SIERRA CLUB
FOUNDED 1892

Houston Regional Group
~~P. O. Box 30~~21
~~Houston, Texas 77253-3~~021
~~713-895-~~9309
~~http://texas.sierraclub.org/~~houston/

December 27, 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 tenth 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 leads birds to migrate earlier", David Frey, The Wildlife Society, December 20, 2019

Due to climate change (caused in part by oil/gas drilling air pollution) birds are migrating earlier and may not have the food resource available when they migrate. This could, in part, be one factor which has led to long-term declines in bird populations in the United States. These bird populations are supposed to be protected by the FS via its management of the NFGT.

2. "Oil sector may be entering final decade of growth", Jordan Blum, Houston Chronicle, December 26, 2019.

This article documents that oil/gas shale drilling may be heading for a decline in the United States over the next 10 years.

3. "Financing for Arctic drilling could be on thin ice", Dino Grandoni, Washington Post, Houston Chronicle, December 22, 2019.

This article states that some forms of oil financing are being rejected by major U.S. banks.

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,

Brandt Mannchen

Brandt Mannchen
Forest Management Issue Chair
Lone Star Chapter of the Sierra Club
Chair, Forestry Subcommittee
Houston Regional Group of the Sierra Club
20923 Kings Clover Court
Humble, Texas 77346
281-570-7212
brandt_mannchen@comcast.net

Climate change leads birds to migrate earlier

By David Frey

Posted on December 20, 2019

A warming climate is changing the timing of bird migration to and from the United States.
©Kyle Horton/Colorado State University

Climate change is prompting migratory birds to take flight earlier, raising questions about how these shifts will affect their ability to persist in a warming world.

Looking at almost a quarter-century of radar data, researchers found changing climate conditions were affecting the migration timing of hundreds of species — representing billions of birds — across the United States. The effects are most pronounced in northern states, where warming is taking place more rapidly. Researchers say the study is one of the first to examine the impacts of climate change on migration timing at a continental scale.

The birds aren't responding to temperature changes themselves, said Colorado State University professor Kyle Horton, lead author of the study published in *Nature Climate Change*. They're responding to changes on the landscape caused by warming temperatures. But whether their shifts in migration is keeping pace with other changes — such as the availability of food when their reach their destinations — remains to be seen.

"We may be seeing some impacts of that already with massive declines in bird populations," he said.

The research team — including scientists from the Cornell Lab of Ornithology and the University of Massachusetts — found migrants were likely to pass certain stops earlier now than they would have 20 years ago. The differences may seem minute — less than a day per decade change for most birds — but the scale is remarkable, Horton said.

"We're talking about the movement of the entire system," he said.

To conduct the research, the team acted like meteorologists in reverse. Instead of ignoring the flocks of birds on radar data to focus on weather patterns, the team sought to screen out rain and snow to look for birds. Relying on data from 143 National Oceanic and Atmospheric Administration radar stations across the Lower 48 states, they used cloud computing and an artificial intelligence system called MistNet to automatically find and remove rain from the images.

Search

To search, type and hit enter

Most Popular


Skipwith confirmed as U.S. Fish and Wildlife Director


Agency funding bill passes Congress


35-year study sheds new light on alligators' lifespan


Climate change leads birds to migrate earlier


What drove one of the only U.S. parrot species to extinction?


Hybrids — and maybe a full red wolf — found in former range


Two Wisconsin students win student presentation awards


Can I keep this animal skull I found?

WSB: Editor-in-Chief

It's the sort of work Horton said he used to do as a graduate student by hand, but the new technology reduced hundreds of hours of work to just two days of computer time.

"What we're able to do now is automate that process completely," he said.

Researchers found migration timing was shifting in both spring and fall, but the effects were sharpest in the spring. Fall is "messier," Horton said, with individuals less likely to migrate at the same time as they are in the spring when they head north to breed and nest.

Horton hopes to expand the research to Alaska, where he expects the trends will be more pronounced.

David Frey is managing editor at The Wildlife Society. Contact him at dfrey@wildlife.org with any questions or comments about his article. Read more of David's articles here.
You can follow him on Twitter at @davidmfrey.

Share your thoughts on this article, and others, on our Facebook and Twitter pages.

birds climate migration

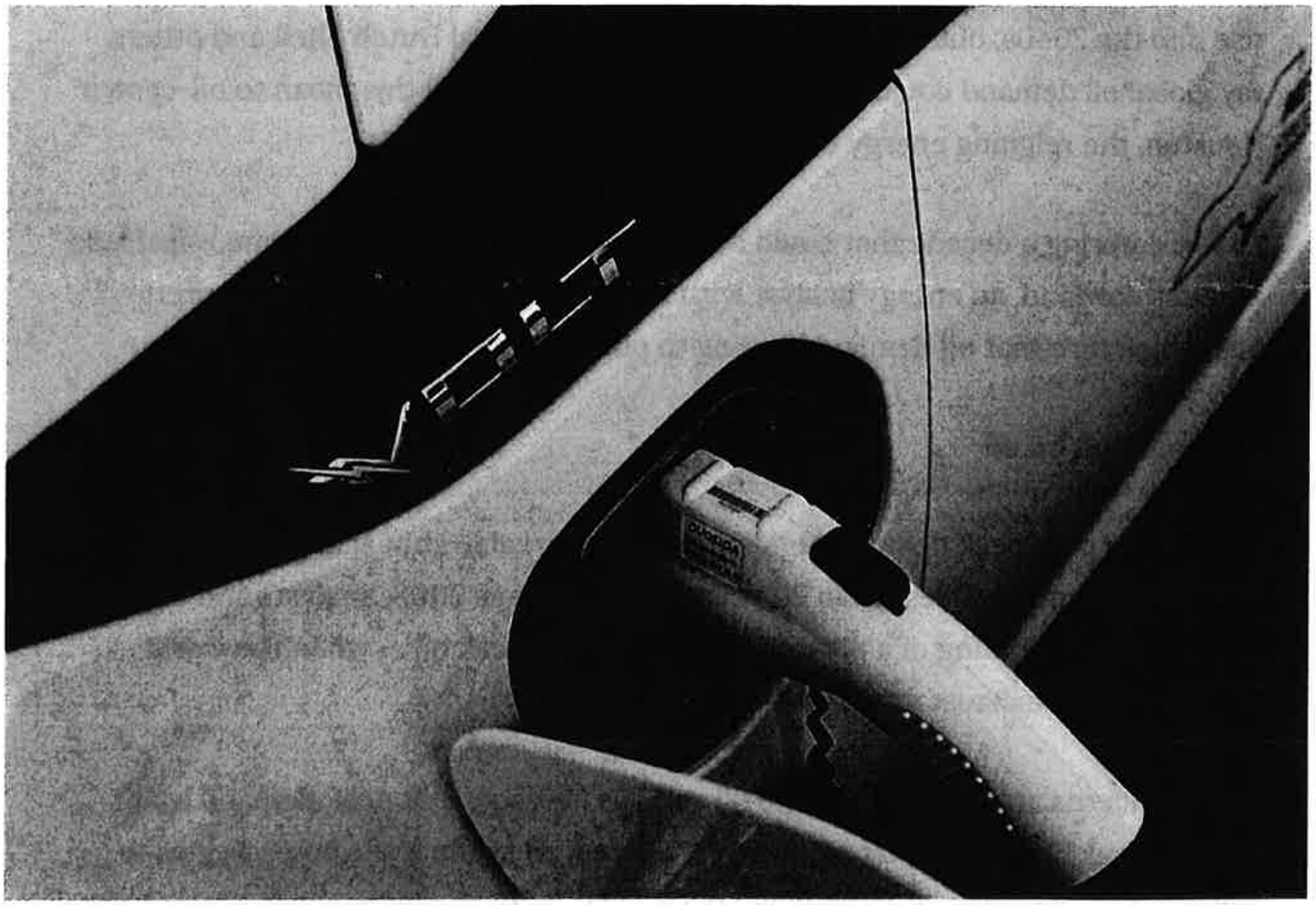
Like 106 Tweet

BUSINESS // ENERGY

Oil sector may be entering final decade of growth

Jordan Blum

Dec. 26, 2019



The spread of electric vehicles could help bring a peak to oil demand in the next decade.

Photo: Will Waldron, Staff Photographer / Albany Times Union

If the decade coming to a close will be remembered for a shale drilling revolution that transformed the United States into the world's biggest oil producer, the oncoming 2020s may well go down in history as the decade when the world's demand for crude peaked for good.

As concerns about climate change mount, electric vehicles are projected to gain ever-larger shares of auto markets, while the fuel efficiency of internal combustion is only expected to improve — all cutting into the demand for transportation fuels, oil's primary product.

Virtually everyone agrees peak oil demand is coming. OPEC predicts demand will rise into the 2040s, but the European energy major Royal Dutch Shell and others say global oil demand could peak before 2030. So what will this mean to oil-centric Houston, the reigning energy capital of the world?

"We're entering a decade that could be the beginning of the end in some ways," said Jennifer Rowland, an energy analyst with Edward Jones. "You can paint a pretty bearish picture that oil demand is going to plateau before 2030."

Sour outlook on oil

The debate over peak demand highlights the remarkable shift that global energy markets have made in less than 20 years. As recently as 2008, analysts and investors argued over the timing of a phenomenon known as peak oil — when the world would begin to exhaust its reserves of crude.

Now, concerns are mounting in the oil and gas industry that peak demand is not only coming, but coming faster than anticipated, all as the shale boom begins to slow, companies slash jobs and Wall Street turns its back on the energy sector after years of generating lackluster returns.

On HoustonChronicle.com: Has the peak of the shale revolution come and gone?

While the S&P 500 Index is up more than 25 percent in 2019, Standard and Poor's index of oil and gas producers has plunged more than 15 percent. The energy sector now represents just 4 percent of the S&P 500 after peaking at 14 percent just over a decade ago.

Earlier this year, Exxon Mobil fell from the ranks of the S&P 500's 10 biggest companies for the first time, underscoring that investors are hesitant to put money into a mature industry that is barely growing, Rowland said.

"We're in this vicious negative feedback loop," she said. "It feeds on itself as the energy sector becomes less relevant."

Ryan Lance, chief executive of the largest Houston-based oil and gas producer, ConocoPhillips, acknowledges that his company is operating in a mature industry. The solution, he says, is tight spending and steady growth, while consistently returning money through dividends and stock buybacks to shareholders to build loyalty.

"Our industry faces a flight of sponsorship by investors," Lance said during a recent presentation. "This sector will struggle for relevance unless the industry can create value on a sustained basis."

Where Houston stands

Houston has worked to diversify its economy, but it's still an oil town. Crude prices and production reverberate through every facet of the economy.

The industry already is contending with flat U.S. demand for gasoline because of improved vehicle fuel efficiency. Next up: the anticipated wave of electric vehicles.

On HoustonChronicle.com: Wall Street's stern discipline cools energy M&A

"That will have a major impact and a bottom-line impact on Houston," said Praveen Kumar, executive director of the Gutierrez Energy Management Institute at the University of Houston.

For now, the United States is producing record volumes of oil that only continue to rise. The Houston and Corpus Christi areas are evolving into larger export hubs to supply the world with more oil, refined fuels, chemicals and plastics.

“The major story for Houston right now is not a lack of oil supply, but how well it can be exported to prevent a domestic glut,” Kumar said.

Indeed, Houston’s role as an export hub will rise in importance in the years to come, said Sarp Ozkan, director of analytics at the Austin energy research firm Enverus. As global oil demand plateaus, U.S. crude will need to compete intensely for market share worldwide, he said.

“Peak demand is an issue we need to accept as an eventual reality, but that doesn’t mean Houston is going to lose its luster,” Ozkan said. “It really is more of an evolution.”

Most analysts say oil demand will peak, then plateau for a prolonged period before it begins to decline. Few expect a sharp peak and rapid downfall.

Varied global views

For now, there are more questions than answers. Electric vehicles and renewable power are butting up against the need for more energy as global population grows, incomes rise and middle classes expand in developing nations, particularly in Asia.

Oil and other fossil fuels will hold smaller shares of the overall energy mix, but the total energy pie will keep growing for decades, analysts said. Crude oil represents more than 30 percent of global energy demand.

Global oil demand stands at about 101 million barrels a day, with the United Stated pumping more than 12 million barrels a day to feed that demand. Experts project demand could peak anywhere from 105 million to more than 115 million barrels a day.

How quickly demand peaks and at what level will depend largely on how governments worldwide respond to global warming. The latest report from the Paris-based International Energy Agency gives a mid-range scenario —

governments doing more than they are now without being extremely aggressive — in which oil demand slows to a crawl after 2025, but doesn't peak until the 2030s at 106 million barrels per day or so.

Under that scenario, global fuel demand for passenger vehicles would peak before 2030, but crude demand would continue to increase from supplying long-distance freight, shipping, aviation and petrochemicals, the IEA said.

That means the oil sector still has decades ahead of it, said Muhammed Ghulam, an energy analyst at Raymond James in Houston. Even global coal demand is growing slightly, he noted, and coal is much easier to displace with natural gas and renewable energy than crude oil, he said.

"Oil demand growth is slowing significantly, but it's still rising," Ghulam said. "Energy transformations take a long time."

jordan.blum@chron.com

twitter.com/jdblum23

fuelfix
THE WORLD OF ENERGY FROM FUELFIX.COM

MARKETPLACE

Light, sweet crude
Dollars per barrel:

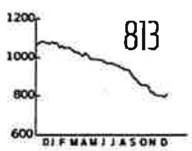
	12/20	12/13	Year ago
Merc light cr	$60.44	$60.07	$45.88
Spot sour cr	$60.31	$60.32	$39.88

Natural gas
Dollars per million British thermal units:

	12/20	12/13	Year ago
Merc	$2.328	$2.296	$3.583
Henry Hub	$2.27	$2.25	$3.60

Source: Bloomberg

Rig count
U.S. drilling activity was up 14 at 813 rigs. Drilling in Texas was up 18 at 418 rigs. The offshore rig marketed utilization rate in the Gulf was 78.6 percent, down from last year's 81.4 percent.



Rigs drilling	12/20	12/13	Year ago
Texas	418	400	531
Colorado	22	22	34
Louisiana	58	56	66
New Mexico	103	102	106
North Dakota	49	50	53
Oklahoma	51	50	141
Pennsylvania	24	25	47
Wyoming	25	27	35
Canada	149	153	131

Source: Baker Hughes

	12/20	12/13	Year ago
U.S. Gas	132	137	186
U.S. Horizontal	704	698	937

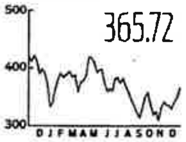
Source: IHS Markit

Marketed rigs under contract

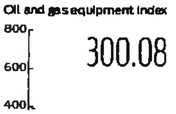
	12/20	12/13	Year ago
U.S. Gulf	33	32	35

Source: IHS Markit

S&P's energy stock indexes
Oil and gas exploration and production

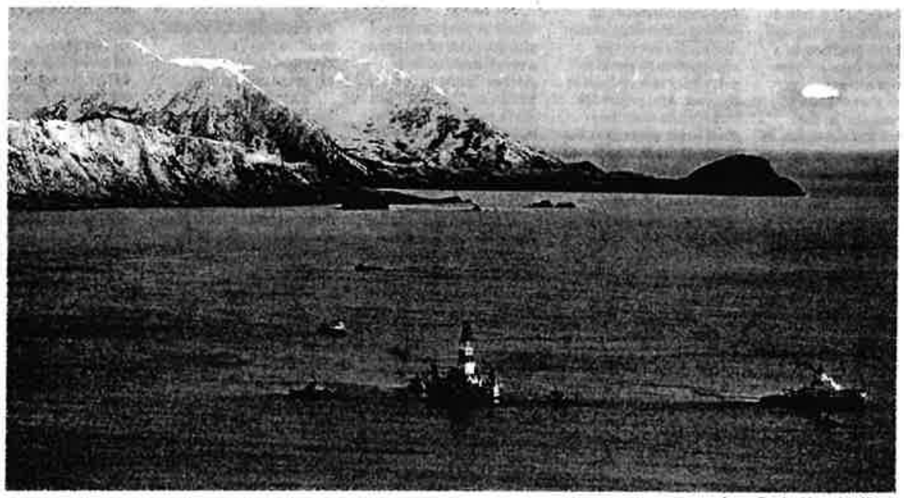


Oil and gas equipment index



CLIMATE CHANGE

Financing for Arctic drilling could be on thin ice



James Brooks / Associated Press

Goldman's decision comes after the Trump administration said it wanted to lease off portions of an Alaska refuge to drilling.

Goldman Sachs pulls funding, citing 'climate transition' concerns — and other major U.S. banks might follow

By Dino Grandoni
WASHINGTON POST

Goldman Sachs just became the first big U.S. bank to say it will no longer finance new drilling or oil exploration in the Arctic. It may not be the last.

That's the hope of some Native Americans and environmentalists in Alaska who for years have pressured Wall Street to rule out financing oil and natural gas work in the world's fastest-warming region.

Among the major banks next on their target list are Wells Fargo, Citigroup, Bank of America and Morgan Stanley, which together have conducted nearly a half a trillion dollars in fossil fuel financing since the signing of the Paris climate accord at the end of 2015.

And at the top of their list is JPMorgan Chase, which from 2016 to 2018 financed more oil, gas and coal work than any bank in the world, according to an analysis by the Rainforest Action Network.

"They're the biggest player," said Jason Disterhoft, a senior campaigner at Rainforest Action Network, of the bank that did nearly $196 billion in fossil fuel financing over that three-year period. "They need to take the most urgent action."

The new environmental policy from Goldman Sachs, outlined last week as interna-

that don't have carbon emissions reduction technology as well as for coal mines that extract fuel for those power stations.

The bank also promised to invest $750 billion in "sustainable finance" over the next decade.

"Profitability will always matter," Goldman Sachs CEO David Solomon wrote in an op-ed in the Financial Times explaining the decision. "But finance must also address climate transition and inclusive growth while achieving and sustaining those returns."

Other major banks abroad, such as Barclays and the Royal Bank of Scotland, have also ruled out financing for Arctic drilling. But Goldman is the first to do so among major U.S. firms.

The move by the bank, seen as one of the most prestigious on Wall Street, raised hopes that other major financial institutions in the United States will follow its lead. Between 2016 and 2018, American banks made up six of the top 12 financiers of coal, oil and gas work.

The dominos have fallen like that before. Leading up to the climate talks in Paris in late 2015, and shortly thereafter, those six major U.S. banks each promised one after another to reduce

"These big six banks move in absolute lockstep," Disterhoft said. He added that other financial institutions will feel pressure to ratchet up their commitments to forgo financing fossil fuel projects ahead of the next round of climate talks in Glasgow in November.

Andrew Gray, a spokesman for JPMorgan Chase, said he would not comment on any future actions. But in an email, he said the bank has "a significant amount of work underway to further build upon our efforts on climate-related risk and opportunity and we look forward to sharing more in the coming year."

And E.J. Bernacki, a spokesman for Wells Fargo, said the bank has restricted some financing in the Alaska Arctic since 2018. "While we will continue to support the responsible development of conventional energy, Wells Fargo is committed to accelerating the transition to a low-carbon economy," he added.

Goldman's decision comes after Bernadette Demientieff, executive director of the Gwich'in Steering Committee, and other activists met with the bank multiple times — and after the Trump administration said it wanted to lease off portions of

said Demientieff, whose people live outside the refuge but rely on its caribou herd for sustenance and worry how oil and gas development may harm their food source.

"Our people are living in ground zero of climate change," she said.

Backed by the oil interests and Alaska's entirely Republican congressional delegation, the Trump administration said in September it would seek to open the refuge's entire coastal plain up to oil and gas exploration. The nearly 1.6 million-acre area, home to polar bears, wolves and migratory birds in addition to the caribou, had long been closed to drilling. President Trump's team is also seeking to expand drilling in Alaska's massive National Petroleum Reserve, with the Bureau of Land Management last week leasing 1 million acres for just under $11.3 million.

The Arctic is not the only place where Wall Street is feeling the heat. So is Saudi Arabia.

Earlier this year, green groups from the United States, United Kingdom and the Netherlands asked seven of the largest banks in the world — including Goldman Sachs and JPMorgan Chase — not to underwrite the initial public offering of Saudi Aramco, the kingdom-owned oil giant.

Environmentalists put pressure on the private sector to reduce climate-warming emissions at a time when govern-

tional climate talks in Madrid wrapped up, prohibits financing for not only Arctic drilling but also for coal-fired power plants

their credit exposure to coal mining companies or outright end financing for certain coal projects in developed countries.

the pristine Arctic National Wildlife Refuge in Alaska for oil and gas drilling.

"My heart is really humbled,"

ments fumble to act as quickly as needed to avert worsening disasters, according to climate scientists.

U.S. energy chief shrugs off Permian slowdown as 'pause'

New secretary still bullish despite predicted downturn

By Stephen Cunningham
BLOOMBERG NEWS

The golden age of U.S. shale is far from over, with an expected slowdown in the Permian Basin likely to be temporary, according to the new U.S. Energy Secretary.

The shale boom helped transform the U.S. into a net exporter of crude and petroleum products in September from a major importer a decade ago. Even as growth is set to slow next year in the Permian and elsewhere as drillers respond to investor demands for capital restraint, Dan Brouillette said the shale boom has further to run.

"Maybe there are some folks who – for whatever reason – thought they could make some quick money in this and they are learning that production is not as easy as you might think," Brouillette said Tuesday in an interview in Washington. "You may see some of them go by the wayside."

Brouillette, who replaced Rick Perry at the beginning of the month, said improvements in drilling technology meant companies are better equipped to respond to price fluctuations than in the past. And prices are less volatile than they used to be, given the new status of the U.S. as a major producer. The widely anticipated slowdown in the Permian next year "could be a pause," he said.

"You are also going to see some natural adjustments to the price of gas and the price of oil and as a result some of those guys are going to pull back a little bit," he said. "But that's normal, that's the business cycle, that's not the Permian becoming unproductive."

Odd Andersen / AFP / TNS

Energy Secretary Dan Brouillette says the shale oil and gas revolution is far from over.

Saudi attacks

In September, a drone attack in Saudi Arabia temporarily knocked out half of the country's production, while OPEC and its allies this month announced deeper-than-expected output cuts.

"The recent events in Saudi Arabia, the recent events with OPEC – none of those had any sort of dramatic or extraordinary move of the market associated with them," he said. "We're just not subject to the same types of price shocks that we used to be subjected to."

The producer group "just doesn't matter in the same way that it did a generation ago," Brouillette said.

According to Brouillette, one risk to the growth of U.S. production and exports comes from Democratic presidential candidates including Elizabeth Warren and Bernie Sanders who have promised to ban hydraulic fracturing, the process by which shale rock is broken apart to release oil and gas.

"It would be detrimental to the U.S. economy if folks were seriously considering that" given the shale boom has saved American consumers billions of dollars, he said.

Although flaring of natural gas remains a problem, a lack of available infrastructure doesn't help matters, he said. "Even if we could capture the gas, it's not clear we could get it to the marketplace. We just need more pipeline capacity."

SPR future

Soaring exports have also raised renewed speculation over the future of the nation's emergency stockpile of oil, known as the Strategic Petroleum Reserve. President Donald Trump previously proposed selling off half of the reserve.

Brouillette brushed aside the suggestion that the reserve should be scaled back further or was no longer needed, given its very existence provides some assurance to markets during periods of turmoil such as the attacks on Saudi oil facilities in September.

"It's there for a very good reason," he said. "It needs to be there for that reason and I think you will see it stay there for that reason."