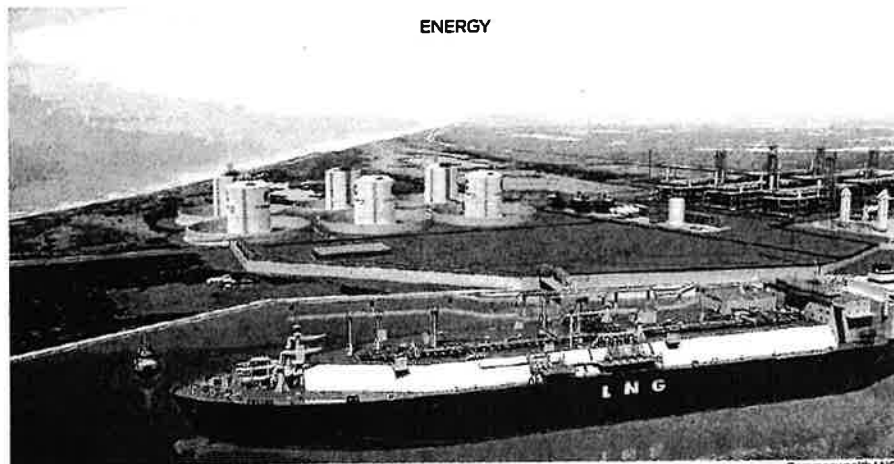
Some analysts predict that the Organization of the Petroleum Exporting Countries, Russia and other allies will agree to cut output beyond the 1.2 million barrels a day reduction they approved last year and extended in the summer, perhaps by as much as an additional 1 million barrels a day. But even that might not be enough to offset new production, shrink global supplies

and keep prices from diving to \$40 a barrel by spring, said Paul Sankey of Mizuho Securities.

And he's not alone in that thinking.

"Even if they layer on additional cuts, it likely won't be enough to stimulate a paradigm shift in the market's view of oversupply," said Ethan Bellamy, an energy analyst at the financial services company Robert W. Baird & Co. "On the other hand, if OPEC undershoots and OPEC+ continues on B8

### ENERGY



Houston liquefied natural gas company Commonwealth LNG is seeking permission from the federal government to build an export terminal at the mouth of the Calcasieu Ship Channel along the Gulf of Mexico in southwest Louisiana.

## Rare marsh bird may become stumbling block for LNG site

By Sergio Chapa  
STAFF WRITER

A rare marsh bird that fits in the palm of the average person's hand may become a stumbling block for a Houston liquefied natural gas company seeking to build an LNG export terminal in southwest Louisiana.

In a letter filed with the Federal Energy Regulatory Commission, the Louisiana chapter of the Audubon Society wrote that the proposed Commonwealth LNG export terminal could destroy habitat for the eastern black rail.

Described as "shy and elusive" by the U.S. Fish & Wildlife Service, the rail is one of 41 species of animals nominated to be added to the federal agency's endangered species list next year. Exact population



The Audubon Society is raising concerns that building a new liquefied natural gas export terminal in Louisiana could destroy habitat of the eastern black rail, a shy and elusive marsh bird destined for the endangered species list.

## Chemical makers launch projects to tackle plastic waste

By Jordan Blum  
STAFF WRITER

The world's rapidly mounting plastic waste and the public reaction to its impact on marine and wildlife is challenging the booming petrochemical industry, but the world's biggest energy companies are increasingly stepping up with new projects to take on these challenges.

Royal Dutch Shell, BP and Houston's LyondellBasell have all announced new projects or pilot plants in recent weeks to address

recycling plastics that are the hardest to transform back into reusable materials. The latest came from Shell, which has begun making petrochemicals from plastic waste in a process known as chemical recycling.

The Anglo-Dutch energy giant is partnering with Atlanta-based Nexus Fuels to break down hard-to-recycle plastics into a liquid feedstock and then manufacture new high-end petrochemical products. The first feedstock was recently delivered from Nexus to

Plastics continues on B6









Royal Dutch Shell

Atlanta-based Nexus Fuels is turning hard-to-recycle plastic waste into liquid feedstock for Royal Dutch Shell to manufacture new plastics.

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## BUSINESS

## AUTO

From page B1

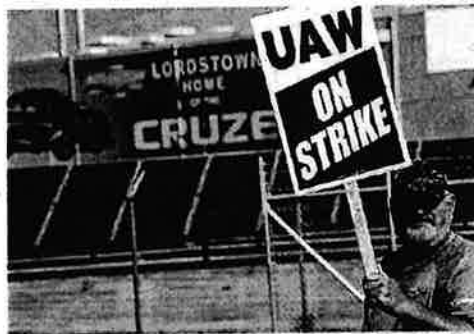
dustry and has been mired in a sales slump. Electric-vehicle startup NIO Inc., which has lost billions of dollars and watched its New York-listed shares plummet, dismissed about 20 percent of its workforce by the end of September, shedding more than 2,000 jobs.

"The persistent slowdown in global markets will continue to dent automakers' margins and earnings, which have already been hurt by increased R&D spending for autonomous-driving technology," said Gillian Davis, an analyst with Bloomberg Intelligence. "Many automakers are now focused on cost-saving plans to prevent margin erosion."

Being an early leader in electrification hasn't spared Nissan, which has been in turmoil since the arrest of former Chairman Carlos Ghosn a year ago.

With profits plummeting decade lows, the Japanese automaker is shedding 12,500 positions in the coming years, mostly at factories across the globe, to reduce costs as it rushes to refresh an aging model lineup.

A redesigned version of the battery-powered Leaf, which debuted later than planned because of the loss of the company's long-time leader, isn't giving the com-



Keith Siskoc / Associated Press

A striking worker in September carries a sign outside of a closed GM plant in Lordstown, Ohio.

pany much of a boost this year.

Factory-floor workers have been rising up against the retrenching. GM's more than 46,000 U.S. hourly workers staged a 40-day-long strike this fall — the longest against the company in almost half a century — but managed to coax the firm into keeping open only one of the four American factories it made plans to shutter a year ago.

On Nov. 22, about 15,000 people marched in the streets to protest job cuts and factory closures in Stuttgart, the German city that's home to the global headquarters of Daimler, Porsche and

major parts supplier Robert Bosch.

Protesters in the historic downtown square of Schlossplatz wore red scarves, blew whistles and waved red flags in support of Germany's powerful labor union IG Metall, which organized the demonstrations. Top union officials who represent workers at Mercedes-Benz, Audi and many parts makers claim the companies are using the shift toward EVs as an excuse to push through deeper cuts and boost profits.

"We don't let our jobs be taken away just because some manag-

ers haven't done their homework," Roman Zitzelsberger, the regional head of IG Metall in the state of Baden-Wuerttemberg and the worker representative on Daimler's supervisory board, told the crowd.

The job concerns proved to be justified. Audi announced a week later it will eliminate as many as 9,500 positions in Germany through 2025 as parent Volkswagen AG prepares for a costly transition to electric vehicles. Daimler announced plans to shed more than 10,000 worldwide.

If it were a country, the auto industry would be the world's sixth-largest economy, according to Fircroft, a technical job-placement firm. In Germany alone, when including local operations of foreign manufacturers, about 150,000 jobs might be at risk in coming years, according to estimates by the Center of Automotive Management, near Cologne.

The clouds started to form for U.S. carmakers last year, when Ford revealed plans for a years-long, \$11 billion restructuring. The company has made a series of piecemeal announcements since then, slashing roughly 10 percent of its global salaried ranks and shutting six plants: three in Russia and one apiece in the U.S., U.K. and France. Of about 17,000 jobs Ford is eliminating, 12,000 will be in Europe.

The state of car-factory jobs in

the U.S. is less clear, mainly thanks to the new contracts Detroit-area automakers have been negotiating for the next four years.

The prospects looked somewhat bleak for the United Auto Workers union when talks began this summer. With vehicle demand slowing, production shifts were being pared back across the country — by Nissan at its truck-and-van plant in Mississippi, Fiat Chrysler Automobiles NV at its Jeep Cherokee SUV factory in Illinois and Honda at an Ohio plant that mostly makes Accord sedans.

Workers fear plug-in cars, which have fewer parts and require less labor to build, will doom auto jobs.

In the end, the UAW has announced commitments by GM, Ford and Fiat Chrysler to invest almost \$23 billion in U.S. facilities over the course of the next four years, and to add or retain more than 25,000 jobs. While that sounds like a lot, it remains to be seen whether the spending will actually boost production. It costs the companies billions to convert or retool existing factories for them to make new cars and powertrains.

The union also didn't emerge without some bruising losses, with the most notably being its lost battle to save GM's spacious car plant in Lordstown, Ohio.

## OPEC+

From page B1

comes out too dovish, the bottom could drop out of oil quickly."

## Output doubles

The OPEC+ alliance kicks off its semi-annual meeting Thursday. The cartel has been forced to adopt production cuts to try to offset the vast amounts of crude flowing from U.S. shale oil fields, particularly the Permian Basin in West Texas, and avoid the price crash of five years ago that led to the worst oil bust in a generation.

U.S. crude output has more than doubled from 5.7 million barrels a day in 2011 to a current estimate of 12.8 million barrels daily. Shale production will keep rising — albeit at a slower pace — at least through 2020, if not longer, according to U.S. Energy Department forecasts.

And new supplies are coming online from other countries, including Norway, Guyana and Brazil. After starting up in October, oil production from the Norwegian North Sea's giant Johan Sverdrup field has risen to nearly 400,000 barrels a day. Exxon Mobil will soon begin producing up to 120,000 barrels of oil per day offshore of Guyana as the tiny South American nation becomes a significant oil producer.

All told, the Norwegian consultancy Rystad Energy estimates, global production outside of OPEC will jump by a record 2.25 million barrel of oil per day in 2020, more than double the anticipated growth in worldwide demand. Energy demand has softened with the slowing global economy, adding to fears of another crude oil glut and freefall in oil prices.

The efforts to better balance



Karim Sahib / AFP/Getty Images

When OPEC meets later this week, the question is whether the cartel and its allies will cut production further.

heaviest load of the production cuts and likely will have to do even more going forward. Although its quota is 10.3 million barrels a day, Saudi Arabia has held its production just below 10 million barrels a day for most of this year.

Saudi's new oil minister, Prince Abdulaziz bin Salman, meanwhile, is expected to decry a lack of compliance with agreed-upon production quotas by other coun-

months, according to government and industry estimates.

The OPEC meetings also coincide with the Saudis launching a limited initial public offering of the massive state energy company, Saudi Aramco. Higher oil prices are desired by the Saudi government to boost the price of the stock that is going up for sale.

## Bleak outlook

expiration date. Such a decision could cause crude prices to fall by 5 percent a month through mid-2020 — a cumulative 30 percent drop that could push oil prices even below \$40 per barrel, according to Rystad.

Rystad estimates the global oil market is on track to be oversupplied by 800,000 barrels of oil per day in the first half of 2020. So OPEC+ would have to deepen its

world consumes more than 100 million barrels of crude per day.

"We have a clear message to the OPEC+ countries: A rollover of the current production agreement is not enough to preserve a balanced market and ensure a stable oil price environment in 2020," said Bjørnar Tonhaugen, Rystad's head of oil market research. "The outlook will be bleak if OPEC+ fails to agree on additional cuts."

supply and demand have been led by Saudi Arabia. Within the OPEC group, the Saudis have carried the

tries. Russia, Iraq, Nigeria and Kazakhstan have all cheated and produced extra oil supplies in recent

Most analysts expect OPEC and its allies to simply extend the current quotas beyond their March

cuts by at least that much to keep oil supplies from growing and prices from sliding, Rystad said. The

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## PLASTICS

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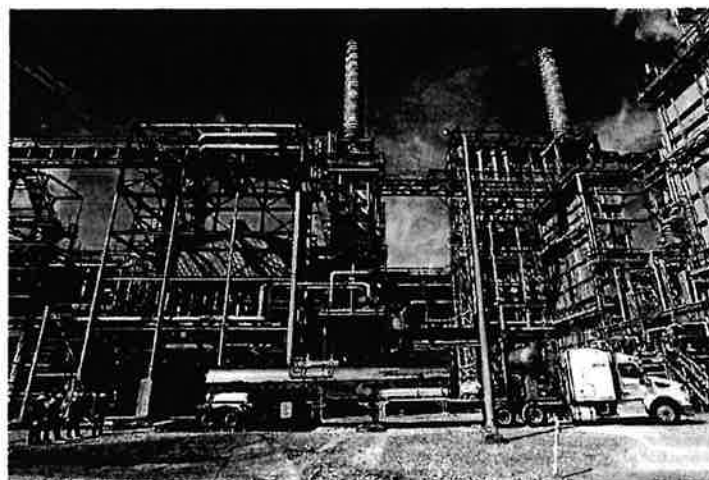
Shell's chemicals plant in Norco, La., outside of New Orleans.

"We can't always control what people do with plastics at the end of their lifetimes, but we are committed to playing our role," said Thomas Casparie, Shell executive vice president of global chemicals.

BP and LyondellBasell, meanwhile, recently announced pilot plants they're building in Illinois and Italy, respectively, to test new recycling technologies. The world produces more than 300 million metric tons of plastic per year, but more than 8 million tons end up in waterways each year and eventually in the ocean. Beached whales have been found with large amounts of plastic in their stomachs.

Shell has partnered with technology companies that specialize in types of chemical recycling. The goal is to create a circular system in which plastics can be recycled again and again. Most traditional mechanical recycling is limited because the plastics can only be recycled so many times after they're chopped up, melted and shaped back into plastic granules.

"Every time you do it you degrade the quality of the plastics,



Royal Dutch Shell

A truck delivers liquefied plastic feedstock made from waste to Shell's Norco plant in Louisiana.

and you can only do it so much," Casparie said.

### Market solution?

The newer technology with Nexus uses pyrolysis, a system of rapidly heating the plastic waste without oxygen to "crack" the plastic, liquefy it and transform it into virgin chemical feedstock to

manufacture like-new plastics.

Environmental groups counter that nearly half the plastics manufactured each year are single-use products, such as bottles and packaging, and the focus should be on eliminating most single-use plastics. Of the world's roughly 6.5 billion metric tons of plastic waste, only 9 percent was recy-

cled and 12 percent incinerated.

Meanwhile, it's projected that the amount of plastics in the world's oceans could reach 250 million metric tons as soon as 2025.

Shell said its goal is to recycle 1 million metric tons of plastic waste a year in its chemical plants by 2025. Casparie said that once

enough chemical recycling plants are built, they will create a market for waste plastics that will help keep them out of the environment.

"It is both good for the environment and for our business," he said. "You're creating a demand for plastic waste, and you're creating more incentives to recycle."

The British energy major BP is spending \$25 million on a pilot plant near its refining complex in Illinois to test its new Infinia technology to transform plastics that can't now be recycled into new plastic feedstock.

### Molecular level

LyondellBasell plans to build a test plant for recycling old plastics on a molecular level. LyondellBasell worked with the Karlsruhe Institute of Technology in Germany to develop the new recycling technology, called MoReTec, which uses a catalyst to break down plastics on the molecular level more quickly and efficiently than traditional chemical recycling technologies, the company said.

LyondellBasell will build the first small-scale test plant at its campus in Ferrara, Italy, which is home to much of the chemical maker's research and development.

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**BUSINESS**

# U.S. hits a milestone as petroleum exporter

By Dino Grandoni  
WASHINGTON POST

After years of relying on other countries for petroleum, the United States just reached a new energy-producing milestone by notching its first month in at least 70 years exporting more crude oil and petroleum products than it imported per day.

During the month of September, the country sent out 89,000 barrels a day more than it brought in, according to new official data from the U.S. Energy Information Administration released over the long Thanksgiving weekend.

That marks the first full month the United States has been a net petroleum exporter since record-keeping began in 1949. The country, which for years has been on the path to becoming a net oil exporter, first posted net petroleum exports on a weekly basis in December 2018.

The monthly milestone, fueled by an outpouring of fracked oil,

was unthinkable just more than a decade ago when president after president from Jimmy Carter to Barack Obama spent their State of the Union addresses hammering home the need to wean the United States off of dependence on foreign oil.

"This is a very big deal, not just rich in symbolism but marking a major and tangible benefit to the U.S. economy," said Daniel Yergin, vice chairman of IHS Markit and author of "The Prize," a Pulitzer Prize-winning history of the oil industry.

"It's the end of an era that began with the oil crises of the 1970s," he added, referring to the days of long lines at gas stations when Middle Eastern nations would wield their vast supplies of oil as a political weapon on the world stage.

President Donald Trump, too, has touted making America a net energy producer as a signature campaign issue. In office, he has followed through by aggressively expanding drilling on federally

controlled lands and trimming back safety rules on offshore oil operations. In moves cheered by the petroleum industry and condemned by environmentalists.

"We have unleashed a revolution in American energy," Trump said during his most recent State of the Union speech while touting the oil export numbers.

But the decade-long surge in domestic oil production began before Trump took office with a spigot of new oil produced via the hydraulic fracturing, or fracking, of shale deposits in the Permian Basin stretching from Texas to New Mexico and the Bakken formation running from North Dakota to Montana.

"Shale completely turned it around," Yergin said. "This world has never seen growth at this scale this fast. It's almost as though, in number of barrels, that the United States added a second Saudi Arabia within its own borders."

The height of U.S. oil imports came in August 2006, when the

United States posted net imports of more than 13 million barrels a day, according to EIA.

Since then, new fracking techniques, coupled with the lifting of a ban on oil exports in 2015 through a compromise between Obama and congressional Republicans, helped vault the United States to its oil-exporting status.

"The rapid rise in U.S. oil production began before President Trump and would very likely have continued even if he had not become president, notwithstanding his aggressive deregulatory efforts," said Jason Bordoff, founding director of Columbia University's Center on Global Energy Policy.

Through its petroleum exports, the United States has been able to take a bite out of its trade deficit with the rest of the world — another Trump campaign promise — even though the overall U.S. deficit ballooned to \$621 billion last year under Trump.

To be clear, the United States is


still far from free of the sway of global energy markets.

Gulf refineries still rely on the import of foreign heavy crude since they are best suited for converting that type of oil into gasoline, jet fuel and petroleum products.

And one of the average American's main concerns when it comes to energy policy — the price at the pump — is still set by supply-and-demand forces abroad.

In fact, a spike in the historically volatile price of crude oil may undermine the economics of producing oil from U.S. shale formations in the first place.

"Shale oil is more sensitive to crude prices than conventional oil production," said Robert McNally, head of the Rapidan Group, an energy consulting firm, who worked in the George W. Bush White House. "While the economic and security benefits are large and real, being a net exporter does not confer the ability to stabilize oil prices."



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Isaac Ruffin Smith Academy	5815 West Little York Road	Houston	77091-1199	Greater True Light Baptist Church	6828 Annunciation Street (Fellowship Hall)	Houston	77016-2115
Westbury Senior High School	11911 Chumley Rock Road (Community Center)	Houston	77015	Nimitz High School	2005 W W Thorne Boulevard	Houston	77073-3301
Serbe Tabernacle Christian Methodist Episcopal	7210 Langley Road (Fellowship Hall West Wing)	Houston	77016-2724	Whitlip High School	1900 West 34th Street (Room 1203P)	Houston	77018-6186
Restoration Square Full Gospel Baptist Cathedral	5110 Crane Street	Houston	77026-3908	Deerwood Elementary School	2920 Forest Garden Drive (Music Room)	Kingwood	77345-1409
The Power Center	12401 South Post Oak Road	Houston	77045-2020	Korean Christian Church of Houston	10410 Clay Road (Social Room)	Houston	77041-8752
Parkway Place Independent Living	1321 Park Bayou Drive (Independent Living Audiotapes)	Houston	77077-1507	Hope Christian Reformed Church	770 Finlock Drive (Gym)	Houston	77062-2548
Kate Bell Elementary School	12323 Shattbury Drive (PE Room)	Houston	77031-1123	Bedwige Intermediate School	12570 Richmond Avenue (Library)	Houston	77062-2486
Korean Central Presbyterian Church of Houston	14311 Park Row Drive	Houston	77084-5095	Saint Lukes Missionary Baptist Church	714 Delwing Street (Golftee Room)	Houston	77007-5195
Holy Comforter Lutheran Church	1901 Woodland Hills Drive (Catering Space Lobby)	Kingwood	77339	Westside High School	4201 Briar Forest Drive (Library)	Houston	77077-1806
Residence Garage	2347 Underwood Street	Houston	77030-3627	North Pointe Elementary School	3200 Almond Creek Drive (Gymnasium)	Houston	77059-2812
Clear Lake Presbyterian Church	1511 El Dorado Boulevard (Nether Philadelphia Hall)	Houston	77063-3422	Brookwood Elementary School	16850 Middlebrook Drive (Cafeteria)	Houston	77059-4700
SC South Campus Fine Arts Center Building 15	13735 Benner Road Entrance B	Houston	77089-4009	Mound Mariah Missionary Baptist Church	15500 Vandalia Way (Fellowship Hall)	Houston	77053-2128
Frederick Elementary School PISD	10503 Hughes Road (Cafeteria)	Houston	77089-4530	Elland Elementary School	6700 North Klein Circle Drive (Room 112 PLC Room)	Houston	77068-1500
Sanit Timothy Lutheran Church	14225 Hargrove Road (Adult Education Building Room 103)	Houston	77070-3843	Shadowbrook Elementary School	2650 Shadowbrook Drive (Adult Purpose Room)	Houston	77077-6000
Alief Middle School	4415 Cook Road (Front Hallway)	Houston	77072-1104	The Forum at Memorial Woods Multi Purpose Room	777 North Post Oak Road (Large Activity Room)	Houston	77074-3000
India House	8888 West Bellfort Street	Houston	77031-2006	Clear Lake City Church of Christ	958 El Dorado Boulevard (Fellowship Hall)	Houston	77062-4020
Mandarin Immersion Magnet School	5445 West Alabama Street (PE Room)	Houston	77042-2338	Holiday Inn Houston Intercontinental	15222 John F Kennedy Boulevard	Houston	77032-2306
Paul Rivers Middle School	10502 Bear Forest Drive (Library)	Houston	77996	Clear Lake Intermediate School	15545 El Camino Real (Commons Area)	Houston	77062-5794
West Bend E Johnson Elementary School	13901 Homestead Road	Houston	77092-4336	16511 Diana Lane (PAV Room)	17400 Saturn Lane (Small Gym)	Houston	77068-4400
Northwest Church of Christ	6720 West Tidwell Road (Building A Fellowship Center)	Houston	77042-2999	Provincial Boulevard	22311 Provincial Boulevard	Katy	77450-1621
Grace Presbyterian Church	10221 Ella Lee Lane (Molly Ann Smith)	Houston	77071-4088	21660 Sandpiper Drive (Room 100)		Houston	77053-5382
Mount Sinai Baptist Church Family Life Center	902 West 8th Street (Gym)	Houston	77007-3432	12900 Alameda Genoa Road (Main Room)		Houston	77034-4636
Country Village Chhobose	12042 Riverview Drive (Chhobose)	Houston	77062-4655	2100 Mills Branch Drive (Commons)		Kingwood	77345-2100
Waveright Elementary School	5330 Milburn Street (Cafeteria)	Houston	77026-2315	2002 Wilbur Terrace Drive (Cafeteria)		Humble	77345-1785
Margaret Collins Elementary School	9429 Town Park Drive (Library)	Houston	77072-1999	2300 Rodway Street (Fellowship Hall)		Houston	77034-1149
Chancellor Elementary School	4350 Boone Road (Art Room)	Houston	77077-3671	3303 Synnot Road (Cafeteria)		Houston	77082-4926
Derrytown Estates	1815 Enclave Parkway (Main Building Living Room)	Houston	77071-1700	7610 Synnot Road (Gym)		Houston	77083-5199
Milne Elementary School	7800 Fortal Drive (Gym)	Houston	77017-1794	7899 Winslow Street		Houston	77028-2441
Rail Yapiere School for Success Tejaso Center Building B		Houston	77011	720 Fairmont Parkway (Gym)		Pasadena	77504
2950 Broadway Boulevard (Tejaso Center for Community Concerns Board Room)		Houston	77075-2250	17770 Imperial Valley Drive (Library)		Houston	77060-6100
Rail C Martinez Annex	1001 SSGT Macario Garcia Drive (Room 204)	Boston	77075-2250	6720 South Haywood Drive (Main MultiPurpose Room)		Houston	77061-1514
Laura Welch Bush Elementary School	9100 Blackhawk Boulevard (Front Foyer)	Houston	77021	9850 Meadows Lane		Houston	77042-4303
EV 147Y Alice McKee Young Neighborhood Library	5107 Griggs Road	Houston	77004-7322	15040 Westpark Drive (Music Room 3121)		Houston	77082-3900
Isidore Robinson Junior Community Center	3225 Hensman Drive (Assembly Room 1)	Houston	77045-4693	11825 Tinsack Drive (Gym)		Houston	77089-6120
The Crossing Community Church	3225 West Orem Drive (Crossing Life Center)	Houston	77022-4911	7980 Alameda Genoa Road (Room 111)		Houston	77075-2006
Serrano Elementary School	525 Benavente Street (Mini gym)	Houston	77026-1203	3200 Russell Street (Arts and Crafts Room)		Houston	77026-4728
Ross Elementary School	2810 Bay Street (Parents Room)	Houston	77045-1852	5100 Hazard Street (Main Front Hallway)		Houston	77098-5330
Riverwood Middle School	2610 High Valley Drive (Orchestra Room)	Kingwood	77066-5497	13333 Brookwater Park Drive (Portable Building 77)		Houston	77044-1377
Beaumont Assembly of God	10611 Fountain Road (Foyer)	Houston	77031-2448	1700 Campbell Road (Gym)		Houston	77080-7404
Westlake Court Retirement Community	10680 Westlake Parkway (First Entrance of Main Building)	Houston	77099-5018	9515 South Dairy Ashford Road (Front Hall)		Houston	77069-4909
Tamuning Elementary School	10455 South Kidwood Road (Front hallway)	Houston	77072-3416	8410 Dairy View Lane (Front Hall)		Houston	77072-3977
Martine Elementary School	11718 Heddon Lane (East hallway)	Houston	77042-3340	9730 Stroud Drive (Library)		Houston	77036-5105
Comfort Suites Westlake	2830 Wilcrest Drive (Meeting Room)	Houston	77020-5242	1015 Congress Avenue (Conference Room)		Houston	77002
Scroggins Elementary School	400 Boyles Lane (Library)	Kingwood	77339-374	9449 Grand Road (Rooms 114 and 115)		Houston	77070
HC Public Library Kingwood Branch	4400 Best View Lane (Meeting Room)	Houston	77054-4201	19520 Pinchard Trail Drive (Meeting Room)		Humble	77346
South Union Church of Christ	7427 Ambrose Street (Classrooms 104 and 105)	Houston	77036-4402	4102 Rustic Woods Drive (Meeting Room)		Kingwood	77345-1350
Vietnamese Community Center	1440 Boulevard Drive (Great Hall)	Houston	77062-2247	16616 Diana Lane (Meeting Room)		Houston	77062
IF Ward Elementary School	5430 Hidalgo Street (Library)	Houston	77036-6211	10851 Scarsdale Boulevard		Houston	77089
St. George Place Elementary School	4601 Glenmont Drive (Library)	Bellaire	77401-2238	3810 West Pappas Street		Houston	77043-6402
Pin Oak Middle School	7409 Calhoun Road	Houston	77033	9301 West Bellfort Boulevard		Houston	77031
Greater New Testament Church	2516 Paul Quinn Street (Fellowship Hall)	Houston	77091-4712	926 Country Place Drive (Meeting Room)		Houston	77079
Saint Paul Missionary Baptist Church	8390 Westview Drive (Library)	Houston	77095-6738	2223 West Loop South/Freeway (1st floor Conference Room)		Houston	77027
Valley Oaks Elementary School	513 West Rinehouse Road	Houston	77091-2404	1475 West Gray Street (ADSL AR 2 3)		Houston	77019-4926
Sandero de la Cruz	7304 Homestead Road	Houston	77028-3027	5601 West Loop South (Room C108)		Houston	77081
Bethany Baptist Church Fellowship Hall	8104 Westwood Road (Baptist Fellowship Hall)	Houston	77068-1673			Houston	77074

Location	Address	City	Zip
North Forest High School	10726 Mesa Drive (Community Room)	Houston	77062
New Westside Volunteer Fire Department Station	19636 Senna Road	Houston	77064
Beer Branch Community Center	3215 Cedar Knolls Drive (Community Room)	Kingwood	77055-4917
Eastover Senior High School	7922 Antoine Drive	Houston	77091
Iglesia Trinidad Church	11602 Bobcat Road	Houston	77088
Key Middle School	4000 Kelsey Street (Auditorium)	Houston	77076-1220
Northbrook Elementary School	3402 Hollister Street (Library)	Houston	77338-4822
EV 141C Northwest Multi Service Center	9720 Spindling Street (Auditorium Room 100)	Houston	77026-2941
Crestwood Middle School	3603 West Lake Houston Parkway (Chair Room 903)	Kingwood	77011-1036
Hartings Senior High School	4410 Cook Road (Hartings North Lobby)	Houston	77087
Douglas Smith Elementary School	11300 Stanchiff Road (Foyer outside of data room)	Houston	77054-1706
Willie B Ernst Elementary School	7103 Woodlawn Trail	Houston	77051
Kingwood Park High School Performing Arts Center	4015 Woodland Blvd Drive (PAC Foyer)	Kingwood	77004
William Booth Garden Apartments	888 Fawcett Street (Activity Room)	Houston	77004
Seize Beal the Great Creek Ordovician Church	1100 Eldridge Parkway (Kostas Hall)	Houston	77040
Iglesia Episcopal Church	9400 Huntington Place Drive	Houston	77009
Chadron Towne Apartments	8300 Westplace Drive	Houston	77008-3441
El Franco Lee Community Center	9300 Hall Road (Large Meeting Room)	Houston	77072

# EXHIBIT B - EARLY VOTING INFORMATION / ANEXO B - INFORMACIÓN DE VOTACIÓN ANTICIPADA / 附件B - 提前投票資訊 / PHU LUC B - THÔNG TIN VỀ TRÙ TIẾC BỎ PHÉU SỚM

Location	Address	City	Zip
Lugar	Dirección	Ciudad	C.P.
Địa Điểm	Địa Chỉ	Thành Phố	Số Zip Code
Metropolitan MultiService Center	1475 West Gray Street (AdMSL AR 2 3)	Houston	77019-4926
HCC West Loop South	5601 West Loop South (Room C108)	Houston	77081
Bayland Park Community Center	6400 Rimonnet Street (Annex)	Houston	77074
Tacy Gee Community Center	3599 Westcenter Drive (Art Room 1 and 2)	Houston	77042
Katharine Tyne Branch Library	16719 Clay Road (Meeting Room)	Houston	77048
Tina Mendezhall Community Center	1414 West Road (Room 106)	Houston	77055-4917
Acres Homes Multi Service Center	6719 West Montgomery Road (Auditorium)	Houston	77091
Lane Star College Victory Center**	4141 Victory Drive (VC102)	Houston	77088-7321
Hardy Street Senior Citizens Center	11901 West Hardy Road (Auditorium)	Houston	77076-1220
Kashmere MultiService Center	4802 Lockwood Drive (Auditorium)	Houston	77026-2941
Neighborhood Centers Inc Ripley House Campus	4410 Navigation Boulevard (Room 209)	Houston	77011-1036
HCC Southeast College Building C Parking Garage	6960 Rastic Street	Houston	77087
Fiesta Mart Inc	8130 Kirby Drive (Dining Area)	Houston	77054-1706
Sunnyvale Multi Service Center	9314 Cullen Boulevard (Auditorium #189)	Houston	77051
Texas Southern University	3100 Cleburne Street (Robert J Terry Library)	Houston	77004
University of Houston	4302 University Drive (E Cullen Building Room 18)	Houston	77004
The Grand Tuscany Hotel	12801 Northwest Freeway (The Regency)	Houston	77040
Moody Park Community Center	3725 Fulton Street (Main MultiPurpose Room)	Houston	77009
SPJST Lodge Num 88	1435 Beall Street (Annex in back of main building)	Houston	77008-3441
HCPL Octavia Fields Branch Library	1503 South Houston Avenue (Meeting Room)	Humble	77338-4822
Alief ISD Administration Building	4250 Cook Road (Room 730)	Houston	77072
EV141C - Northeast Multi Service Center	9720 Spindling Street (Kitchen Area)	Houston	77016
EV147Y-Alise McKean Young Neighborhood Library	5107 Griggs Road	Houston	77021-3715

\*\* Closed November 27. Cerrado el 27 de noviembre. Đóng cửa ngày 27 tháng 11. 11月27日关闭。

# E-commerce sales spike surpasses an important milestone

CHRIS TOMLINSON  
Commentary



E-commerce has crossed the traditional retail industry's Rubicon.

Just as Julius Caesar's march on Rome established an empire, e-commerce companies have changed retail by selling more goods online this Black Friday than Americans bought in stores, industry data show.

E-commerce rose 19.6 percent on Black Friday to total \$7.4 billion, Adobe Analytics reported. The only two days with higher sales were last year's Cyber Monday, and this year's, which totaled a stunning \$9.4

billion.

The long decline of brick-and-mortar stores clearly is accelerating. Foot traffic on Black Friday fell 6.2 percent this year, ShopperTrack reported. Americans instead bought \$2.9 billion in goods with their mobile phones, a 21 percent increase over Black Friday last year, Adobe said.

Too many traditional retailers still consider themselves distinct from e-commerce. They spend

their time and money creating beautiful stores with well-trained staff to merchandise select products. They think they sell taste and experience as much as anything else.

More than half of retailers said they planned to create a unique and immersive shopping experience for their customers, a survey by Adobe showed. Two-thirds of them said loyalty programs are essential. Investments in experience

and loyalty are smart. And admittedly, forecasts predict that out of the \$730 billion that the National Retail Federation expects Americans to spend this holiday season, only \$170 billion will go to websites. But that ratio is changing fast.

The good news is that some retailers have figured out the future of retail is a cyborg.

Last week, consumers rewarded brick-and-mortar stores

*Tomlinson continues on B5*

## BUSINESS

HOUSTON CHRONICLE • WEDNESDAY, DECEMBER 4, 2019 • SECTION B ★★

● **DOW:** 27,502.81, down 280.23 (-1.0%) | ● **S&P:** 3,093.20, down 20.67 (-0.6%) | ● **OIL:** \$56.32, up 36¢ (+0.6%) | ● **NATURAL GAS:** \$2.44, up 11¢ (+4.2%)

# Perry's role in Ukraine 'scheme' spelled out

House Dems' report says ex-Texas governor knew of and approved actions by Trump

By Benjamin Wermund  
and James Osborne  
WASHINGTON BUREAU

WASHINGTON — Rick Perry was one of several senior administration officials who knew about and approved of President

Donald Trump's attempt to "use the powers of his office to solicit foreign interference on his behalf in the 2020 election," according to a report by Democrats running an impeachment inquiry into the president.

The report, the culmination of

weeks of public and private hearings by the House Intelligence committee, says the president subverted foreign policy toward Ukraine and undermined national security when he pushed Ukrainian President Volodymyr Zelenskyy to announce investigations into Trump's political rival, former Vice President Joe Biden.

The report also debunks theories that Ukraine interfered in



Perry

the 2016 election. Trump's so-called scheme was "undertaken with the knowledge and approval of" senior administration officials, including Perry, the former Texas governor who recently stepped down as energy secretary.

Though it offers few bombshells, the report details Perry's involvement in Trump's effort, which included participating in a sort of diplomatic back channel with Ukraine led by the president's personal attorney, Rudy Giuliani.

The report, largely built off accounts of officials who publicly testified before the committee

*Perry continues on B5*

## ENERGY



Blair Pittman / Bloomberg

A flare burns near Mentone. Williams and its unit Mockingbird Midstream Gas Services sued the Railroad Commission over gas flaring by oil companies.

# Gas flaring is under fire

## Pipeline firm sues state, says oil byproduct should be sold

By Sergio Chapa  
STAFF WRITER

The controversial oil and natural gas industry practice of burning off natural gas produced as a byproduct of crude oil production is under fire in a lawsuit filed by a pipeline company alleging that Texas regulators allowed one of its potential customers to flare natural gas instead of moving it to market and selling it.

In a Nov. 20 lawsuit filed before Judge Jan Solfer with the

345th State District Court in Austin, Oklahoma pipeline operator Williams and its subsidiary Mockingbird Midstream Gas Services sued the Railroad Commission of Texas over the agency's 24 decision on Aug. 6 allowing Dallas oil and natural gas company Exco Resources to burn natural gas produced by B38 wells in the Eagle Ford shale of South Texas.

Williams argues that its natural gas gathering pipelines

*Flare continues on B3*



Getty Images file photo

Environmental groups say natural gas flaring contributes to greenhouse emissions and pollution.

## Trade association supports call for taxes on carbon emissions

By James Osborne  
STAFF WRITER

WASHINGTON — A leading natural gas trade association came out in support of carbon taxes Tuesday, as the oil and gas industry comes under increasing pressure to better work with government on addressing climate change.

Representing companies including Exxon Mobil, Chevron, ConocoPhillips, Cabot and Southwestern Energy,

Natural Gas Supply Association President Dena Wiggins said member companies were unanimous in their support for taxing carbon emissions and suggested more in companies were likely to follow.

"It's such a huge, important national conversation, every trade association has to be thinking about it," she said. "We're likely not going to be the last."

The move follows calls for a

*Carbon continues on B3*

## Poor potato harvest could mean tighter supplies of french fries

By Ashley Robinson  
BLOOMBERG NEWS

Potato processors are rushing to buy supplies and ship them across North America in order to keep french fries on the menu after cold, wet weather damaged crops in key producers in the U.S. and Canada.

Cool conditions started to hit growing regions in October, lashing potatoes with frost. Farmers in Alberta and Idaho were able to dig up some damaged crops for storage. But growers in Manito-

ba, North Dakota and Minnesota received snow and rain, forcing them to abandon some supplies in fields.

As the wild weather hurt crops, an increase in fry-processing capacity in Canada has boosted demand. The combination will lead to tight supplies, and it's likely that potato prices could climb this year across North America, Stephen Nicholson, a senior grains and oilseeds analyst at Rabobank, said in a phone interview. International costs may also rise as the U.S. won't be able

to export as much.

"French fry demand has just been outstanding lately, and so supplies can't meet the demand," Travis Blacker, industry relations director with the Idaho Potato Commission, said in a phone interview.

The United Potato Growers of Canada estimates about 12,000 Manitoba acres, or 18 percent of the province's planted area, were left unharvested — equal to what was abandoned for all of Canada last season. About 6.5 percent of

*Potatoes continues on B5*



Daniel Sheehan

William Isherwood drives a forklift with a pallet of potatoes into the warehouse of Northwest Harvest in Seattle.



## BUSINESS

### FLARE

From page B1

were already connected to Exco's wells and would have allowed the company to move the gas to market and sell it instead of burning it off in an industry practice known as flaring.

"Natural gas flaring has long been recognized as wasteful and environmentally harmful," Williams said in the lawsuit. "The Railroad Commission of Texas is vested with the duty to prevent the waste of oil and gas."

Natural gas is byproduct of crude oil production, but with gas prices so low, many companies are simply burning it off, rather than paying the costs to transport it.

Exco has been using temporary permission from the Railroad Commission to burn off billions of cubic feet of natural gas from its Eagle Ford wells since Dec. 2017.

#### Costs and capacity

In a filing with the Railroad Commission, Exco contended that it does not have a natural gas gathering agreement with Williams and even if it did, the using the system would be too costly and that the network does not have enough capacity to move all of the natural gas produced by the wells.

"Connecting to Williams' pipeline would be uneconomic," Exco said in the filing, "and without a flaring exception Exco will have to shut in the 138 wells which could cause damage to the wells and the reservoir resulting in a waste of hydrocarbons."

Flaring remains a thorny issue



Staff file photo

Gas flares burn in La Salle and Dimmit counties. The Texas Railroad Commission has not denied any of the more than 27,000 requests for flaring permits over the past seven years, a suit says.

for the oil and natural gas industry in Texas where the Norwegian research firm Rystad Energy estimates that operators burned 752 million cubic feet of natural gas per day during the third quarter, a double digit increase from the 650 million cubic feet burned daily during the second quarter.

Selling that gas, instead of burning it, would have prevented the release of millions of pounds of carbon dioxide and other pollutants into the atmosphere. It also could generate billions of dollars

in revenue and hundreds of millions of dollars of royalties for landowners, the state, county governments and school districts.

#### Emissions, waste

In its lawsuit, Williams argued that the Railroad Commission has not denied any of the more than 27,000 requests for flaring permits received over the past seven years, a practice that had already sparked the ire of environmentalists who say the agency is weak on enforcement and is doing nothing

to limit greenhouse gas emissions blamed for climate change.

Environment Texas, an Austin-based environmental group, delivered an open letter to the Railroad Commission on Tuesday asking the agency's three elected commissioners to stop issuing flaring permits. Signed by 26 people ranging from environmentalists, scientists and Native American leaders to Texas State Sen. Jose Rodriguez, D-El Paso, and retired Shell Oil Company John Hofmeister, the letter asked the agency to end flaring.

"At current prices, flaring in the Permian Basin burns an excess of \$1.8 million dollars a day worth of natural gas," the letter stated. "Annual waste of gas is sufficient to power 400,000 Texan homes for two and a half years."

No court date has been set. The Railroad Commission said it would not comment on pending litigation. But the Aug. 6 hearing for Exco's flaring permit sparked fierce debate in the all-Republican commission.

#### Agency's reasoning

Commissioners Christi Cradick and Ryan Sitton voted in favor of the permit while Chairman Wayne Christian voted against it.

"Exco can't go out today and just turn the valve open because there is no contract in place and it's not our job," Sitton said during the meeting. "We don't have regulatory capacity over those contracts or signing contracts."

And with natural gas prices stuck near 20-year lows, Christian expressed concerns about the economic incentive to burn it off rather than building new pipelines to move it to market and sell it.

"I have some serious concerns about the frequency and ease with which this commission grants flaring exemptions that may not be associated with the drilling of a completed well," Christian said during the meeting.

"The price of gas right now is a lot of incentive to flare out of convenience and economics rather than necessity."

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### CARBON

From page B1

national carbon tax from a number of individual companies. Exxon Mobil said last year it was putting \$1 million into the effort to convince Congress to enact such a law.

The Natural Gas Supply Association said it was not lobbying for any one specific proposal, but broadly supports carbon taxes at the federal, state and regional level, as long as they also eliminate existing regulations on carbon emissions and deliver revenues not to government but directly to American consumers in form of tax rebates.

But many environmentalists are skeptical of the industry's conversion, given earlier efforts to undermine climate scientists and few signs now that oil and gas companies are putting real pressure on Congress to move ahead.

#### Skeptics demand action

"Actions speak louder than words. If the natural gas industry is truly committed to combating the climate crisis, they'll work with policymakers on the full suite of actions dictated by science," said Matthew Davis, legislative director of the League of Conservation Voters. "The scale of the climate crisis is massive and while putting a price on carbon could play a role in

our transition to a clean energy economy, it won't be the only solution."

The move by the Natural Gas Supply Association comes as a number of state regulators are debating how to go about decarbonizing the power grid, including direct subsidies for nuclear plants, which have been closing at a fast pace in recent years amid increasing competition from gas and renewables. At the same time, some cities are weighing bans on natural gas, in a bid to address climate change.

But Wiggins said that was not why her trade group chose to come out in support of a carbon tax.

"It might [help our image] but that's not why we did it," she said. "We think it's the right thing to do and want to be part of the conversation."

#### Impact on coal-fired plants

Carbon taxes would likely be an advantage for natural gas companies, which produce less carbon dioxide than coal or oil. Carbon taxes would likely force more coal plants to shut down, to be replaced by gas-fired plants, wind turbines and solar panels.

Speaking about efforts to address climate change last year, Patrick Pouyanné, CEO of the French energy major Total, said, "There is room for us to have more gas."

"Gas should - should be - it's a hydrocarbon - it's a hydrocarbon of choice for energy transition because it's more flexible, because there is less emission of CO2 when you make power," he said.

Total is also a member of the Natural Gas Supply Association.

Not included in the NGSA's announcement were any mention of other greenhouse gas emissions such as methane, which oil companies routinely flare in lieu of building pipelines and other infrastructure to get natural gas to market. Methane also escapes from leaks in pipelines.

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### THE MOTLEY FOOL

#### ASK THE FOOL Big bosses

Q: What are America's biggest employers?

P.K., West Haven, Conn.

A: The United States federal government employs the most people in America. As of 2018, it employed more than 585,000 civilians in the U.S. Postal Service and over 2 million more people in all other agencies, per the president's budget for fiscal year 2020. The military, meanwhile, employed about 1.4 million people in uniform, for a grand governmental total of more than 4 million. Among

Lipton, Cheetos, Gatorade, Ruffles, Tostitos, Near East, Naked, Sabra, Smartfood, SodaStream, Quaker and Life. Fully 22 of my brands generate more than \$1 billion each. Who am I?

Last Week's Trivia Answer: Hudson Group

#### THE TAKE

#### A smoking dividend

Philip Morris International (NYSE: PM), the world's second-largest publicly traded tobacco company, was spun off from Altria in 2008. While Altria kept the shrinking domestic market, Philip Morris focused on higher-growth foreign mar-

rateSeeker.com

### Deposit & Loan Guide

Institution	Int Chkng Acct Min	Money Mkt Acct Min	3 mo CD Min	6 mo CD Min	12 mo CD Min	18 mo CD Min	24 mo CD Min	36 mo CD Min	60 mo CD Min	Phone / Website
Lone Star Bank	0.79	0.83	0.92	1.09	1.75	1.29	1.38	1.51	1.71	713-358-9400 LSBTexas.com
Premium Savings > 250,000-2.02% apy, 12 Mth CD Rate on New Money										
Origin Bank	0.05	0.90	0.25	0.90	1.25	1.25	1.25	1.25	1.25	713-463-0300 www.origin.bank
Call about Performance Checking with increased APY										
Synchrony Bank	NA	1.20	0.75	1.00	2.00	2.00	2.10	2.10	2.25	800-869-3813 www.synchronybank.com
Great Rates + Safety = Peace of Mind. Member FDIC.										

Houston Chronicle



private employers, Walmart leads the pack by far, employing about 2.2 million people globally, per Fortune 500 data. It's followed in the Fortune 500 by Amazon.com (647,500 total employees), Kroger (453,000), Yum China Holdings (450,000), Home Depot (443,000), Berkshire Hathaway (389,000), IBM (381,000), United Parcel Service (364,575), Target (360,000), FedEx (359,000), UnitedHealth Group (300,000), Walgreens Boots Alliance (299,000), CVS Health (295,000), Starbucks (291,000) and General Electric (283,000).

#### POLOSH TRIVIA Name that company

I trace my roots back to the 1893 creation of a carbonated beverage for a pharmacy's customers. My CEO in the 1950s was married to Joan Crawford. In 1965 I acquired Frito-Lay. Today I'm a snack and drink giant, with a market value recently topping \$85 billion. People in 200 countries and territories consume my offerings more than a billion times a day. My brands include Doritos, Fritos, Rold Gold, Tropicana, Mountain Dew,

kets. Selling tobacco products in more than 180 countries, Philip Morris can count its geographic breadth as an asset. Weakness in developed markets is offset by market advantages in developing countries, many of which have a burgeoning middle class seeking affordable luxuries, such as tobacco. Philip Morris has been able to grow its sales through price hikes, even as cigarette shipping volumes have fallen. The company is looking beyond traditional tobacco offerings, and its IQOS heated-tobacco device has seen its total user count rise from an estimated 7.6 million in the first quarter of 2018 to 12.4 million in the third quarter of 2019. This has fueled a 45.7 percent year-over-year increase in heated-tobacco unit shipping volumes through the first nine months of 2019. At a time when investors worry about a possible recession, Philip Morris is well-positioned for a downturn: Its chief product is addictive, so people will keep buying it regardless of the economy. It also offers investors a hefty dividend — which recently yielded 5.6 percent. If you're OK investing in tobacco, give the stock a closer look.

Andrew McMeel  
Syndication

<b>TEXAN BANK</b>	1.01	1.51	NA	0.75	1.55	NA	NA	NA	1.77	281-276-1800 www.texanbank.com
Texan Bank	100	100	NA	1,000	1,000	NA	NA	NA	1,000	
50 or older? Add 0.25% to stated yield for Texan Legends Account										
<b>Trustmark</b>	NA	0.10	0.10	0.10	0.15	0.45	0.50	0.65	1.06	713-407-9900 www.trustmark.com
Trustmark Bank	NA	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
Call for our 3 and 6 Month CD Specials \$5 Million Maximum Deposit										

**TO PARTICIPATE IN THIS FEATURE,  
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**SAVINGS UPDATE**

### Does the amount of my CD deposit affect my rate?

By Sabrina Kart

If you're getting ready to sock savings away in a certificate of deposit, you may know how much you want to deposit. But as you shop rates, you might discover deposit minimums and rate tiers influencing your decision.

Most CDs stipulate a minimum deposit. That's the smallest amount you can invest to open a particular CD. Fortunately for modest savers, many certificates have entry points as low as \$1,000 or \$500. Others even lower the bar to no minimum at all.

But that's not always the case. Sometimes depositing more funds will earn you a better rate, and it happens one of two ways.

Some certificates simply have hefty minimum thresholds, requiring a deposit of \$5,000 or \$10,000. And there are also "jumbo" CDs requiring \$25,000 or even \$50,000 in a single certificate. These larger CDs aren't guaranteed to pay better than lower-minimum options, but often they do.

Then there are banks and credit unions that offer CD rate tiers. Here, for example, you may earn one rate on deposits up to \$4,999, then a slightly higher rate above \$5,000, and perhaps a third rate if you deposit \$25,000 or more.

These options may lead you to stretch a bit on your deposit in order to score a higher rate, moving for instance from an initially planned \$20,000 up to \$25,000 to qualify for a well-paying jumbo certificate.

It may also impact whether you open one vs. multiple certificates. The strategy of splitting your savings into more than one CD — to lessen the penalty hit if you need to cash out some of your savings early, but not all of it — is a smart one. But if it prevents you from earning a higher rate with a single, larger certificate, you may want to reconsider.

Rate Criteria: Rates effective as of 12/02/19 and may change without notice. RateSeeker, LLC, does not guarantee the accuracy of the information appearing above or the availability of rates in this table. Banks, Thrifts and credit unions pay to advertise in this guide. NA means rates are not available or not offered at the time rates were surveyed. All institutions are FDIC or NCUA insured. Yields represent annual percentage yield (APY) paid by participating institutions. Rates may change after the account is opened. Fees may reduce the earnings on the account. A penalty may be imposed for early withdrawal. To appear in this table, call 773-320-8492.