Texas
Independent
Producers and
Royalty Owners
Association

U.S. CELEBRATES MAJOR ENERGY MILESTONE AS PETROLEUM EXPORTS EXCEED IMPORTS

New official government data released by the U.S. Energy Information Administration (EIA) confirms the United States exported more petroleum and crude oil than it imported in the month of September,

marking the first full month this has happened since recordkeeping began by the federal government over 46 years ago. During September, the United States sent abroad roughly 89,000 more barrels per day of oil than levels imported into the nation, a monumental change to global energy trade. Given that only a decade ago the nation was importing over 10 million b/d more petroleum than it was

exporting, this milestone represents a major shift for global and domestic energy supply and demand patterns and a significant achievement for U.S. energy producers.

"This is a very big deal, not just rich in symbolism but marking a major and tangible benefit to the U.S. economy," Daniel Yergin, a renowned industry expert and vice chairman of IHS Markit, said this week. "It's the end of an era that began with the oil crises of the 1970s,"

The latest estimates by the EIA show total U.S. crude oil exports have grown to 2.8 million b/d in 2019 through September, up from 591,000 b/d recorded in 2016. This resurgence in oil exports the last three years was made possible only after federal lawmakers agreed in December 2015 to lift restrictions on exporting domestically produced crude oil.

Growing exports of U.S. crude oil and natural gas has naturally

been supported by increasing levels of domestic oil production, which continues to hit record-breaking levels of output. According to the EIA, U.S. oil production rose from an average of 5.3 million b/d in 2009 to 12.1 million b/d in 2019 (through September),

Although heightened exports have brought new opportunities for U.S. producers to ship oil and petroleum products worldwide, the EIA notes the United States is still currently considered a net importer of crude oil. Despite experiencing a rise in exports of oil and gas, the nation does continue to bring in heavy high-sulfur crude oils that most U.S. refineries are configured to process, as well as other petroleum products.

Total U.S. crude oil imports have averaged 7.0 million b/d in 2019 through September, with more than 60 percent of U.S. crude oil imports coming from North American partners in Canada and Mexico, says the EIA. Nonetheless, the volume of imports has gone down significantly from an average of 9 million b/d in 2009, and simultaneously, the United States in more recent years has also reduced the number of sources from which it imports crude oil. U.S. imports are generally expected to keep falling steadily in the short and long term, as America eases its need for imports of crude oil and petroleum products from other nations.

In the meantime, U.S. net petroleum exports are likely to continue to surge upwards, averaging 751,000 b/d in 2020. If realized, the United States would become a net petroleum exporter for the first time on an annual basis.

TIPRO HOSTS FINAL POLICY FORUM FOR 2019 IN ABILENE

On Tuesday, December 3, the Texas Independent Producers & Royalty Owners Association was joined in Abilene by members for a policy forum including state Representative Stan Lambert (R-Abilene). This forum was part of a statewide series of association events hosted by TIPRO involving key elected officials and regional members to discuss priority oil and natural gas policy issues for the interim and next legislative cycle. Earlier this Fall, TIPRO also has met with members in Midland/Odessa, San Antonio and Houston. TIPRO has numerous forums confirmed throughout the state for next year. For additional information, please contact the TIPRO office.

"By traveling to the different regions of our state, we've enjoyed the opportunity to directly connect with membership to review some of the largest opportunities as well as challenges impacting Texas producers and royalty owners today," said TIPRO President Ed Longanecker. "We look forward to continuing to engage with our membership base at other upcoming TIPRO events planned for early next year."



President's Message

TIPRO members.

Last Monday, November 25, the Texas Independent Producers & Royalty Owners Association (TIPRO) filed comments with the U.S. Environmental Protection Agency (EPA) over proposed policy changes highlighting recommended improvements to the 2012 and 2016 New Source Performance Standards (NSPS) for the oil and natural gas industry promulgated under the Clean Air Act. As you may be aware, the EPA currently is evaluating proposed amendments to national oil and gas air regulations, which if implemented, are estimated to save members of the oil and gas industry between \$17 to 19 million a year in compliance costs for a total of \$97 to \$123 million from 2019 through 2025.

Our association and industry welcome the proposed regulatory actions by EPA, and applaud the Trump Administration for seeking to adopt reasonable air quality driven performance standards that protect the environment while also reducing unnecessary regulatory burdens that stifle domestic energy production. These changes to the EPA's NSPS policies are long overdue, and something which our advocacy team has pushed to achieve for years on behalf of Texas independent producers.



Ed Longanecker

Since the EPA updated its NSPS and permitting rules in 2016 for new, reconstructed and modified oil and gas sources, TIPRO has lobbied against the regulations and the disproportionate impact on smaller U.S. oil and natural gas producers. In fact, TIPRO has been an active participant in the rulemakings and associated litigation since the EPA proposed to revise the NSPS for the Oil and Natural Gas Sector in August 2011. The latest filing also represents the third round of formal NSPS comments submitted by TIPRO to the EPA over the past four years.

While the government seeks changes to federal requirements included under the 2012 and 2016 NSPS, it's also critically important to highlight the proactive and successful efforts of oil and natural gas producers to reduce energy-related emissions through voluntary actions, industry best practices and innovation. Over the past 20 years, the U.S. oil and natural gas industry has invested \$300 billion in greenhouse gas (GHG) mitigating technologies. As a result of this commitment and related initiatives, methane emissions from oil and natural gas production fell 24 percent between 2011 and 2017, while oil and natural gas production rose 65 percent and 19 percent, respectively, according to data from the EPA and the U.S. Energy Information Administration (EIA). Since 2005, total U.S. GHG emissions have dropped by 12 percent, and total GHG emissions from fossil fuel combustion have also decreased nearly 15 percent. Increasing use of domestic natural gas for electricity generation has contributed in significant reductions in the emissions of carbon dioxide (CO2) and criteria air pollutants. Meanwhile, every one of the signatories of the Paris Accord lags behind America in overall emissions reductions.

TIPRO maintains that only through a fair, stable regulatory environment has the country been able to accomplish such major achievements, leading to cleaner air and water resources and record oil and gas production. The U.S. today dominates as a global leader in oil and natural gas production and environmental stewardship, However, unbalanced policies like the so-called 'Green New Deal' would not only be devastating for our economy and enhanced national security, but also hinder important advancements and innovations pursued by U.S. companies to help the environment.

To download a copy of TIPRO's comments submitted recently to the EPA, please visit: https://bit.ly/37BhNpb. For those members also interested in learning more about EPA's proposed policy amendments to the 2012 and 2016 NSPS for the oil and natural gas industry, I encourage you to visit the following resource page available through the EPA's website: https://bit.ly/2RdQ08v.

Thank you,

Ed Longanecker

TIPRO PRESIDENT INTERVIEWS PHIL KENDRICK OF KENDRICK OIL & GAS

This week, TIPRO's President Ed Longanecker sat down with longtime TIPRO member Phil Kendrick on Tuesday, December 3rd as part of the association's 'Leadership in Industry' video series, an ongoing project of the association capturing moments of historical significance for TIPRO and other notable industry stories. Kendrick received his first TIPRO membership in 1950 as a gift from his father and has maintained his involvement ever since even through the more difficult times in our industry. His father also was a charter member of TIPRO and never missed a meeting even well into his 90s. Kendrick's son, Michael, is carrying on the tradition and currently serves on TIPRO's Board of Directors. In 2018, Kendrick Oil & Gas celebrated its 100 year anniversary.

TIPRO Calendar of Events

DECEMBER 11, 2019

HOUSTON — IPAA/TIPRO
Leaders in Industry
Luncheon, 11:30 a.m.
Houston Petroleum Club.
For info, call: (202) 857-4733.

JANUARY 8, 2020

HOUSTON — IPAA/TIPRO
Leaders in Industry
Luncheon, 11:30 a.m.
Houston Petroleum Club.
For info, call: (202) 857-4733.

FEBRUARY 6-7 2020

HOUSTON — 2020 NAPE Expo, George R. Brown Convention Center. For info, call: (817) 847-7700.

FEBRUARY 12, 2020 HOUSTON — IPAA/TIPRO Leaders in Industry Luncheon, 11:30 a.m. Houston Petroleum Club. For info, call: (202) 857-4733.

Texas House to review water recycling, energy-related community impacts this interim



State representatives on Monday, November 25th received interim assignments from House Speaker Dennis Bonnen, who identified leading concerns for legislators to examine ahead of the state's next legislative session in 2021. "Building on our shared success and the legislative accomplishments of the 86th Regular Session, these charges focus primarily on the implementation and associated rulemaking of legislation passed earlier this year with an emphasis on ensuring the legislative intent of these measures is achieved. These charges also reflect the issues and priorities that many of you have requested to study and review in preparation for the 2021 Legislative Session," said Speaker Bonnen.

Earlier this interim, TIPRO requested that Texas committees consider studying existing federal and state permits and the current technology that allows the transformation of produced water, the industry's number one waste product, into beneficial use. TIPRO also asked committees to examine the

increased impacts of energy exploration and production on communities in production-intensive zones taking into consideration the impacts on roads and other infrastructure, safety, healthcare, and education and to provide recommendations on how to better manage those impacts in energy sector areas of the state. "We are happy to report that both of these requests were incorporated in the interim charges for the House Energy Resources Committee," shared Ryan Paylor, director of state government affairs for TIPRO.

The House Energy Resources Committee has also been directed by the speaker of the House to evaluate the adequacy of the workforce currently available to the industries responsible for energy production in Texas, and consider how state policies may facilitate investment in public infrastructure and future workforce development. Additionally, the committee will review labor needs within the oil and gas exploration, production, and transportation sectors to identify workforce gaps and the resulting effects on industry expansion, economic growth, and increasing population.

Issues relating to eminent domain also are likely to be a heavy focus for lawmakers in the next legislative cycle, which is why members of the House Committee on Land and Resource Management have been instructed to review in coordination with the office of the Attorney General the efficacy of the Landowner's Bill of Rights (LBoR). Officials will look at how well the LBoR explains to landowners the eminent domain condemnation process and their rights and responsibilities under Chapter 21 of the Property Code. Under interim charges provided by Speaker Bonnen, the committee will work to identify any omitted information which can enhance the landowner's understanding of the condemnation process and determine whether any other changes should be made to the document to make it more user friendly. The committee also will assess whether it would be beneficial for the legislature to be more prescriptive in statute with the mandatory contents of the LBoR.

With transportation infrastructure an ongoing priority for the state, this interim session the House Committee on Transportation meanwhile will continue to closely track recommendations on ways to improve transportation corridors in Texas and evaluate ways in which to improve policies, funding strategies, program development, and agency coordination to ensure continuous improvements to road safety. Legislators also will study the state's seaport infrastructure and the infrastructure at land ports of entry to facilitate international trade and maximize opportunities for economic growth, a growing area of focus in particular for the oil and natural gas industry as exports of Texas-produced energy supplies are increasingly sent to other nations abroad.

Furthermore, at the request of the speaker, the House Committee on Appropriations will examine possible structural changes that can be made to the Economic Stabilization Fund (ESF), known also as the Rainy Day Fund, in order to maximize investments and establish a source of funding for long-term liabilities. Committee members also will explore the potential of use of the fund for long-term infrastructure projects and the impact of the constitutional cap on the ESF balance.

View the complete list of House interim committee charges here: https://bit.ly/2sk5cqq.

In the weeks to come, Speaker Bonnen also has indicated that he will announce several select legislative committees formed to address issues of "extraordinary interest and concern."

Texas Lt. Governor forms new committee to review changes to the Senate chamber

The head of Texas' Senate chamber, Lieutenant Governor Dan Patrick, shared on Tuesday, November 26th that he has appointed a special new legislative panel to review the history and procedures for the placement of art, including Confederate paintings and other decor, in the Texas Senate. Since taking over as the leader of the legislature's upper chamber in 2014, Lieutenant Governor Patrick has incorporated a number of changes to the historic Senate chamber in the state's capitol building, including in 2015 restoring the annual practice of placing a Christmas tree, after an absence of many years. During the 86th Legislative Session, which adjourned earlier this year, Patrick promised to create this committee after heated debate ensued over the process to move, alter or remove historical monuments and memorials.

Patrick has appointed seven senators — four Republicans and three Democrats — to the committee, and selected Senate Administration Committee Chairman Bryan Hughes, R-Mineola, as chairman. Other members include: Senators Paul Bettencourt, R-Houston, Donna Campbell, R-New Braunfels, Borris Miles, D-Houston, Beverly Powell, D-Burleson, Charles Schwertner, R-Georgetown, and Kirk Watson, D-Austin.



TIPRO'S 74th Annual Convention will bring together Texas producers, mineral owners, policymakers, industry experts and other oil and gas professionals to review evolving policies and other trends that will impact you in 2020 and beyond.

Presenters at TIPRO's Annual Meeting will highlight interim legislative work underway at the Texas capitol on key oil and gas issues, examine market conditions for the energy sector, and discuss strategies to maximize unconventional performance.

TIPRO's 2020 conference also will offer a special information hall, showcasing unique industry services and products. Contact TIPRO today for more information on how to participate.

CONFERENCE DETAILS:

March 23-24, 2020

Hilton Anatole Hotel Dallas, Texas

*Agenda overview coming soon

Don't miss other exclusive networking opportunities at the TIPRO Annual Convention to connect with prominent oil and gas companies!

Find other event information and learn about available sponsor packages by visiting

www.tipro.org!

"RICK PERRY LED TEXAS AND THE NATION TO ENERGY PROSPERITY"

By former state Representative Jason Isaac

Week before last, the *Houston Chronicle* editorial board missed the mark in its criticism of our outgoing Secretary of Energy, slamming Rick Perry for—get this—doing his job.

"It's clear that promoting fossil fuels, especially coal, took up far more time than it should have," wrote the editorial board, "for someone whose job also includes developing energy alternatives."

This assessment couldn't be further from the truth. The energy czar of the world's leading energy-producing nation should be unashamed of supporting the citizens who produce and export the fuels that drive our vibrant economy. Our federal government should empower the energy industry, including all forms of energy, to promote human flourishing and prosperity worldwide. As energy secretary, Rick Perry truly pursued an "all of the above" energy strategy.

Most notably, Perry shepherded the United States into global leadership in liquefied natural gas, one of the cleanest and most efficient energy sources, brokering a \$2.5 billion deal with India and visiting nearly every possible trading partner to promote the benefits of American LNG. Perry's "freedom gas" doesn't just create jobs—it bolsters our national security and liberates our allies from dependence on militant, unstable nations.

The U.S. Department of Energy was created in 1977 because "increasing dependence on foreign energy supplies present[ed] a serious threat to the national security of the United States and to the health, safety and welfare of its citizens." On Perry's watch, America is slated to achieve the department's goal and become a net energy exporter—one step closer to true energy independence—in just a few weeks.

Contrary to the *Chronicle's* claims, it would be folly to blindly discard the fuels that have created so much prosperity on a political whim before alternatives are ready. Fossil fuels remain the cheapest, most reliable, and most abundant source of energy currently available—the only real option in the foreseeable future to continue our trajectory of economic growth and ensure a high quality of life for all Americans.

The advent of energy accessible to all has grown our gross domestic product by nearly twenty-fold in the last 50 years alone. Worldwide, the number of people living in "extreme poverty" has dipped below 10 percent, an incredible advancement for humankind.

Around the world, people are living longer, healthier lives than ever. It's no coincidence that life expectancies average just 60 years in sub-Saharan Africa, where less than half the population has any access to electricity and many likely lack reliable electricity. Similarly, infant mortality rates in the region are nearly nine times those in the United States.

And a strong energy industry doesn't only benefit human flourishing; it also supports clean air and water. Any cursory review of government environmental data reveals the little-acknowledged truth that environmental quality and access to energy go hand in hand. Over the last 50 years, the United States has cut the top six pollutants by 74 percent—and all signs point to that trend continuing to improve. Smog and toxic air pollution, like the literally crippling haze in India are nearly nonexistent in America thanks to incredible innovations in environmental technology, from catalytic converters in our cars to bag houses in coal plants. And reliable electricity makes scientific innovation possible.

Many on the left will argue that the energy secretary should use his position to exclusively promote renewables, which are purported to be more environmentally conscious. But to place any more proverbial eggs in the renewable basket would take America down the disastrous path of the failed "100 percent renewable" policies in places like Germany, Denmark, and even Georgetown, Texas. To date, none of these policies have breached 50 percent renewable, and costs have spiked dramatically.

Until renewable energy technology dramatically improves (including storage technology), 100 percent renewable isn't doable, and its reputation for climate friendliness is misleading. According to data models used by the United Nations' climate alarmists, even switching every lightbulb, server, and vehicle in America to wind or solar power would yield less than two-tenths of a degree difference.

Instead of using the American people's hard-earned tax dollars to prop up weak and inefficient energy sources that provide a mere fraction of our power, the federal government should continue along the path of prosperity—unleashing the power of the free market to innovate, experiment, and benefit the American people without picking winners and losers with the our money.

America should be a champion of energy. Rick Perry's years of service both to Texas and the nation ensure it has reached that status—and that its future is bright.

The Honorable Jason Isaac is senior manager and distinguished fellow for Life: Powered. He previously served four terms in the Texas House of Representatives.

DAN BROUILLETTE RECEIVES SENATE CONFIRMATION TO BECOME U.S. SECRETARY OF ENERGY

In a vote of 70-15, the U.S. Senate on Monday, December 2nd confirmed Dan Brouillette as the nation's next secretary of energy, following the recent resignation of former Energy Secretary Rick Perry. Prior to confirmation, Brouillette was acting leader of the Energy Department in place of Perry, and over the last two years has served as the deputy secretary of the U.S. Energy Department. Brouillette said Monday, "I am honored and humbled by the opportunity to serve the American people, President Trump, and DOE's dedicated civil servants in this new role. I want to thank President Trump for placing his confidence in me to help advance America's national security, energy security, and economic security through groundbreaking science, technology and innovation. I also would like to thank the Senate for its expedient review of my nomination and for the bipartisan support provided to me during the nomination hearing and [Monday's] vote."

STATE COMPTROLLER TRANSFERS \$3.3 BILLION TO STATE HIGHWAY AND RAINY DAY FUNDS

Texas Comptroller of Public Accounts Glenn Hegar recently announced the state has completed its transfer of \$3.33 billion into the State Highway Fund (SHF) and the Economic Stabilization Fund (ESF), commonly referred to as the Rainy Day Fund. Each of the two funds received more than \$1.66 billion this cycle, or 50 percent of the total transfer. Funding for this transfer is provided from crude oil and natural gas production tax revenue exceeding 1987 collections. If either tax generates more revenue than the 1987 threshold, an amount equal to 75 percent of the excess is transferred to the ESF, according to the comptroller's office.

Pursuient to requirements provided in the Texas Constitution, the comptroller must complete any transfer from the ESF within 90 days after the end of the fiscal year. When Fiscal Year 2019 ended on August 31, the ESF balance stood at \$10.1 billion.

With this most recent transfer, the comptroller reports that the new balance will be about \$11.45 billion, not accounting for currently outstanding spending authority of approximately \$3.74 billion. The balance in the ESF will change as agencies spend down this remaining appropriation authority and investment earnings are realized.

BENNETT APPOINTED HEAD OF NEW REGULATORY COMPLIANCE DIVISION IN THE GOVERNOR'S OFFICE

A new government division established by Governor Greg Abbott is taking shape that will provide formal review of rules affecting market competition proposed by state licensing agencies. As set forth by Senate Bill 1995, approved by the 86th Legislature this past May, the governor has created a new Regulatory Compliance Division to oversee rules proposed by state licensing boards and ensure a legitimate state purpose for each rule adopted. In late November, the governor announced his appointment of Erin Bennett to serve as the director of this new division, for a term set to expire on February 1, 2021. Bennett has served as a policy advisor for the governor's office since January 2018, and holds previous experience providing legislative counsel for the Texas Legislative Council Legal Division for nearly eight years.

Dallas Fed casts wary eye on slowing activity in Texas' Permian Basin

Labeling job growth in the Permian as "sluggish," the Federal Reserve Bank of Dallas signaled in a November report that a slowdown for the state's biggest oil patch is causing a direct impact to the Texas economy. Decreasing employment numbers in the Permian coupled with reduced capital spending by energy companies have hurt economic growth in the state, as drilling activity stalls in Texas' top oilfield. "Drilling activity...continued to erode, with firms cutting spending and orders for new equipment," the Dallas Fed said of quarterly business activity. "Well completion activity has proved more resilient, particularly in the Permian Basin, slipping only slightly from recent highs. The oilfield services market remained depressed, with little optimism about better margins next year." Housing in the Permian also has taken a hit, noted the Dallas Fed, with the region's median home price falling 3.6 percent between September and October.

Despite market conditions, most analysts still are standing by their forecasts for increased oil and gas production through 2020. A new outlook by the U.S. Energy Information Administration put out in late November projects Permian crude oil production will grow by 809,000 barrels per day next year.

Trump Administration weighs opening 1.9 million acres of Texas land for oil & gas development

The U.S. Forest Service is currently evaluating a regulatory proposal that would open up to 1.6 million acres of federal land in the state of Texas for leasing, providing new opportunities for oil and gas development inside of national forests and other designated grasslands in the Lone Star State. If statutory changes are approved by the Trump Administration, large areas of Sam Houston National Forest, Davy Crockett National Forest, Angelina National Forest, Sabine National Forest, Caddo National Grasslands and LBJ National Grasslands would become available for leasing by oil and natural gas companies. These areas, which largely sit over the Haynesville shale formation, had previously been leased by the federal government until the Obama Administration in 2016 instated a moratorium denying access to the federal lands for drilling.

Meanwhile, in a government report, the U.S. Forest Service estimates oil and natural gas companies could drill more than 1,000 horizontal wells and 500 vertical wells over a 20-year period in these forests and grasslands, unlocking more than 68 million barrels of oil and more than 4.2 trillion cubic feet of natural gas.

Though environmental activist organizations have criticized the move to open up more areas of federal land for oil and gas development, the oil and gas industry maintains energy development is a safe, well-regulated operation and is encouraging federal leaders to press forward with the regulatory plans. "Texas oil and natural gas operators comply with all state and federal regulatory requirements and adhere to the highest levels of safety and environmental standards," Ed Longanecker, president of the Texas Independent Producers & Royalty Owners Association, recently told the *Houston Chronicle* regarding the proposal from the U.S. Forest Service. "This commitment holds true in all areas of oil and natural gas development throughout the state of Texas."

Comments regarding the proposal were accepted by the U.S. Forest Service through last Friday, November 29. The Forest Service now will review all input provided regarding the recommended regulatory update. The government is expected to then prepare another draft report on the proposal, which will lead to more public meetings and another round of public comment before a final environmental impact statement is due to be released next Fall. If the entire process is successful, the Bureau of Land Management could start leasing the lands in Texas as early as 2021.

To find out more information on this proposed policy change, please visit: https://bit.ly/33Q2cyQ.

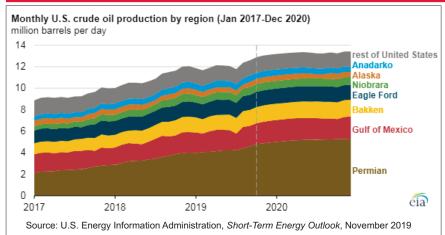
PETROLEUM MANUFACTURERS WILL NOT BE SUBJECTED TO ADDITIONAL FINANCIAL REQUIREMENTS BY EPA

Leaders of the U.S. Environmental Protection Agency (EPA) said in early December that the federal government will not force petroleum and coal product manufacturers to set aside additional funds to cover pollution cleanups that may result from their operations, given that the industrial sector already is effectively managed through other existing federal and state requirements. As a result of the EPA's proposal, the industry, which transforms crude petroleum and coal into usable products, will not see existing requirements repealed; rather, after extensive evaluation, the EPA has determined additional requirements are not necessary and consequently would result in burdensome, potentially duplicative financial responsibility requirements against U.S. manufacturers.

"After a thorough evaluation, EPA has determined that the petroleum and coal manufacturing industry's current practices, along with existing federal and state regulations, adequately address potential financial risks to the federal government and American taxpayer," said EPA Administrator Andrew Wheeler on Wednesday, December 4. "As part of President Trump's commitment to protecting our environment and growing our economy, we are committed to responsible regulation while not imposing additional and unnecessary requirements on key sectors of the economy when the current regulatory framework is working."

The EPA's December 4th proposal for the petroleum and coal industry will be published in the Federal Register, after which time EPA is inviting stakeholders and members of the public to provide comments during the 60-day public comment period. For more information, visit: https://www.epa.gov/superfund/superfund-financial-responsibility.

EIA FORECASTS OIL PRODUCTION GROWTH LEADING INTO 2020, BUT WARNS SLOWDOWN IS COMING



In a new monthly report, analysts with the U.S. Energy Information Administration (EIA) suggest daily oil production levels in the United States will continue to increase leading into next year, though project the rate of oil output from U.S. oil producers could experience reduced growth in 2020 as compared to more recent years. In the EIA's November *Short-Term Energy Outlook* (STEO), the federal data agency forecasts U.S. crude oil production will increase to 12.3 million barrels per day (b/d) in 2019 from 11.0 million b/d in 2018. "Output in the Permian region is the primary driver of EIA's forecast crude oil production growth, and EIA forecasts Permian production will grow by 915,000 b/d in 2019 and by 809,000 b/d in 2020," says the EIA. Experts report that the Bakken region in North Dakota

also will see rising crude oil production, growing by 152,000 b/d in 2019 and as much as 96,000 b/d in 2020. Additionally, the EIA forecasts that production in the Federal Offshore Gulf of Mexico will increase by 138,000 b/d in 2019 and 116,000 b/d in 2020.

EIA analysts also expect natural gas production in the United States could grow much less in 2020, according to projections included in the November *STEO*. Latest figures by the agency estimate natural gas production in 2020 will average 94.9 Bcf/d.

Breaking from larger production trends, exports of U.S. energy supplies will likely continue to expand over the next year, says the EIA, supported by new infrastructure development and other facilities in the United States. Exports of liquefied natural gas (LNG) will grow to an average 6.4 Bcf/d in 2020, indicates the EIA, up from 4.7 Bcf/d in 2019, as new liquefaction projects come online.

New federal maps show production evolution in Bone Spring formation

The U.S. Energy Information Administration on Wednesday, December 4th released updated geologic maps and information highlighting production growth in the Bone Spring formation, part of the Delaware Basin spanning across west Texas and southeastern New Mexico. As described by the EIA, the Bone Spring play lies directly between the Delaware Mountain Group and the Wolfcamp formation, and consists of four intervals comprised of siliciclastic, carbonate and shale rocks measuring up to 4,000 feet in thickness.

According to EIA analysts, only with new technologies and advancing completion techniques have operators been successful in withdrawing oil and gas from this particular field, given the very low permeability of the shale rock in the Bone Spring. As a result, EIA estimates oil recovery to be near 34 percent, meaning that portion of the estimated resource base has been produced.

Still, despite difficulties with extracting mineral resources here, the Bone Spring play has increasingly drawn the attention of oil and gas producers, and has seen producing wells grow from 436 reported in January 2005 to more than 4,330 wells in mid-2019. Wells drilled in the Bone Spring have become increasingly more productive over time, as evidenced by EIA data, delivering greater output of oil and gas. More specifically, EIA notes average initial daily crude oil production per well in the shale play for the first six months of operation increased from 67 barrels per day (b/d) in 2005 to 770 b/d in 2019. In that same period, average natural gas production per well for the first six months of operation grew from 0.1 million cubic feet per day (MMcf/d) to 1.6 MMcf/d.

"In August 2019, average monthly production from Bone Spring reached 0.6 million barrels of crude oil and 1.7 billion cubic feet of natural gas per day," said the EIA in its latest analysis. "EIA expects Bone Spring production to continue to drive production growth in the Permian Basin. Additional pipeline takeaway capacity is coming online through 2020 to accommodate the production increase."

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Texas Independent Producers & Royalty Owners Association

With nearly 3,000 members, TIPRO is the nation's largest statewide association representing both independent producers and royalty owners. Our members include small family-owned companies, the largest publicly traded independents and large and small mineral estates and trusts.

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