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January 31, 2020

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 sixteenth 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. "In war against plastic, the energy industry should beware", Chris Tomlinson, Houston Chronicle, January 29, 2020.

This article says, "The implications for the environment and the petrochemical industry is significant ... Experts hope that once economical recycling processes are available, companies create buyback programs that pay enough to make recycling profitable. This is bad news for the oil and gas industry, which is backing on petrochemical demand growing as gasoline and diesel demand recedes .. But one thing is clear; the petrochemical industry will be drastically different than it is today, the supply chain should pay attention." This is another environmental impact due to oil/gas extraction that should be analyzed in the OGLEIS.

2. "Big Oil wants to dump more wastewater into rivers. What could go wrong?", Naveen Adasivam, The Daily Grist, January 22, 2020.

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

The article brings up another environmental impact due to oil/gas extraction particularly since the U.S. EPA is weakening environmental wastewater standards. The FS must consider this and analyze its impact in the OGLEIS.

3. "The industry is a victim of its own success", Rachel Adams-Heard, Naureen S. Malik, and Sayer Devlin, Bloomberg News, Houston Chronicle, January 26, 2020.

This article says, "But the dark side of the boom is increasingly difficult to ignore. Shale drillers are extracting so much gas that it's overwhelming demand ... At that level, U.S. producers simply don't make money. It's forcing a wave of multibillion-dollar write-downs, layoffs and spending cuts ... The industry is a victim of its own success ... You don't just have oversupply in the U.S. – you have oversupply in Europe, oversupply in Asia, and really oversupply across the globe."

4. "Electric cars making inroads in Houston", Paul Takahashi, Houston chronicle, January 26, 2020.

This article says, "Electric vehicles ... were front and center at the 37th annual Houston Auto Show, another sign of a quickening energy transition that has huge implications for the region's oil industry and economy ... Demand for electric vehicles is expected to explode in the coming decade as major automakers increase production and battery technology continue to advance, helping to lower prices and improve range. Industry leaders predict electric vehicles will become price-competitive with conventional gas-powered vehicles as early as 2023."

The Sierra Club appreciates this opportunity to provide these additional initial scoping comments about the social, economic, and environmental impacts of the OGLEIS. Thank you.

Sincerely,



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In war against plastic, the energy industry should beware

CHRIS TOMLINSON
Commentary



The war against plastic is on. China's government is introducing bans on single-use straws, utensils and a slew of

other disposable products in the world's most populous country. After standing by as water supplies and the ocean filled with tiny shards of polyethylene, the government is cracking down.

The anticipated drop in plastic consumption, accompanied by new research to improve recycling, is bad news for Texas natural gas producers. Their product is the key ingredient in this environmental menace, which is known within the industry as polymers.

"China is the biggest polymer import market in the world, especially for polyethylene, around half of the demand for which is in single-use plastics," explained John Richardson, senior consultant for Asia at ICIS, a commodity market intelligence company. "So, whatever happens in China is a big deal for the global polymer business."

China's National Development and Reform Commission has released a three-stage plan to

Tomlinson continues on B7



Ricardo De Arantes / Tribune News Service

China has announced it will stop the production and sale of all single-use plastic bags and straws and other utensils in major cities by the end of the year.

BUSINESS

HOUSTON CHRONICLE • WEDNESDAY, JANUARY 29, 2020 • SECTION B ★★

• **DOW:** 28,722.85, up 187.05 (0.7%) | • **S&P:** 3,276.24, up 32.61 (1.0%) | • **OIL:** \$53.48, up 34¢ (0.6%) | • **NATURAL GAS:** \$1.934, up 3.2¢ (1.7%)

Space module has Houston link

Axiom will build a \$2 billion orbiting commercial unit, create 1,000 jobs

By Andrea Leinfelder
STAFF WRITER

A Houston company will build an out-of-this-world platform to ensure humans have a continued presence in space and that an increasing number of people and businesses can access microgravity for research, exploration and manufacturing.

NASA on Monday selected Axiom Space to build a privately funded commercial module that will attach to the International Space Station, a project that could

cost \$2 billion and ultimately create 1,000 jobs. It's the latest announcement in space station succession planning and efforts by NASA to welcome more private astronauts and commercial companies aboard.

"The vision of our company is to make living and working in space commonplace," Michael Suffredini, CEO of Axiom Space, told the Chronicle. "And we've done that both to aid exploration but, perhaps more importantly to us, to make our lives better here

Space continues on B8



Axiom Space

A rendering of the Axiom Space commercial module, which will provide living and working environments. Its launch is expected in 2024.

New Meyerland H-E-B caters to higher authority



SOCIAL MEDIA

Judge blocks Off-Facebook privacy tool

By Dwight Silverman
STAFF WRITER

A Harris County judge, ruling in a case involving the sex trafficking of a 16-year-old girl, temporarily blocked a privacy tool released with much fanfare by Facebook on Tuesday.

A Houston attorney, Annie McAdams, won a temporary restraining order against the social network after what McAdams described as a contentious hearing before State District Judge Tanya Garrison in the 334th District Court. The order, which affects tens of millions Facebook users in the United States, halts the rollout of its Off-Facebook Activity tool, which lets users disconnect data from their accounts that was collected from their actions on other websites and apps.

That data is partly what enables personalized ads on Facebook, and has caused some people to believe Facebook is listening to conversations via users' smartphones.

Facebook continues on B7

Members of the Jewish community including Meyerland residents, who were heavily impacted by Hurricane Harvey, tour the kosher meat section of the H-E-B Meyerland Market.

Marie D. De Jesus / Staff photographer

Grocer's return earns praise from Jewish community

By Paul Takahashi
STAFF WRITER

Harry Brown strolled down the aisles of the new H-E-B in Meyerland, gazing in awe at the rows of kosher beef, salmon and yogurt lining the shelves.

Nearly three years ago, the Meyerland resident lost his home, his synagogue and his local H-E-B to Hurricane Harvey, which devastated the neighborhood's tight-knit Jewish community. Harvey inundated Brown's home with 4 feet of water, forced the demolition of his Orthodox synagogue and shuttered the H-E-B Pantry store where Brown used to shop for kosher food.

H-E-B Meyerland Market, which opens Wednesday in Meyerland Plaza, represents a long-awaited and welcome sign of recovery for Brown. The life insurance agent and his family, who have been living with friends and in apartments while their home was being rebuilt, moved back into their Meyerland home last month — a few days before Hanukkah.

"After everything Meyerland has been through, it's a great rebirth for the entire neighborhood," Brown, 52, said while touring the new H-E-B on Tuesday. "A lot of people have



The opening of H-E-B Meyerland Market fulfills the grocer's promise to return to a neighborhood devastated by repeated flooding.

left Meyerland. Something like this will bring them back."

Harvey devastated rich and poor, black and white, Hispanic and Asian. But the storm had an outsized impact on Houston's Jewish community, many of whom live in Meyerland.

About one out of every 13 Jewish families in Houston flooded during Harvey. The storm damaged three of the city's largest synagogues, which had a combined membership of 3,900 families. The Evelyn Ruben-

stein Jewish Community Center took on 10 feet of water. Flood water inundated the Jewish senior home, the community resource center and the Beth Yeshurun Day School.

Since the August 2017 storm, most synagogues, Jewish community centers and day schools have reopened. However, Harvey still casts a long shadow on Meyerland.

Homes still sit vacant, as families have moved away. Many who have

Grocer continues on B3



Staff file photo

Former Black Elk Energy CEO Jeff Shulze will have federal fraud charges dismissed in 2022 if he avoids other arrests.

Black Elk ex-CEO gets deal to drop federal charges

By Jordan Blum
STAFF WRITER

The former CEO of the Houston company Black Elk Energy reached a deal to eventually dismiss charges that he helped run a fraudulent scheme with the company's New York hedge fund owners.

Jeff Shulze will have the charges dropped in January 2022 as long as he avoids other arrests as part of a deferred prosecution agreement announced Tuesday by U.S. Attorney Richard Donoghue of the Eastern District of New York. His trial was scheduled to begin Monday in federal court.

Black Elk gained infamy in 2012 when an explosion killed three workers on an offshore rig it operated in the Gulf of Mexico. Amid the loss of production, extra expenses and lawsuits, Black Elk was failing financially. To salvage what was left of the company's value, the majority owners at the Platinum Partners hedge fund were alleged to have run a scheme to raid the

Charges continue on B7

BUSINESS

Redo of oil speculation rules less sweeping

By Ben Bain
BLOOMBERG

U.S. regulators are poised to issue long-delayed restrictions on excessive speculation in oil and metals markets after tougher proposals stalled during the Obama administration, said three people with direct knowledge of the matter.

The Commodity Futures Trading Commission intends to release a new plan this week for limiting the size of bets that hedge funds and other traders can make on derivatives tied to various commodities. The constraints, less sweeping than earlier versions proposed by the agency, would impact trading on the soonest-expiring contracts, leaving intact traders' abilities to make big wagers on longer-term contracts, two of the people said.

The effort is the CFTC's latest attempt to pass controversial regulations that for years have faced stiff opposition from a powerful coalition of financial, energy and agricultural firms.

In another sign that the revamp will be softer than previous iterations, it's likely to let traders take bigger maximum positions than currently allowed in some physically settled futures contracts. That's partly because the CFTC is relying on data that shows that deliverable supplies of commodities are larger than previously estimated, said the people who requested anonymity to discuss the plan.

'100% committed'

The policy proposal is the most significant to date from CFTC Chairman Heath Tarbert, a former Treasury Department official who the Senate confirmed in June. While the effort will add regulations if finalized, it's arguably better for firms that such rules come from a CFTC chairman picked by President Donald Trump than someone appointed by a possible Democratic administration.

The plan would impact a wide swath of businesses, including food and transportation companies, that trade commodity derivatives to protect against price fluctuations for raw materials.

In a Jan. 22 Twitter post, Tarbert said he was "100% committed to getting the position limits rule done right in a way that allows flexibility for farmers, ranchers, and end users of the products our futures markets are meant to serve."

A CFTC spokesman declined to comment on the proposal.

Politically fraught

CFTC commissioners are set to vote on the new rules at a Jan. 30 public meeting. The proposal will mark the agency's fourth attempt over the past decade to address the politically charged issue. The effort was prompted by the 2010 Dodd-Frank Act, which was passed amid surging gas prices and widespread hostility toward financial firms that lawmakers accused of manipulating commodities to boost their trading profits.

During Barack Obama's presidency, the CFTC said it was required by law to finish the rules. But Tarbert's proposal is based on the premise that the CFTC is moving ahead because it's found a "necessity" for the new limits, two of the people said.

The subtle difference could be important in fending off possible legal challenges. In 2012, a federal judge blocked the CFTC's first attempt to create position limits after the International Swaps and Derivatives Association and Securities Industry and Financial Markets Association sued the regulator.

While the CFTC has long imposed federal restrictions on nine contracts tied to agricultural products, exchanges set the limits on widely traded contracts for energy and precious metals futures. Tarbert's proposal would create additional thresholds on more than a dozen contracts.

Exchange limits

The position limits to be proposed by the CFTC will likely be more permissive than those now allowed by exchanges, according to one of the people. Exchanges would be free to maintain their current levels, but then they'd be

more restrictive than what the CFTC is permitting. The CFTC will maintain spot and aggregate position limits for the nine agricultural contracts for which it already restricts speculative bets, two of the people said.

Many businesses have long been concerned that any CFTC rule would upend how they do business. For instance, companies such as airlines are now permitted to exceed exchanges' oil constraints if the trades are deemed bona fide hedges, such as transactions that protect against legitimate business risks. In its proposal, the CFTC plans to broadly continue honoring those exemptions and others, two of the people said.

In a possible blow to some on Wall Street, the CFTC will propose scrapping a long-standing exemption that has been used by banks to offload risk they take on when they sell commodity index funds to clients, according to the people. Agriculture firms in particular have complained that such an exemption shouldn't be available to financial firms.

TOMLINSON

From page B1

prohibit the production and sale of ultra-thin plastic bags, foam tableware, disposable plastic swabs, and the production of goods containing plastic microbeads.

By 2025, the government will ban shipping services from using disposable plastic packaging while restricting the amount of plastic tape they use.

"The implications both for virgin PE (polyethylene) polymers demand in China and for the amount of that demand which is met by recycled production are likely to be very significant," Richardson added.

U.S. polyethylene exports to China are expected to rise this year, before the bans become effective, but producers already see prices drop due to a global glut created by overproduction of U.S. natural gas, Richardson wrote in a separate report.

Producers don't need to worry about a U.S. ban. In Texas, state lawmakers have rolled back municipal regulations limited single-use plastic products. But consumers are demanding change.

Unilever, a conglomerate that makes thousands of consumer goods, has pledged to reduce plastic packaging by 10,000 tons by 2025, a 15 percent cut. The

corporation also will work toward 100 percent recycled, reusable or compostable packing.

"Our plastic is our responsibility, and so we are committed to collecting back more than we sell, as part of our drive towards a circular economy," CEO Alan Jope said, promising to eventually collect 600,000 tons of plastic waste a year.

Every major corporation, especially consumer brands, is searching for ways to appease customers worried about putting more plastic into the environment.

Starbucks has announced plans to shift to reusable packaging, research how to change customer behavior and cut packaging waste 50 percent by 2030.

"Our aspiration is to become resource positive - storing more carbon than we emit, eliminating waste, and providing more clean freshwater than we use," Starbucks CEO Kevin Johnson said in a statement. "We do know that this journey will require new innovations and creative ideas from entrepreneurs, nonprofits, our suppliers, our licensees, our partners and our customers."

Innovations in recycling will be the most critical. The biggest problems are convincing people to recycle plastic and then figuring out how to process it.

Some types of plastic, classes I through 4, can be recycled by shredding, cleaning and melting



Munk Uz Zaman / Getty Images

A man paddles on a boat as plastic bags float on the surface of the Buriganga River in Dhaka, Bangladesh. It's one of the world's most polluted rivers.

them, but the process is dirty and wasteful. More exotic plastics, such as foam packing peanuts, cannot be recycled at all.

"The issues with current recycling processes are so severe that countries who were previously mass importers of waste for recycling have closed their doors, leading to significant buildup of polymer waste," Bryony Core writes in a research paper for IDTechEx, a market research company.

New research is focused on using chemical processes to break down plastic waste into its chemical components, which can become feedstocks for new plastics or fuels.

If implemented on a commercial scale, recycling plastic will become as easy as recycling aluminum cans, which today include 70 percent recycled content.

The implications for the environment and the petrochemical industry is significant. People around the world dump the equivalent of one garbage truck full of plastic into our waterways every minute.

Experts hope that once economical recycling processes are available, companies create buy-back programs that pay enough to make recycling profitable. This

is bad news for the oil and gas industry, which is banking on petrochemical demand growing as gasoline and diesel demand recedes.

Anyone who thinks they can accurately forecast consumer behavior or technological innovation is a fool. But one thing is clear; the petrochemical industry will be drastically different than it is today, the supply chain should pay attention.

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FACEBOOK

From page B1

8:18

Off-Facebook Activity

Your Off-Facebook Activity

Off-Facebook activity includes information that businesses and organizations share with us about your interactions with them, such as visiting their apps or websites. Learn More

and mobile versions of Facebook. Facebook works with online advertising networks that place ads on websites and in apps. Those networks include code that can identify Facebook users and track their activity. The actions they take are then pulled into Facebook and used to help personalize ads and may even determine stories that are shown in a user's news feed.

The data also may affect the ads you see in sites away from Facebook.

CHARGES

From page B1

proceeds from the sale of Black Elk assets in 2014.

Shulse and six Platinum executives were charged in 2016 with securities fraud and wire fraud conspiracy. Shulse's defense argued for three years that he was unaware of any alleged wrongdoing orchestrated by Platinum Partners.

the case to be changed or deleted.

Facebook CEO and co-founder Mark Zuckerberg promised the tool in 2018, the result of changes in the way the company handles user information in the wake of the Cambridge Analytica scandal, which involved a third parties using personal data in ways that violated Facebook's rules. The original TRO delayed the release in the United States, although the tool has been available for a while in a handful of other countries.

Facebook has 240 million users in the United States and Canada.

McAdams said Facebook's attorneys have not provided data from the account of the man who lured her client, although they have said the information was preserved. Facebook did not respond to requests for comment.

"That is what is so alarming," McAdam said. "We asked for this evidence, and there has been no objection to providing it. They have not provided it."


The lawsuit alleges the man "groomed" the girl on Facebook, then convinced her to come to a meeting where she was sexually assaulted by seven men.

The U.S. release of the tool, which was announced in a blog post under Zuckerberg's byline, was timed for Data Privacy Day, an annual event sponsored by the National Cyber Security Alliance. The blog post said the tool will be available for about 2 billion users. Facebook had 2.45 bil-



Chron.com, Har.com and other websites or apps have shared your activity with Facebook.

What You Can Do

 **Manage Your Off-Facebook Activity**
View activity shared with us by the businesses and organizations you visit off of Facebook.

 **Clear History**
Disconnect off-Facebook activity history from your account.

... **More Options**
See more options for managing your off-Facebook activity.

The Off-Facebook Activity tool lets you stop Facebook from connecting activity away from the social network to your account. You can also use it to disconnect data already collected from your account.

lion users globally in the third quarter of 2019.

The temporary straining order expired after 14 days, and this one has the same time limit, McAdams said. A hearing on the TRO will be held on Feb. 7 before State District Judge Steven Kirkland.

Off-Facebook Activity lets users control whether data collected as the result of using websites

and third-party apps is filled in to Facebook and associated with their accounts. The feature lets them disconnect all such activity from their accounts, but it does not necessarily delete the data. Users can also prevent such activity from being collected in the future, either in general or per site or app.

The new feature is buried in privacy settings of the desktop

Facebook.

For example, if you shop for a car on an automaker's website, you may start seeing ads in your news feed for cars. These ads may also follow you as you use the web or third-party apps.

On a web page describing the new tool, Facebook says doing this won't prevent users from seeing ads, but that "the ads that you will see may be less personalized to you."

Among the things the tool lets users do:

- See a list of sites and apps that have funneled activity data to Facebook, and prevent them from doing so in the future.
- Disconnect past off-Facebook data associated with a user's account. The data itself is not deleted, however.
- View and control the information Facebook has collected based on category.
- Download the information generated by your activity both on and off Facebook.

The latter two items have been available on Facebook for a while, but are now included on the Off-Facebook Activity page.

The tool is available on the web version of Facebook at facebook.com/offfacebookactivity/. On the mobile app, click the three-bar menu icon, then Settings & Privacy > Privacy Shortcuts. Scroll down to Your Facebook Information and tap "View or clear your off-Facebook activity."

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houstonchronicle.com/techburger

The conspiracy alleged the also-failing Platinum tried to sell Black Elk assets and take the money for itself, rather than pay creditors holding Black Elk bonds, authorities charged.

Shulse, who led a Black Elk subsidiary, was appointed the Black Elk chief financial officer in January 2014 with the plan that he would replace Hoffman. Platinum installed Shulse as the Black Elk chief executive that September to supplant Black Elk founder John Hoffman, who did not face any charges.

Shulse was brought in to turn Black Elk around and he was not a party to the fraud that federal investigators allege Platinum committed, said Shulse's lawyer, F. Andino Reynal. Shulse was unaware of the alleged fraud, he said.

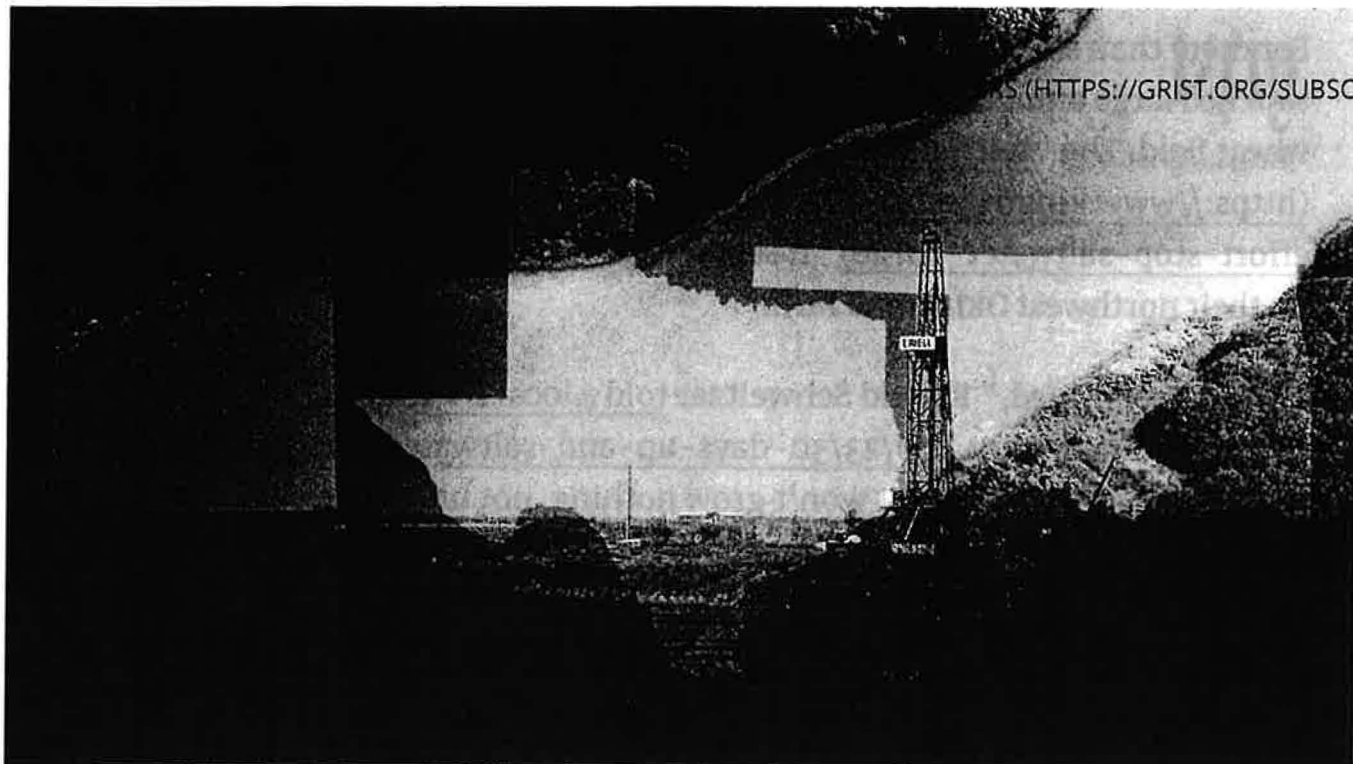
This was a clear case of government overreach, Reynal said, in which prosecutors falsely assumed Shulse was an extension of the hedge fund in Houston.

In an early 2019 trial, some Platinum executives were acquitted. A new trial is pending for Platinum founder Mark Nordlicht, who has denied wrongdoing.

Reynal credits a new prosecution team with taking a more reasoned approach with regard to his client.

"No one can return to Jeff the last four years," Reynal said, "but I know Jeff and the support he has in the community and I know that he will rebuild."

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MUDDY WATERS

Big Oil wants to dump more wastewater into rivers. What could go wrong?

By [Naveena Sadasivam](https://grist.org/author/naveena-sadasivam/) (https://grist.org/author/naveena-sadasivam/) on Jan 22, 2020

https://www.facebook.com/dialog/share?app_id=548917378618963&display=popup&href=https%3A%2F%2Fgrist.org%2Fenergy%2Fbig-oil-wants-to-dump-more-wastewater-into-rivers-what-could-go-wrong%2F&redirect_uri=https%3A%2F%2Fgrist.org%2F

<https://twitter.com/intent/tweet?uri=https%3A%2F%2Fgrist.org%2Fenergy%2Fbig-oil-wants-to-dump-more-wastewater-into-rivers-what-could-go-wrong%2F&text=Big+Oil+wants+to+dump+more+wastewater+into+rivers.+What+could+go+wrong%3F&via=grist>

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For more than six months, twin brothers Ronald and Donald Schweitzer have watched large amounts of salty wastewater bubble up from the ground in their wheat field. The “saltwater purge” (<https://www.kingfisherpress.net/article/news/update-four-swd-wells-shut-effort-stop-saltwater-purge>) has killed three trees and several acres of crops on their northwest Oklahoma farm.

“Absolutely ruined,” Ronald Schweitzer told a local TV station (<https://kfor.com/2019/10/23/30-days-up-and-saltwater-purge-continues-in-kingfisher-county/>). “It won’t grow nothing, not unless they dig the dirt out and put new dirt back in.”

The Schweitzers’ property is surrounded by highly-pressurized underground injection wells that store wastewater from oil and gas drilling. After tests confirmed that the saltwater had a similar chemical profile to wastewater dumped in the area, the Oklahoma Corporation Commission shut down eight disposal wells and reduced pumping rates for several more in November. The agency, which regulates the oil and gas industry in the state, has also banned new wells in a 14,000-square-mile area near the Schweitzers’ field.

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The industry generates mind-boggling quantities of this waste, which is called “produced water” in industry parlance. Oklahoma, Texas, and New Mexico producers alone generated about 270 billion gallons of it in 2017. That’s enough water to fill the New York Giants stadium more than 550 times over.

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As oil and gas producers face increasing regulation of underground wastewater disposal (<https://www.bloomberglaw.com/news/articles/2018-02-27/oklahoma-tightens-oil-fracking-rules-as-shale-earthquakes-climb>) — in part to limit earthquakes that result from the pressure injection puts on rocks — they're looking for new ways to get rid of the fluid left behind after fracking and drilling. That pinch is being felt particularly acutely in Oklahoma, Texas, and New Mexico, which have experienced a fracking boom (<https://grist.org/energy/oil-and-gas-emissions-are-reversing-progress-from-coals-decline/>) in the last few years and have limited ways to dispose of the substance.

Much to the alarm of environmentalists and public health experts, those three states are now exploring expanding avenues for produced water disposal — including discarding the wastewater in streams and rivers.

A complex web of rules govern produced water management. East of the 98th meridian — an imaginary line that runs down the middle of Kansas, Oklahoma, and Texas — oil and gas operators are allowed to release treated wastewater into rivers, but only if it's first routed through treatment facilities capable of removing the chemicals contained in the waste.

West of the meridian, which includes half of Texas and Oklahoma as well as all of New Mexico, oil and gas companies can discard produced water into rivers without that hurdle, so long as they secure government permits. In the three Southwestern states at the heart of the country's oil boom, the Environmental Protection Agency is currently responsible for issuing permits. Producers say this makes them time-consuming and cumbersome to obtain. As a result, last year Texas (<https://www.huntonnickelreportblog.com/2019/08/texas-moving-forward-with-npdes-delegation-for-produced-water-discharges/>) and Oklahoma (<https://www.eenews.net/stories/1061525917>) took steps to take over permitting from the EPA. New Mexico is considering following suit.

The EPA has also been considering easing regulations (<https://www.epa.gov/sites/production/files/2019-05/documents/oil-and-gas-study-draft-05-2019.pdf>) — including the 98th meridian rule — which

could further expand the industry's wastewater disposal options. The agency is set to publish a final report (<https://www.regulations.gov/document?D=EPA-HQ-OW-2018-0618>) with its findings in the next few months.

The oil and gas industry has been a vocal proponent of expanding disposal methods. They say that few options exist to manage produced water and that current regulations limit the industry's ability to extract oil and gas. The rule banning companies from dumping wastewater into rivers east of the 98th meridian without first sending it through centralized treatment systems is arbitrary, according to the industry. They also consider it unfair that downstream industries such as petrochemical refineries can discharge wastewater into rivers without the same regulatory requirements.

In a letter to the EPA (<https://www.regulations.gov/document?D=EPA-HQ-OW-2018-0618-0094>), a coalition of industry groups including the American Petroleum Institute said that the agency was using "arbitrary geographic distinctions" and that it should move quickly to develop regulations that would allow the industry to more efficiently treat and discharge its own wastewater into rivers and streams east of the 98th meridian.

Produced water contains a slew of chemicals, many of which are poorly understood. Without clear knowledge of the types of chemicals in wastewater — let alone their toxicity — disposal in rivers and streams is reckless, environmental groups and public health researchers say, and could have severe ecological and health ramifications.

"If you haven't done the target science-based research to make changes to your standards and monitoring tools, there's a real risk that our water resources, our public health, and environment could be negatively impacted," said Nichole Saunders, a senior attorney at the Environmental Defense Fund, an environmental nonprofit.

"We aren't going to find what we aren't looking for."

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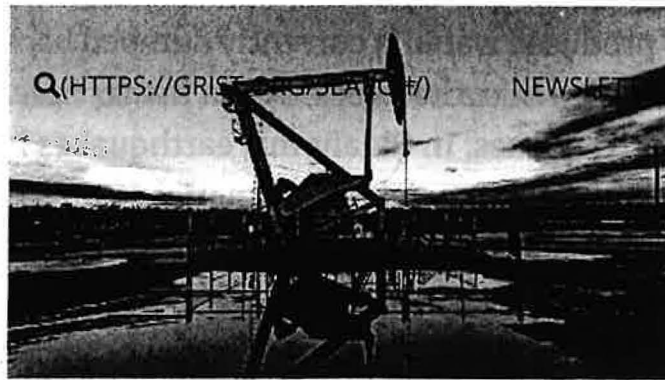
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The oil and gas industry produces billions of gallons of wastewater every year. Citizens of the Planet / Education Images / Universal Images Group via Getty Images

The volume of produced water generated in oilfields has risen dramatically in recent years, with no signs of slowing. In Texas, the top producer of wastewater in the country, produced water volume skyrocketed by 25 billion gallons ([https://documentcloud.adobe.com/link/track?](https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Aascds%3AUS%3A2c7b5154-f581-47dc-9c19-314d82c8de05)

[uri=urn%3Aaaid%3Aascds%3AUS%3A2c7b5154-f581-47dc-9c19-314d82c8de05](https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Aascds%3AUS%3A2c7b5154-f581-47dc-9c19-314d82c8de05)) between 2014 and 2017. The increase is primarily from the Permian Basin — a shale formation that straddles West Texas and southeastern New Mexico — which has been at the heart of the fracking boom. About half of all oil produced in the country is from the Permian, and Sourcewater, Inc., an oil and gas intelligence data firm, projects that

([https://documentcloud.adobe.com/link/track?](https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Aascds%3AUS%3A2c7b5154-f581-47dc-9c19-314d82c8de05)

[uri=urn%3Aaaid%3Aascds%3AUS%3A2c7b5154-f581-47dc-9c19-314d82c8de05](https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Aascds%3AUS%3A2c7b5154-f581-47dc-9c19-314d82c8de05)) Texas alone will generate 630 billion gallons of produced water by 2023.

Produced water is generated both during conventional drilling and fracking. There are two main sources of wastewater in oilfields: water comingled with oil and gas trapped underground and water mixed with sand and chemicals used for fracking. Depending on the particular geologic formation of an extraction site as well as the substances used in the extraction process, these waters can contain hundreds of toxic chemicals and metals, including benzene, lead, and radium.

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JUST The vast majority of produced water is currently dumped back underground into cavernous reservoirs called injection wells. But in the last decade, these wells have been linked to earthquakes. In Oklahoma, earthquakes have increased 900-fold since 2008 (<https://www.scientificamerican.com/article/even-if-injection-of-fracking-wastewater-stops-quakes-wont/>), when fracking became more prevalent. In the last few years, the state has instituted a number of regulations to limit the amount of wastewater disposed, helping decrease the pressure in underground wells. Those rules have led to a sharp decline in earthquakes, but they have left oil and gas producers scrambling to find new and cheap ways to dispose of the fluid.

Environmental advocates and public health researchers say that the biggest concern with releasing produced water into rivers and streams is that the consequences are not very well understood. Oilfield wastewater contains a large but unknown number of chemicals, and there's a dearth of research characterizing its components, concentration, and the effects it can have on public health and the environment, scientists say.

Last year, the Environmental Defense Fund conducted a review of the scientific literature (<https://www.sciencedirect.com/science/article/pii/S0160412019319907?via%3Dihub>) and found that 86 percent of the nearly 1,200 chemicals identified in produced water didn't have the necessary data available to determine exposure levels that would harm humans.

"The [science] gaps are big," said Saunders, the EDF attorney. "You have to understand what chemicals are there, and know if they're going to cause harm if they're released — and know what the right levels are."

The quality of produced water is also highly dependent on the geology and history of the formation from which it comes. No two formations are the same, and the type and quantity of chemicals present are highly variable, sometimes differing significantly within the same oilfield and over time. As a result, research about produced water in one field is not necessarily applicable to another.

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“To be talking about produced water as a singular thing is an oversimplification,” said Seth Shonkoff, executive director of PSE Healthy Energy, an energy science and policy institute, and a visiting scholar at the University of California, Berkeley. Companies inject a number of corrosion inhibitors, biocides, and friction reducers during fracking and drilling, and many of these chemicals react with one another and break down into “daughter products,” Shonkoff said.

“If we’re only testing for the compounds that we know are being used, we’re not able to actually sense whether there are other chemicals that might be of concern,” he added.

Shonkoff is a member of a food safety panel convened by the Central Valley Regional Water Quality Control Board, a water regulator in California’s San Joaquin Valley. Produced water has been treated and used for irrigation in the Central Valley for more than three decades. In 2017, wastewater was used to farm about 90,000 acres of cropland (https://www.waterboards.ca.gov/rwqcb5/water_issues/oil_fields/food_safety/di according to the board. So far, studies of the crops grown with produced water do not indicate any public health concerns, but Shonkoff said those studies have been limited in number and scope.

Produced water in the region is also somewhat unique, Shonkoff said, and results from California should not be used to justify new disposal options in Texas or Oklahoma. The geologic formations in the region have a freshwater history as opposed to a marine history, which led to unusually low salt content in its groundwater. As a result, the total dissolved solids — a measure of salt content in liquids — in some Central Valley oil fields is as low as 300 parts per million, compared to values in the hundreds (https://www.halliburton.com/content/dam/ps/public/pe/contents/Case_Historic_solutions-permian-H09855.pdf) of thousands (https://www.epa.gov/sites/production/files/documents/09_Mantell_-_Reuse_508.pdf) in southwestern states. That makes it easier to treat.



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“I certainly wouldn’t drag scientific findings from these two super weirdo oil fields in California over to Texas or New Mexico and say that I had a good body of information to make a sound policy decision,” he said.



Pennsylvania has seen unprecedented levels of extraction thanks to the Marcellus shale, but it has few options to dispose of wastewater from fracking. Robert Nickelsberg / Getty Images

Lessons from Pennsylvania

The flip side of California’s relatively sunny experience dumping wastewater into its water supply can be found in Pennsylvania. The state has seen unprecedented levels

(<https://stateimpact.npr.org/pennsylvania/2019/10/02/shale-gas-off-ramp-pa-s-fracking-boom-produces-a-glut-of-ethane-thats-helping-fuel-plastics-production-overseas/>) of oil and gas extraction thanks to the Marcellus shale formation, but it has few options to dispose of the toxic fluids produced during fracking. The particularities of Pennsylvania’s geologic formations make underground disposal largely unfeasible, forcing oil and gas producers to either truck it over state lines

(<https://stateimpact.npr.org/pennsylvania/2018/10/12/fracking-wastewater->

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~~from or usually ends up in Ohio some residents say they've had enough to Ohio or send it to municipal and commercial treatment plants so it can be discharged into rivers.~~

During the early years of the fracking boom in Pennsylvania, the use of municipal sewage plants to treat produced water led to disastrous results. These plants struggled to handle the vast array of organic chemicals in the wastewater and ultimately discharged partially-treated water with high levels of heavy metals and salts into rivers.

In western Pennsylvania, for instance, sewage plants released wastewater containing bromide into the Monongahela River. This bromide-laced water was picked up by a municipal water treatment system downstream, where it reacted with chlorine disinfectants to form trihalomethanes, a cancer-causing chemical. The water was then distributed to homes. Once discovered, towns that relied on water from the river were advised to drink bottled water (<https://stateimpact.npr.org/pennsylvania/2016/06/14/epa-bans-disposal-of-fracking-waste-water-at-public-treatment-plants/>), and, in 2011, the state environmental agency asked companies to voluntarily refrain (https://www.pennlive.com/midstate/2011/04/pennsylvania_says_gas-drilling.html) from sending produced water to sewage plants. The EPA officially banned the practice in 2016.

The industry still releases produced water into rivers in Pennsylvania, albeit after sending the fluids through so-called centralized wastewater facilities, commercial treatment plants built to handle oil and gas waste. According to a 2018 EPA report (https://www.epa.gov/sites/production/files/2018-05/documents/cwt-study_may-2018.pdf), there are eight such facilities in the state. The Pennsylvania Department of Environmental Protection permits them to release about 1.6 million gallons of wastewater per day.

There are signs that these facilities aren't cleaning up the waste to particularly high standards. Researchers have found high levels of radium, a radioactive element that increases the risk of different types of cancer, downstream of the



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facilities' outlets. Studies by researchers at Pennsylvania State University have found that radiation levels in the sediment at the outlet are up to 650 times higher than background levels. (https://grist.org)

"Even if you do treatment on these waters through these centralized treatment facilities, you're still releasing water that has radium above levels typically found in freshwater — and you're going to get accumulation in those sediments," said Nancy Lauer, a science and policy fellow at Duke University. "When you're releasing tons of that water every day consistently, you're going to get pretty high accumulations. That's been shown in Pennsylvania."

That radium can also end up further downstream. A 2018 study (<https://www.ncbi.nlm.nih.gov/pubmed/30179464>) found that mussels about a kilometer downstream of a treatment facility on the Allegheny River had higher strontium levels in their shells than those upstream, suggesting that the metal, which is present in oil and gas wastewater, was being carried downstream and absorbed by the bivalves.

"You need to do a perfect job to not have contamination from this practice," said Lauer. "And that's just looking at the radioactivity aspect."



(<https://grist.org/article/climate-candidate-2020-election-president-trump-biden-sanders-warren>)

The 98th meridian

How and where an oil and gas producer can dispose produced water depends on which side of the 98th meridian they're operating.

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Releasing produced water into streams and rivers is allowed west of the 98th meridian, where water is scarce and treated produced water could help alleviate shortages. In the eastern half of the country, however, the practice is banned except when wastewater is treated through a centralized system, as in Pennsylvania.

“The 98th meridian runs right through the middle of some oil fields,” said Kinnan Golemon, an oil and gas lobbyist based in Austin, Texas. “You can treat [and release produced water] on one side of the oil field and you can’t on the other side. That’s stupid.”

EPA and state environmental agencies issue permits to oil and gas producers west of the 98th meridian, but few operators have applied for permits in Texas, New Mexico, and Oklahoma, since alternatives such as underground injection wells have so far proven the cheaper option. Jennah Durant, an EPA spokesperson, said that the agency has issued eight permits that are currently active for produced water disposal in Texas — and none in Oklahoma and New Mexico.

Golemon said that if regulatory roadblocks like the meridian rule and the EPA permitting process are eliminated, it will allow for technological innovation that could result in new treatment methods to improve the quality of produced water being discharged. Once acceptable standards for treatment are set by regulatory agencies, the industry will innovate, he said.

Texas already has wastewater treatment facilities capable of handling produced water, according to Todd Staples, president of the Texas Oil and Gas Association, an industry group. “Modern-day treatment systems in Texas are very good,” he said, and treated wastewater will “meet the quality of the watershed” as well as any established regulatory limits.

Texas, Oklahoma, and New Mexico’s oil and gas regulatory agencies are also broadly supportive of expanding disposal options for produced water, citing droughts, water availability issues, and the potential to augment river flows with recycled wastewater.

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“Current perceived issues associated with discharge of treated produced water are not insurmountable,” a geologist with the Texas oil and gas regulator wrote in a letter to the EPA (<https://www.regulations.gov/document?D=EPA-HQ-OW-2018-0618-0013>). BSCI




Environmental advocates don’t necessarily disagree with that statement. But to overcome those problems, a lot more research must first be conducted, they say.

“I’d like to see the research done before we make regulatory and permitting decisions,” said Saunders. “Because if we find something, we can’t take it back.”

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app_id=548917378618963&display=popup&href=https%3A%2F%2Fgrist.org%2Fenergy%2Fbig-oil-wants-to-dump-more-wastewater-into-rivers-what-could-go-wrong%2F&redirect_uri=https%3A%2F%2Fgrist.org%2F)
 ([https://twitter.com/intent/tweet?](https://twitter.com/intent/tweet?url=https%3A%2F%2Fgrist.org%2Fenergy%2Fbig-oil-wants-to-dump-more-wastewater-into-rivers-what-could-go-wrong%2F&text=Big+Oil+wants+to+dump+more+wastewater+into+rivers.+What+could+go+wrong%3F&via=grist)
url=https%3A%2F%2Fgrist.org%2Fenergy%2Fbig-oil-wants-to-dump-more-wastewater-into-rivers-what-could-go-wrong%2F&text=Big+Oil+wants+to+dump+more+wastewater+into+rivers.+What+could+go+wrong%3F&via=grist)
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body=Big%20Oil%20wants%20to%20dump%20more%20wastewater%20into%20rivers.%20What%20could%20go%20wrong%3F%0AWastewater-wants-to-dump-more-wastewater-into-rivers-what-could-go-wrong%2F%3Futm_campaign%3Dbtns%26%23038%3Butm_source%3Dshare%26%23038%3Butm_medium%3Demail%0A%0A---%0ASubscribe%20to%20get%20more%20like%20this%3A%0A%20https%3A%2F%2Fgrist.org%2Fsubscribe%2F&subject=Shared%20from%20C

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THE WORLD OF ENERGY
FROM FUELFIX.COM

PRODUCTION

'The industry is a victim of its own success'



Kevin Ciancy / Associated Press

Are LNG exports the answer to America's natural gas glut?

By Rachel Adams-Heard,
Naureen S. Malik
and Sayer Devlin

BLOOMBERG NEWS

America is awash with natural gas — and it's about to get worse amid oversupply

One chilly day in October, President Donald Trump boarded Air Force One and flew to Pennsylvania to hail one of the state's most important industries — not coal, but natural gas. Trump spoke at an industry event of the "astounding increase" in shale gas production. The Appalachian region has spearheaded a historic expansion, turning the U.S. into the world's biggest producer while slashing prices for consumers and sounding the death knell for domestic coal.

But the dark side of the boom is increasingly difficult to ignore. Shale drillers are extracting so much gas that it's overwhelming demand.

Prices dipped briefly below \$2 per million British thermal units last Friday for the first time since 2016 and traded below the threshold again on Monday. At that level, U.S. producers simply don't make money. It's forcing a wave of multibillion-dollar write-downs, layoffs and spending cuts.

Still, the industry is powerless to stop a wave of additional gas hitting the market as a bypro-

duct of the shale gas boom.

"The industry is a victim of its own success," said Devin McDermott, an analyst at Morgan Stanley. "You don't just have oversupply in the U.S. — you have oversupply in Europe, oversupply in Asia, and really oversupply across the globe."

Gas prices have been in the doldrums for a while. The Henry Hub benchmark, named after a key Louisiana pipeline facility, has dropped for three years straight. This winter is proving to be unusually warm and inventory levels are above their seasonal average. Futures prices show traders aren't expecting gas prices to rise above \$2.60 even in the coldest months, when demand typically peaks.

U.S. producers need gas to be at least \$2.50 in order to generate free cash flow, according to McDermott. "In the near-term, we don't think it's realistic to see a \$2.50 price," he said.

Annoying byproduct

Evidence of corporate distress is mounting. Chesapeake Energy, once in the vanguard of U.S. frackers, is unprofitable and struggling with more than \$9 billion of debt. It warned in

billions for the fourth quarter, due in part to low prices.

Even the global energy giants aren't immune. Chevron Corp. said last month it expects a writedown of more than \$1 billion, more than half of that attributable to its Appalachian gas assets.

Producers including Cabot Oil & Gas and Range Resources Corp. are responding by taking an ax to capital expenditure. But that's not going to put much of a dent in U.S. output. Production of "dry gas," which excludes hydrocarbon liquids, is forecast to rise by 3 percent to 95 billion cubic feet a day this year, yet another record, the Energy Department said last week.

An unfortunate reality for gas producers is that their oil counterparts in crude plays like the Permian keep spewing more gas from their wells — and they don't even want it. Unlike in the Marcellus Shale in Appalachia, where it's the main prize, gas is often regarded as an annoying byproduct of Permian oil. A lack of pipelines can force gas prices there to occasionally go negative — that is, producers have to pay others to take the fuel. They're increasingly resorting to burning it off, a process known as flaring.

greener "bridge" fuel that enables utilities to lower their emissions en route to a carbon-free future, gas is coming under attack in some parts of the U.S. from lawmakers seeking to ban all fossil fuels.

One outlet for excess supply has been the nascent U.S. liquefied natural gas export sector. Since the first cargo of the super-chilled fuel — "freedom gas," as the Trump administration would have it — set sail four years ago, the country has leaped into the front ranks of global suppliers.

But even that success story appears to have stalled. China has imposed tariffs on U.S. LNG, effectively cutting off a major market. Despite last week's phase one trade deal, in which China agreed to buy an additional \$52.4 billion of U.S. energy products including LNG, it remains unclear if the tariffs will be scrapped. Meanwhile, international LNG prices have tanked, and there are questions whether the global market can take all the supply that's available.

All that pain will almost certainly be reflected in production numbers at some point. The Energy Department forecasts U.S. dry gas production will drop by 600 million cubic feet next year, the first annual decline since 2016. That, combined with the potential removal of

MARKETPLACE

Light, sweet crude
Dollars per barrel:



	1/24	1/17	Year ago
West light	\$54.19	\$58.54	\$53.13
Spot price	\$54.57	\$58.64	\$52.63

Natural gas

Dollars per million
British thermal units:

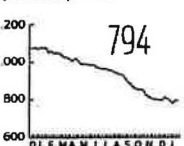


	1/24	1/17	Year ago
West	\$1.893	\$2.003	\$3.090
Henry Hub	\$1.92	\$2.06	\$3.16

Source: Bloomberg

Rig count

U.S. drilling activity was down two at 794 rigs. Drilling in Texas was down four at 397 rigs. The offshore rig marketed utilization rate in the Gulf was 77.5 percent, down from last year's 78.6 percent.



Rigs drilling	1/24	1/17	Year ago
Texas	397	401	517
Colorado	21	21	35
Louisiana	54	55	63
New Mexico	109	105	112
North Dakota	52	52	57
Oklahoma	53	53	126
Pennsylvania	25	25	47
Wyoming	23	25	33
Canada	244	244	232

Source: Baker Hughes

U.S. Gas	122	125	185
U.S. Horizontal	704	700	931

Source: IHS Markit

Marketed rigs under contract

U.S. Gulf	31	32	33
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Source: IHS Markit

S&P's energy stock indexes

Oil and gas exploration and production



Oil and gas equipment index





duct of rising shale oil output in places like the Permian Basin and New Mexico. Even exports of liquefied natural gas provide

November it may go bust. E.ON Corp., the largest domestic gas producer, said last week it will take an impairment of up to \$1.8

The unwelcome attention attracted by flaring isn't helping gas's environmental credentials, either. Despite being touted as

tariffs, could finally provide the kind of positive catalyst U.S. producers are desperately seeking.

WORLD ECONOMIC FORUM

Oil CEOs debate tougher carbon cuts as pressure mounts

'Neutralizing emissions' is central topic of the closed-door meeting in Davos

By Javier Blas
BLOOMBERG NEWS

The bosses of some of the world's biggest oil companies discussed adopting much more ambitious carbon targets at a closed-door meeting in Davos, a sign of how much pressure they're under from activists and investors to address climate change.

The meeting, part of a World Economic Forum dominated by climate issues, included a debate on widening the industry's target to include reductions in emissions from the fuels they sell, not just the greenhouse gases produced by their own operations, people familiar with the matter said.

The talks between the chief executive officers of companies including Royal Dutch Shell, Chevron, Total, Saudi Aramco, Equinor and BP showed general agreement on the need to move toward this broader definition, known as

Scope 3, the people said, asking not to be named because the session was closed to the press. The executives didn't take any final decisions.

Shell and Aramco declined to comment. Media representatives for Chevron, Total and BP weren't immediately able to respond to requests for comment. Equinor confirmed its CEO Eldar Saetre attended the meeting.

Targeting Scope 3 emissions would be a big shift for an industry that produces the bulk of the world's planet-warming emissions, once that could eventually require them to sell far less oil and gas. The simple fact that the industry's top executives were considering it underscored how climate concerns suddenly came into focus in Davos this year.

For the first time, environmental risks occupied the World Economic Forum's top five long-term concerns. Business leaders



Jason Alden / Bloomberg

For the first time, climate change — and activists such as Greta Thunberg — have dominated the World Economic Forum.

from BlackRock Inc. CEO Larry Fink to Allianz SE boss Oliver Baete used their platform at the event to focus on sustainable investment. The two highest-profile attendees at the forum — President Donald Trump and climate activist Greta Thunberg — made headlines as they staked out opposing positions on the issue.

The oil and gas executives debated a document produced by the World Economic Forum on "neutralizing emissions at the pump," a reference to the gasoline and diesel sold to customers. There's an urgent need to shift the industry's target from production to emissions from end users, said one person.

Several companies have already set targets for Scope 1 and 2 greenhouse gases, which come directly from pumping and refining hydrocarbons. Yet these account for less than 10 percent of total emissions from the life cycle of oil and gas. Some of their pledges have also focused on curbing emissions intensity — the amount of carbon dioxide released per unit of energy — which wouldn't necessarily lead to a reduction in the volume of greenhouse gases produced if a company's output is growing.

Among major energy groups, only Shell, Total and Madrid-based Repsol SA have publicly announced that they are either targeting or monitoring Scope 3 emissions.

The Spanish company made the boldest move, promising net-zero emissions in 2050 by diverting investment into wind and solar power. Shell has taken more modest steps, pledging to offset the greenhouse gases produced by fuel sold to drivers on their loyalty-card programs in the U.K. and Netherlands.

FUEL FIX

'A victim of its own success'

America is awash in natural gas, and it's only getting worse amid global oversupply. **PAGE B4**



TECHNOLOGY

It's got lights, and lots of action

The perfect place to stage the perfect TikTok video is the bathroom, influencers say. **PAGE B3**

MONEY

Working remotely — and richer for it

Clocking in from home can offer big savings and more fun if you do it right. **PAGE B5**

BUSINESS

HOUSTON CHRONICLE • SUNDAY, JANUARY 26, 2020 • SECTION B ★★

HOUSTON HOW TO

What you need to know before you file taxes

Should you pay for a CPA? Here's how to choose the best method for income

By Gwendolyn Wu
STAFF WRITER

Starting Jan. 27, the Internal Revenue Service will begin accepting tax filings for the 2019 fiscal year.

But in Houston, where small businesses are plentiful and tax professionals number in the thousands, there are a few tips and tricks to getting your taxes ready before Apr. 15.

Here's how to pick a tax filing method that works for you and your money, and what you need to know about tax changes in 2020.

Going to e-file?

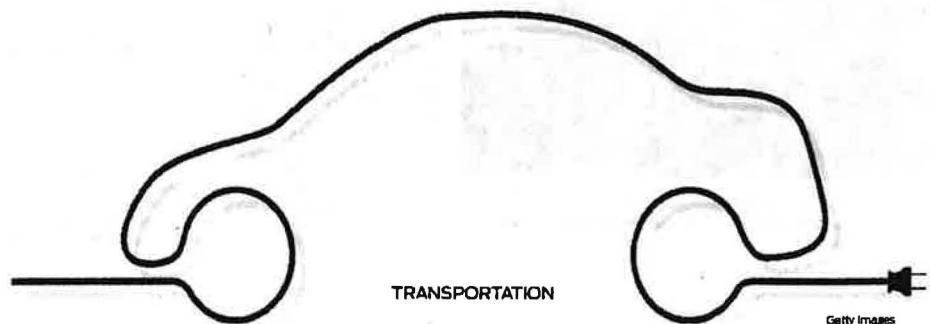
IRS Free File allows tax filers under a certain income threshold to file their taxes for free through automated programs like H&R Block and TurboTax.

The income levels vary from service to service. You need to make less than \$69,000 for most IRS Free File programs. TurboTax puts the cap lower at \$36,000 unless the filer is an active-duty member of the military or veteran.

Each program differs, but you will generally need all your tax documents (which should be mailed out by mid-February). That may include W-2s, 1095s (for health insurance verification), 1098s (a form for paying interest on a student loan, college tuition or charitable donations) and 1099s (for income that isn't salary, wages or tips).

If you make more than \$69,000, you can still file for free. However, you have to file

How to continue on B8



TRANSPORTATION

Getty Images

Electric cars making inroads in Houston

Auto show proves major automakers are shifting gears for the future

By Paul Takahashi
STAFF WRITER

Hugh Jackson made a beeline for the white Mustang Mach-E gleaming under neon blue lights at the front of the Houston Auto Show.

Jackson, 61, was eager to check out Ford's first all-electric Mustang, a small SUV that boasts up to 459 horsepower, a maximum range of 300 miles and a 0-to-60-miles-per-hour top acceleration of 3.5 seconds. Jackson, a longtime Ford devotee who drives a F-450 pickup and a 2002 Thunderbird, said he is interested in buying his first all-electric vehicle after seeing the new Mustang, which starts at \$43,895 before a federal electric vehicle tax credit of \$7,500.

"It looks better than I thought it would," Jackson said. "I have to do more research, but I am seriously considering it."

Electric vehicles, such as the Mustang Mach-E, Chevy Bolt and Porsche Taycan, were front and center at the 37th annual Houston Auto Show, another sign of a quickening energy transition that has huge implications for the region's oil industry and economy. Automakers are displaying more than 700 vehicles, including nearly a dozen electric models, at NRG Center through Sunday.

Electric vehicles represent a small segment of the \$953

an all-electric F-450 pickup to complement its gas-powered counterpart, the top-selling vehicle in Houston.

GM last month announced a joint venture with the South Korean company LG Chem to build a \$2.3 billion battery factory in Lordstown, Ohio, which will produce battery cells for 20 new electric vehicles that the Detroit automaker plans to roll out by 2023. The automaker also is investing \$300 million to expand its Lake Orion, Mich., plant, which produces the Chevy Bolt electric vehicle, to ramp up production for a new electric vehicle based on the Bolt platform.

International automakers also are making big investments. The German company Volkswagen plans to introduce a half-dozen electric vehicles over the next two years, and aims to have its electric vehicles account for 30 percent of its sales by 2025. Japanese automakers Toyota and Subaru last year announced plans to develop an electric vehicle platform, which would help Toyota hit its goal of making electric vehicles 50 percent of its global sales by 2025.

"We're going to see a lot more EVs on the road in the next couple of years," said Dan McDowell, president of Sugar Land-based InfoNation, an automobile data provider. "It's definitely a paradigm shift in automo-



Steve Gonzales / Staff photographer

Many attendees came to check out the Mach-E, Ford's first all-electric Mustang.



HOUSTON HOW TO

"Houston How To" hacks life in Houston, finding ways to make living easier in the nation's fourth-largest city.

billion U.S. auto industry, but major manufacturers are investing heavily in them. Ford, for example, has committed \$11.5 billion to electric vehicles.

Ford launched hybrid versions of its popular Explorer and Escape SUVs last year and plans to introduce a plug-in hybrid version of the Escape later this year. The company also is developing



Steve Gonzales / Staff photographer
Chevy, which offered one of the first affordable electric vehicles on the market, has sold 52,000 Bolt EVs since 2017.

bles."

Long road for EVs

Electric vehicles last year represented 2 percent of new vehicle sales nationally, up from 0.2 percent in 2015. More than 1 million electric vehicles on the road nationally, including about 12,000 in the Houston area.

Tesla has driven much of the growth in recent years, EVs continues on B6



JORDAN GALE / NYT

Presidential candidate Pete Buttigieg's proposals are awfully liberal but appear moderate in the face of extremism on both sides of the aisle.

Buttigieg is a little Clinton, a little FDR — and a lot less radically left

Pete Buttigieg can only be considered a moderate by the drastically-skewed scale of the 2020 presidential election campaign.

The former mayor of South Bend, Ind., wants to expand free health care and allow Medicare to compete with private insurance. He wants free tuition for 80 percent of American teens and higher taxes on the rich to employ millions of people to rebuild the country's infrastructure.

Mayor Pete's policies harken back to a New Deal liberalism not seen since World War II, but that's not necessarily a bad thing. In an era of growing income inequality, rising middle-class

CHRIS TOMLINSON
Commentary



anger and an out-of-touch elite offering all-you-can-eat cake, some of his proposals are reasonable.

Over the past few weeks, I've written columns looking at Elizabeth Warren's energy policy, Bernie Sanders' socialism, and President Donald Trump's fulfill-

ment of campaign promises. Before the Texas primary election on March 3, I'll look at the economic and health policies of the top Democratic candidates.

Buttigieg, 38, has positioned himself as a moderate in the 2020 race which, by historical standards, is a dubious claim. But when compared to Warren and Sanders, he's practically a conservative.

To address the crisis in U.S. health care, Buttigieg offers Medicare for All Who Want It, an unwieldy and derivative moniker for a commonsense solution.

"What I'm offering is a choice," he explained at the

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BUSINESS

EVS

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accounting for more than a third of electric vehicle sales last year. The California automaker, which sold a record 367,500 vehicles last year, has proven to be a major automaker that there is a burgeoning market for electric vehicles. Tesla sells between 100 and 150 vehicles in the Houston area each month, according to InfoNation.

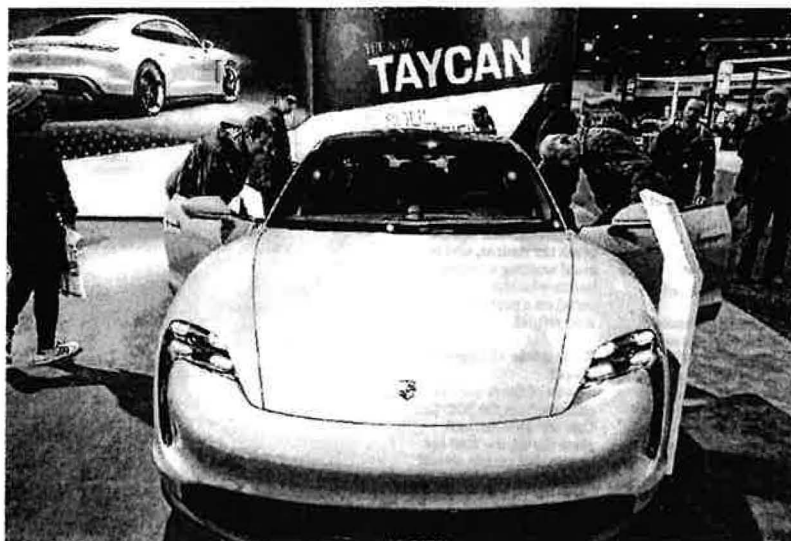
"Tesla has done a great job of making EVs fun and look good," said Chris George, the executive director of EVolve Houston, a local nonprofit pushing for EV adoption.

Demand for electric vehicles is expected to explode in the coming decade as major automakers increase production and battery technology continues to advance, helping to lower prices and improve range. Industry leaders predict electric vehicles will become price-competitive with conventional gas-powered vehicles as early as 2030.

By the end of this decade, an estimated 600,000 electric vehicles will be on the road in Houston and 2 million across the state, according to EVolve Houston, which aims to have electric vehicles represent about 30 percent of all new vehicle sales in the Houston area by 2030.

A jolt in Energy Capital

Consumers are increasingly interested in electric vehicles, which require less maintenance and offer fuel savings. An electric vehicle can save drivers on average about \$1,000 at the fuel pump, according to EVolve Houston. Most major manufacturers, including Ford and GM, offer an 8-year, 100,000-mile warranty on the battery. Most EVs require only new tires, washer



Steve Gonzales / Staff photographer

The Porsche Taycan is a major draw at the 37th annual Houston Auto Show.

fluid and brake pads – and no oil changes.

Tom Thornton, a Chevy district sales manager, said many consumers are open to cost-efficient and environmentally friendly products, such as electric vehicles. Chevy, which offered one of the first affordable electric vehicles on the market, has sold 58,000 Bolt EVs since its launch in 2017. The 2020 version of Chevy's all-electric Bolt sedan has a 259-mile range and starts at \$37,495.

"EVs are now in the consideration list," Thornton said.

Electric vehicles are making inroads in oil-centric Houston despite posing a threat to the city's energy industry. Major oil companies, including Royal Dutch Shell, Chevron and BP, are investing in electric vehicle charging companies to diversify their business and prepare for a low-carbon future as governments around the world

tighten restrictions on greenhouse gases to address climate change.

Shell, which supports EVolve Houston's efforts to expand EVs, acquired Dutch electric vehicle charging company NewMotion in Oct. 2017 and more recently bought the Los Angeles electric vehicle charging company Greenlots.

Hugh Jackson, who works for a local gas pipeline company and is considering purchasing the electric Mustang Mach-E, said he's not concerned about waning demand for fossil fuels in the face of electric vehicles. Petroleum products are used in a wide range of applications, including plastics, petrochemicals and power plants.

"Electricity doesn't grow on trees," Jackson said. "You still need to generate electricity."

Uphill battle

Most electric vehicles

today are sold on the East and West Coasts, where low-emission vehicles are in higher demand because of fuel efficiency regulations and government incentives. Electric vehicles have struggled to gain traction in Houston amid cheap gasoline prices and consumer preference for Texas-sized trucks and SUVs.

Experts say the lack of an affordable, family-sized electric SUV and pickup has been the biggest hurdle to mass adoption locally. But that's about to change.

Tesla last year announced the Cybertruck, a metallic pickup that starts under \$40,000. The Kia Niro, a small crossover that made its Texas debut at the Houston Auto Show this week, starts at \$39,000 before a \$10,000 federal tax credit. The Hyundai Kona Electric SUV starts under \$37,000. Ford, Nissan and Volvo are rolling out electric SUVs,

crossovers and pickups.

EVolve Houston, which collaborated with the Houston Auto Show to launch the expo's first all-electric vehicle show-room, plans to educate consumers about emerging electric vehicles and promote Houston as a growing market to automakers. The nonprofit was founded last year out of Mayor Sylvester Turner's climate action plan to improve the city's air quality.

The nonprofit has created a public-private partnership between the city, Centerpoint Energy, Shell, NRG and the University of Houston to expand the region's electric vehicle charging network – one of the hurdles to widespread adoption. The Houston area has about 230 public electric vehicle charging stations offering 600 charging plugs, EVolve Houston estimates the region will need about 6,000 public plugs by

2030 to accommodate the expected influx of electric vehicles.

Gear shift

Back at the Auto Show, a small crowd gathered around the white Mustang Mach-E on display. Its SUV styling is a major departure from the red 1966 Mustang convertible and white 1995 Mustang Cobra R displayed in the classic car section nearby.

Ford, which is taking a \$500 refundable reservation fee on the Mustang Mach-E, declined to share sales figures, but said it has sold out of the vehicle's first edition run. The all-electric vehicle is expected to hit local dealerships later this year.

"We're seeing great demand and interest from Texas," said Cristina Sanders, a Ford marketing manager. "Houstonians appreciate energy efficiency and new technology. We think it's going to do well down here."

Roy Duke, 65, the president of the 10-member Mustang Club of Houston, said he was skeptical of the electric Mustang, lamenting the styling and the lack of modifications that drivers have long made to "hot-rod" their gas-powered Mustangs.

"We know that's the way of the future," Duke said, "but it's difficult for old people like me to accept change."

Keith Howard, former president of the local Mustang Club, said he welcomes the all-electric Mustang. Howard, a member of the National Electric Drag Racing Association, has been driving a Ford C-Max Energy since 2013, putting 160,000 miles on the plug-in hybrid.

"We have lithium battery-based power tools, e-bikes and scooters," Howard said. "Everyone sees it's the future."

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HOW TO

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through forms provided on the IRS website instead. It may not provide the kind of step-by-step guidance taxpayers will get from preparers and third-party free filing programs.

IRS Free File hasn't always been available. The tax industry agreed to make and publicize free versions of tax filing software for low- to middle-income taxpayers after a ProPublica investigation found that both TurboTax and H&R Block were creating code that would hide

income, are a freelancer or contractor or own a business.

Make sure you have documents from every job that paid you in 2019, and yes – even your side hustle counts as a business.

"If you're doing Mary Kay or Tupperware and do \$2,000 in business," said Ward Molen, who owns Molen and Associates, a Houston-based tax preparing service. "Well, you have a business and if you don't report properly, once again you could end up in a hole, pay more taxes or get on the wrong side of the IRS and be audited if you minimize the time

The volunteers prepare the return, then a manager reviews it to ensure no errors are made, said Cristina Cave, a senior community relations manager at BakerRipley.

"This gives peace of mind not only to the volunteer, but also to our neighbor to reassure that we are really, really taking care of the quality of our service," Cave said.

Whatever you do, be cautious about where you go. Some preparers, particularly in Spanish-speaking communities in Houston, are not authorized to provide tax help – notarios may advertise immigration and legal services

miss that, you'll have to pay a 50 percent penalty on top of whatever taxes need to be paid when you do begin withdrawing.

Two: if you want to change your withholdings for the coming year, you'll need to fill out a new W-4. And that, tax professionals said, is easier said than done.

Prior to 2020, tax deductions were calculated

on allowances, which let federal officials know how many exemptions from tax code you could claim. You are not required to submit a new W-4 unless you want to change your withholdings.

"It kind of morphed into a mini tax return," Ward Molen said. "If the tax return is too complicated for yourself, and if you want to change (your

deductions), it gets way more complicated."

While you can wait it out to do your new W-4, experts recommend not waiting to file your taxes. Otherwise, you'll find yourself in a pickle on April 15 as you try to get the right documents together.

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its free file programs from Google search results. Changes at the end of 2019 also dismantled a rule banning the IRS from creating its own free filing system.

TurboTax and H&R Block did not respond to multiple requests for comment.

Can I pay a professional to do it?

If your taxes are really simple – think a single W-2 form from your employer – then you probably don't need to go through your finances with a tax preparer. But you may want to leave it up to the professionals if you want to learn what parts of tax code affect you or need to navigate a thick stack of forms.

The IRS offers a directory of qualified tax professionals to help you avoid being scammed. You'll want to narrow down your choices by figuring out how complex your taxes are. The National Association of Enrolled Agents also offers a database of preparers.

Go to a certified public accountant (CPA) who specializes in tax preparation or enrolled agent for complicated tax cases. "Complicated" means you have multiple streams of

and effort needed."

Should the IRS audit you or if there are any collections issues along the way, enrolled agents and CPAs specializing in taxes are the only ones authorized to represent you. They are regularly re-tested on tax code and can help you understand tricky finances.

Houston tax experts say it's key to find a firm that has a large enough staff to handle your taxes before the April 15 deadline.

"The more advisers you have, the less bottleneck ends up getting created," said Kevin Molen, a supervisor at Molen and Associates.

Do I have to pay someone to do it for me?

Seeing a professional costs money – usually. But if you make less than \$58,000, you qualify for services from Houston's BakerRipley, which operates 12 tax preparation locations around Houston during tax season.

"Annual program participants" such as BakerRipley are organizations who train tax volunteers ahead of the season. They're best if you have simple taxes to file, like just one W-2.

es like helping with tax prep, Cave said, but they may not actually offer that.

In some Latin American countries, notario publicos are legally authorized to offer such services, but in the U.S., notaries are there just to witness and sign forms.

"Tax season is a good opportunity for unethical tax preparers," Cave said.

When you decide on a service, check the preparer's or business' name against the IRS database to ensure they have a valid preparer tax identification number. The Houston Immigration Legal Services Collaborative recommends not signing blank tax returns, and to avoid working with preparers who charge a fee based on a percentage of your refund.

What other changes are there?

Most of the major tax changes from the 2017 Tax Cuts and Jobs Act took place during the 2019 tax season, but people should keep an eye on two others.

One: you can now wait until age 72 before you must begin withdrawals from your retirement account, rather than being forced to at 70½. If you



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