



**April 1, 2024**



**The TXOGA chartbook serves as an essential resource for our members and those keen on comprehending the data that narrate ongoing developments within the economy and the oil and gas sectors, both internationally and domestically, including specific trends in Texas.**

## Key points for the week of April 1, 2024

- **U.S. economic indicators remained stable this week.** The Aruoba-Diebold-Scotti (ADS) Business Conditions Index, published by the Federal Reserve Bank of Philadelphia, pointed to ongoing favorable conditions, supporting economic expansion in Q1 2024. High-yield corporate bond yields held steady week-over-week (w/w) as of March 28, maintaining their lowest levels since December 2023.
- **Oil market fundamentals remained weakened.** U.S. crude oil stocks rose by 3.2 million barrels for the week ended March 22, reflecting a 1.6 million barrels per day (mb/d) decrease in U.S. petroleum net exports and 0.2 mb/d decline in domestic petroleum demand, according to data from the Energy Information Administration (EIA). Oil prices remained in line with their historical mean.
- **Natural gas storage levels resumed withdrawals.** U.S. working gas in underground storage fell by 1.5% w/w to 2.3 trillion cubic feet (tcf) as of Mar. 22 but remained above its 5-year range. Natural gas futures prices rise progressively beginning in May 2024, and confidence intervals based on past prices show the potential for greater upside than downside.
- **California's electricity debacle.** The [Chart of the Week](#) highlights how California has dealt with its unsustainably high systemwide electricity costs by **mandating income-based base rate charges and household income reporting to utilities**, independent of their power consumption. This has resulted in cumulative fees and charges of up to \$200 per month for upper-income households, even if they require little or no electricity from the grid.



## Income Based Electric Rate System Proposed by California Energy Companies

*'A fixed cost system could only encourage people to use more electricity'*  
California Globe, Feb. 8, 2024

## California braces for new electric plan: Make more, pay more

California Public Utilities Commission has until July 1 to impose new electric rate structure  
Fox Business, Mar. 13, 2024



### Required Income Document Guide

The chart below lists sources and acceptable form of proof of income for eligibility in the CARE/FERA programs. **You must send the most recent copies of documents for every adult household member receiving income.** You can also send (in place of the documents below) a complete copy of your most recent federal income tax return, as long as it includes all sources of your household income.

**Note:** For your protection, please black out Social Security and/or bank account numbers on all copies.

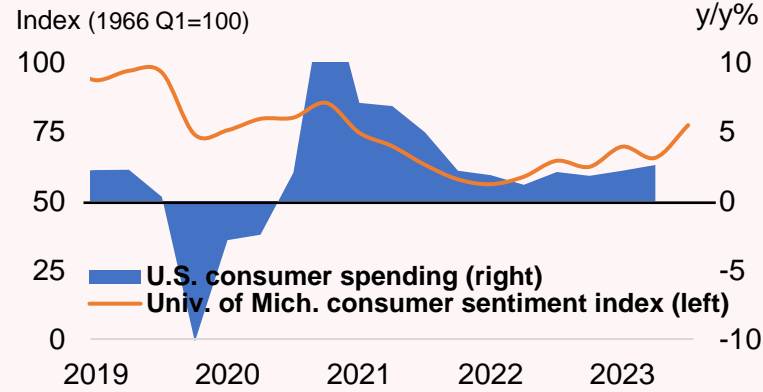
If you or someone in your household receive income from:	You should send us a copy of:
Wages, Salaries and Tips	Most recent pay stub(s) OR IRS 1040 form*

\*Further information may be required if what is submitted is not sufficient to determine eligibility.

Pensions, Social Security (SSA, SSDI, RSDI), Disability Payments, Workers Compensation, Unemployment Benefits, VA Benefits	Award letter(s) OR Most recent check stubs OR Most recent bank statement (to show direct deposit)
School Grants, Scholarships, Other Aid	Award letter(s) OR Statements
Insurance and/or Legal Settlements	Settlement documents
Child and/or Spousal Support, Foster Care Payments	Court documents OR Most recent pay stub(s)
Farm Income	First page of IRS Form 1040 AND Schedule 1
Interest and/or Dividends from: Savings, Stocks, Bonds, Mutual Funds	IRS Form 1040 OR IRS Form 1099(s) OR Recent bank statement
401K, IRA Withdrawals or Annuities	Investment account statement(s) OR IRS Form 1040 OR IRS Form 1099
Capital Gains	Investment account statement(s) OR First page of IRS Form 1040
Rental and/or Royalty Income	First page of IRS Form 1040 AND Schedule 1 OR Rental Agreement OR Trust Statement
Profit from Self-Employment, Commissions	IRS 1040 + Schedule 1 AND all Schedule C(s) OR the most recent 3-month profit and loss statement
Gambling/Lottery Winnings	First page of IRS Form 1040 AND Schedule 1
Cash Income (when you have not filed federal or state taxes)	Signed letter detailing type of work, estimated monthly amount of cash payment and employer name and phone number (if applicable)
Monetary Gifts, Savings, none of the examples above apply, or if you do not receive any income	Signed letter explaining the current source(s) of income used to support your household

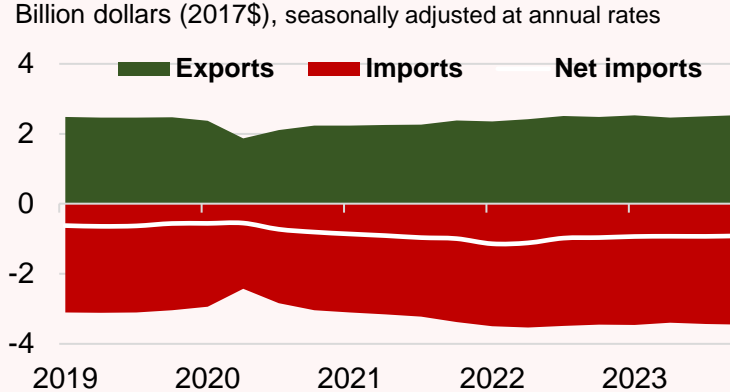
# U.S. economic indicators

## Consumer sentiment vs. spending



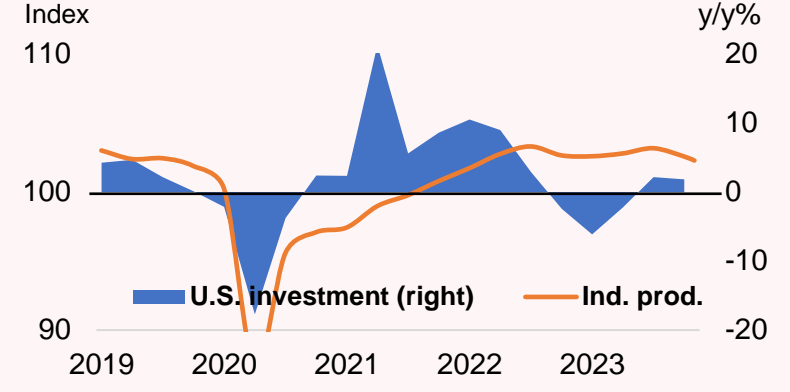
**Consumer spending was revised upwards** by 0.1% y/y to 2.7% y/y for Q4 2023 in the Feb. revision by BEA. The increased spending was consistent with improvement in the Univ. of Michigan's consumer sentiment index rose, which has since risen to 76.5 in the March reading and suggests further spending growth.

## Real net exports of goods and services



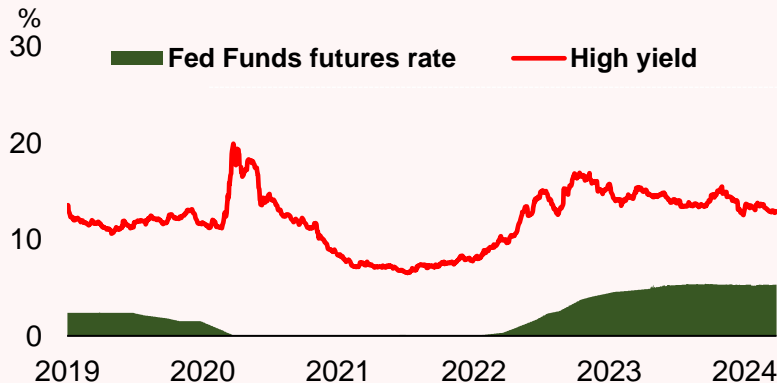
**The U.S. trade deficit narrowed in Q4 2023.** The U.S. real trade deficit ran at an annualized rate of \$908 billion in Q4 2023, down from \$931 billion in Q3 per the U.S. Bureau of Economic Analysis. On a nominal basis, the trade surplus for petroleum and products ran at annualized rate of \$16 billion in Q4 2023, down from \$29.1 billion in Q3.

## Industrial production and investment growth



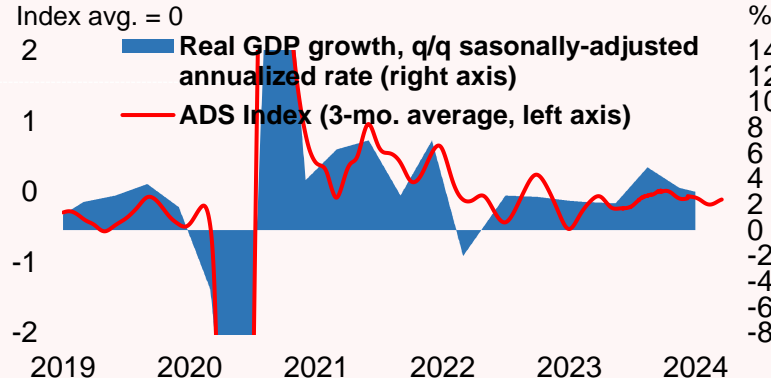
**Industrial production edged up in Feb. 2024** and remained consistent with slow economy-side investment growth in Q1. Investment rose by 0.1% m/m in February per the Bureau of Economic Analysis.

## Fed Funds rate and CCC and lower corporate bond yields



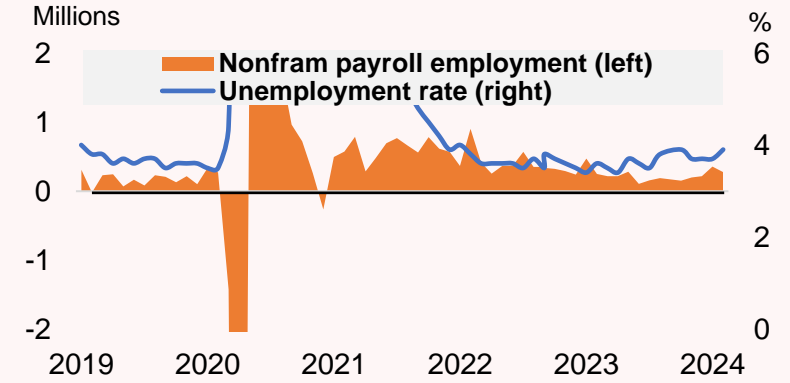
**Decreased bond premium for low credit quality.** High yield (HY) rates reflect debt costs for firms with below-investment grade credit quality. For the week ended Mar. 29, HY rates held steady nearly 12.9% while the Fed Funds futures held steady at 5.3%, sustaining the lowest risk spread since December.

## Aruoba-Diebold-Scotti Business Conditions Index (qtr. avg.) vs. U.S. real GDP growth



**Business conditions show Q1 2024 real GDP growth.** The ADS business conditions index, published by the Philadelphia Fed. Res. Bank, is a leading indicator of GDP growth. A rolling 3-month average of the ADS index accurately reflected the increase in Q4 2023 real GDP and remains consistent with continued GDP growth so far in Q1 2024.

## Nonfarm payroll employment & unemployment rate

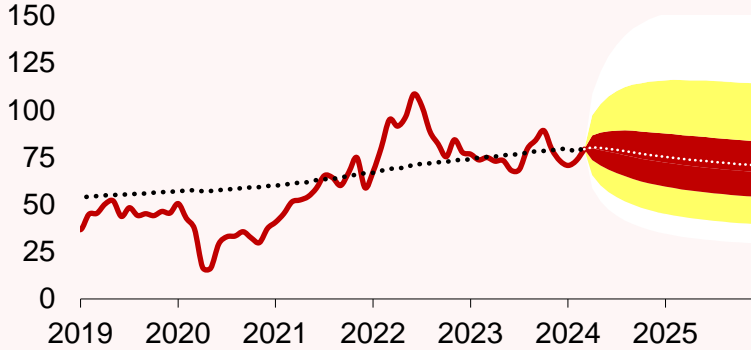


**Higher unemployment rate despite payroll increases.** The employment situation is a lagging indicator of GDP growth. The U.S. unemployment rate rose to by 0.2% m/m to 3.9% in February per BLS, while non-farm payrolls rose by 275,000.

# U.S. oil market indicators

## WTI crude oil price mean reversion analysis

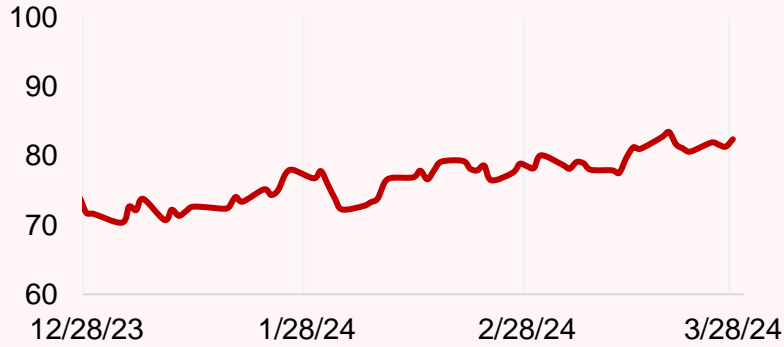
Dollars per barrel (2024\$)



**Futures prices have aligned with their historical mean.** The futures strip remained backwardated (that is, futures prices currently are lower than spot prices). Confidence intervals based on past prices show the potential for greater upside than downside.

## WTI crude prompt month futures prices

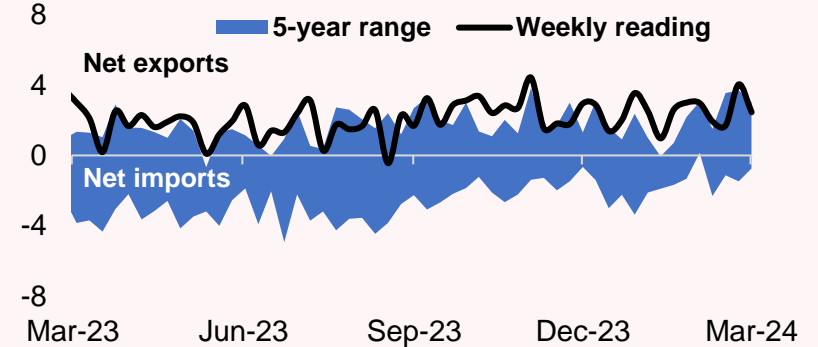
Dollars per barrel



WTI crude oil prices rose above \$82 per barrel for the week ended Mar. 28, supported by a Middle East geopolitical premium, despite weaker fundamentals for the week.

## U.S. petroleum net exports (imports)

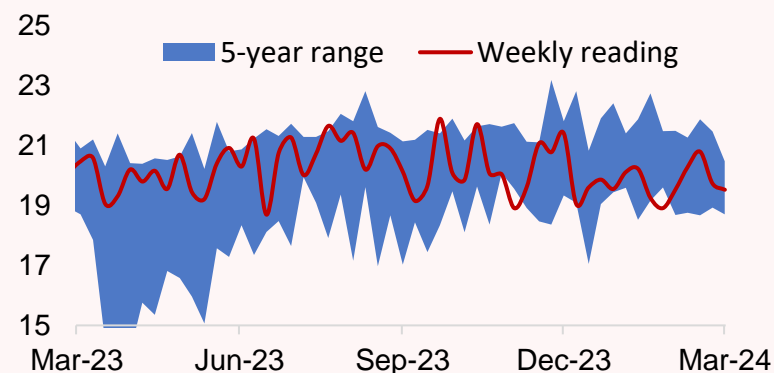
Million barrels per day, mb/d



**Petroleum net exports fell.** The U.S. was a petroleum net exporter of 2.5 mb/d for the week ended Mar. 22, down by 1.6 mb/d from the prior week.

## U.S. petroleum demand

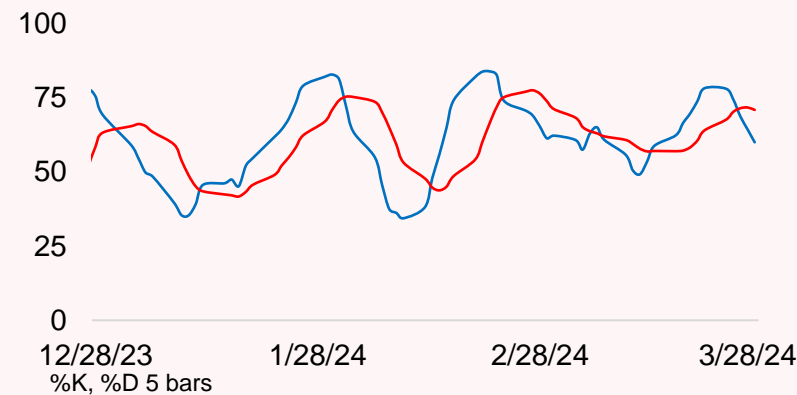
Million barrels per day (mb/d)



**Petroleum demand decreased.** U.S. petroleum demand, as measured by deliveries, fell by 0.2 mb/d w/w to 19.5 mb/d for the week ended Mar. 22.

## WTI crude prompt month futures slow stochastic

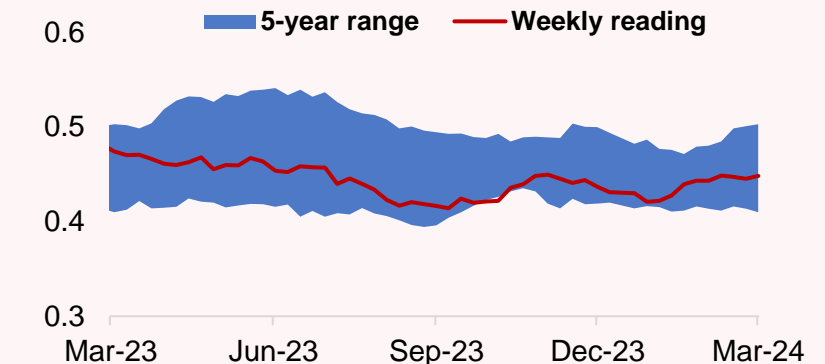
Index level



Price momentum neither increased nor decreased for the week ended Mar. 28.

## U.S. ending stocks of crude oil (excluding the SPR)

Billion barrels (mb)

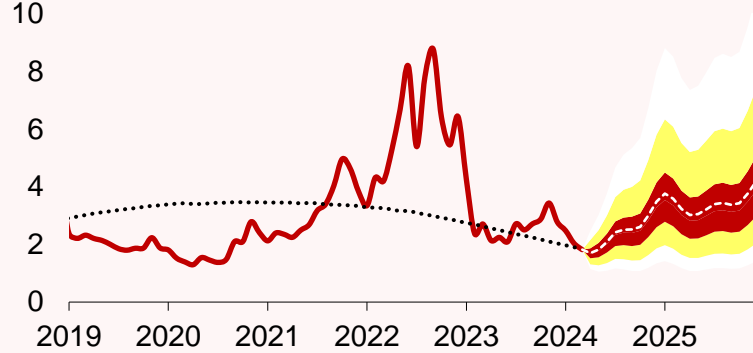


**Inventories increased.** U.S. ending stocks of crude oil excluding the Strategic Petroleum Reserve (SPR) increased by 3.2 million barrels (mb) for the week ended Mar. 22.

# U.S. natural gas market indicators

## Natural gas price mean reversion analysis

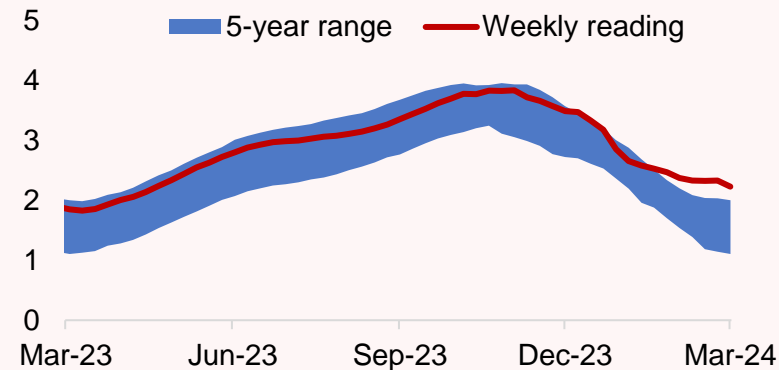
Dollars per mMBtu (2024\$)



**The historical mean reversion target fell with recent low prices.** Natural gas futures prices rise progressively beginning in May 2024. Confidence intervals based on past prices show the potential for greater upside than downside.

## U.S. weekly working gas storage

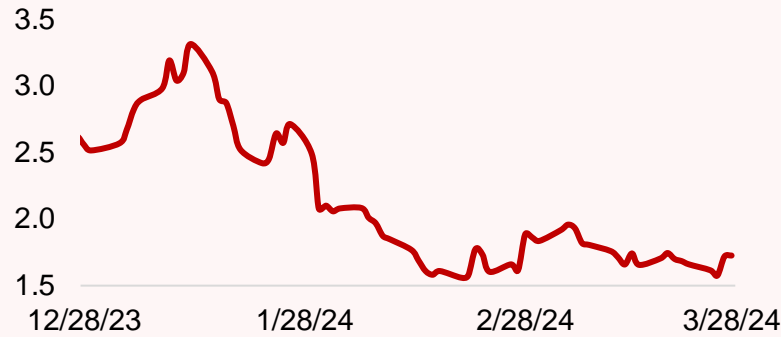
Trillion cubic feet (tcf)



Working gas in underground storage fell by 1.5% w/w to 2.3 tcf as of Mar. 22 but remained above the 5-year range.

## Natural gas prompt month futures prices

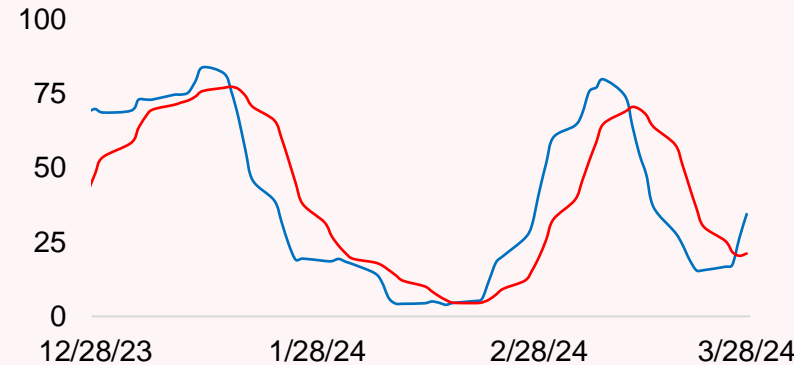
Dollars per million Btu



Natural gas prices at Henry Hub hovered near \$1.70 per million Btu for the week ended Mar. 28, thanks in part to storage levels that exceeded the 5-year range.

## Natural gas futures slow stochastic

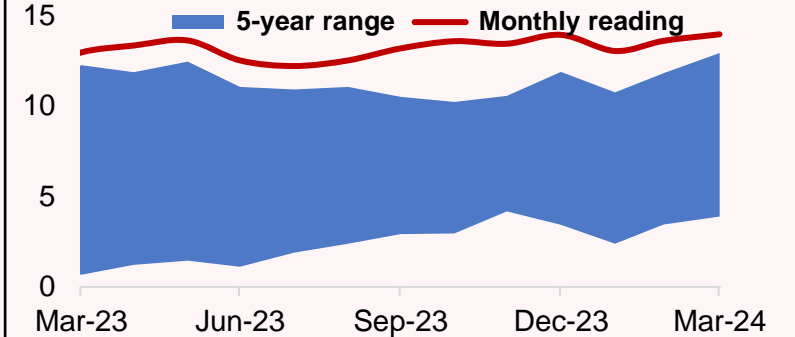
Index level



Natural gas price momentum fell and appeared to reverse during the week ended Mar 28.

## U.S. natural gas net exports

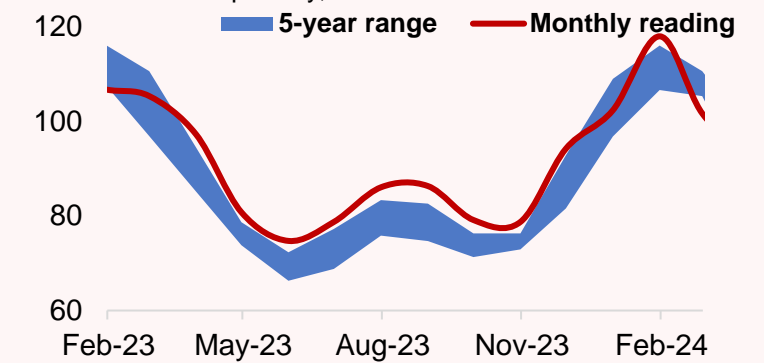
Billion cubic feet per day, bcf/d



**Record-high exports.** U.S. natural gas net exports in March are estimated at a record 14.0 bcf/d per EIA. Notably, LNG exports have held around 12 bcf/d, and the uplift to record levels has come from increased pipeline natural gas exports to Mexico and Canada, coupled with lower imports from Western Canada.

## U.S. natural gas consumption

Billion cubic feet per day, bcf/d

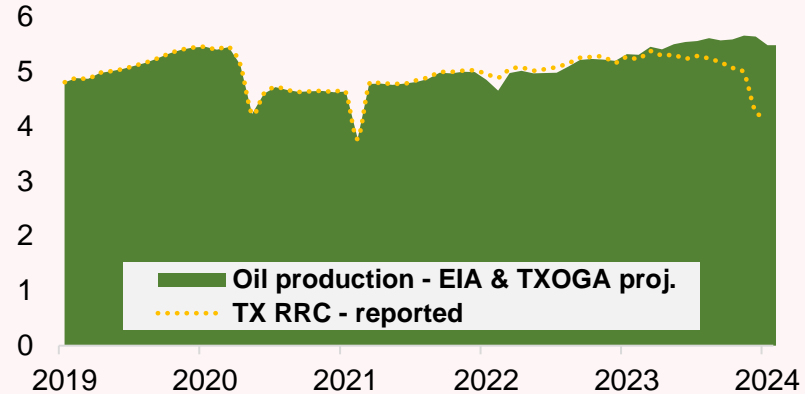


**Consumption downgraded.** EIA estimates that natural gas consumption fell from a record-high 118 bcf/d in January to 91.9 bcf/d in March, below the 5-year range with unseasonably warm weather.

# Texas' oil and natural gas production

Texas crude oil production, Jan. 2019 – Feb. 2024

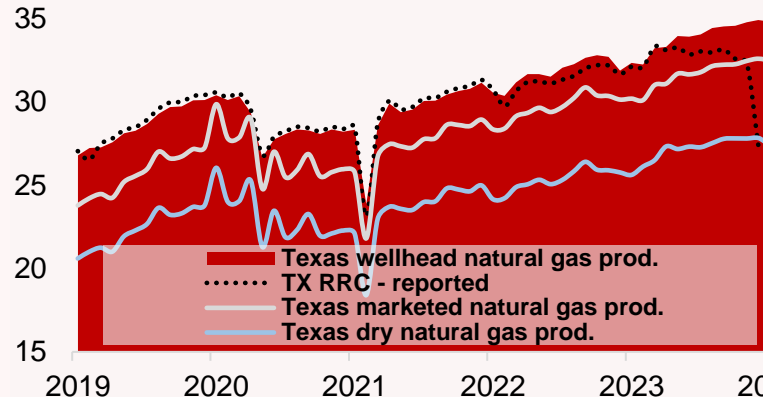
Million barrels per day (mb/d)



**Oil production slipped from record highs.** Texas' oil production of 5.6 mb/d in December was just below the record high set in Nov. per EIA. TXOGA estimates that Texas crude oil production eased further to 5.5 mb/d in January and February.

Texas natural gas production, Jan. 2019 – Feb. 2024

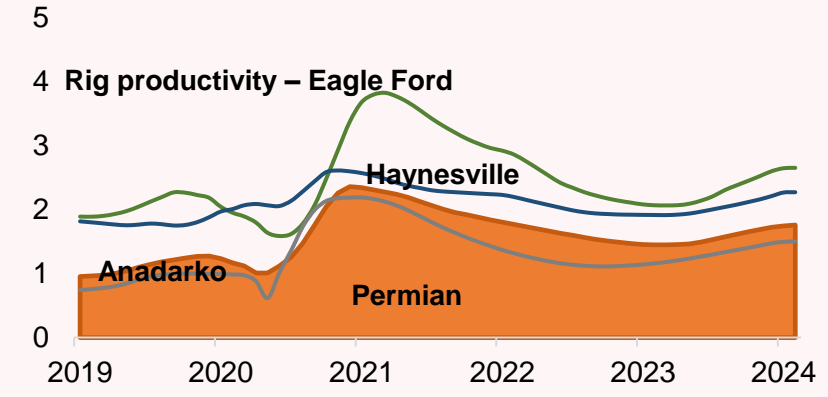
Billion cubic feet per day (bcf/d)



**December production records.** Texas' natural gas production of 34.9 bcf/d of gross withdrawals and 32.6 bcf/d of marketed production in December were record highs per EIA. TXOGA estimates that production decreased in February to 34.8 bcf/d of gross withdrawals, 32.4 bcf/d of marketed production, and 27.5 bcf/d of dry gas production.

Texas rig productivity by basin – new monthly prod. per rig

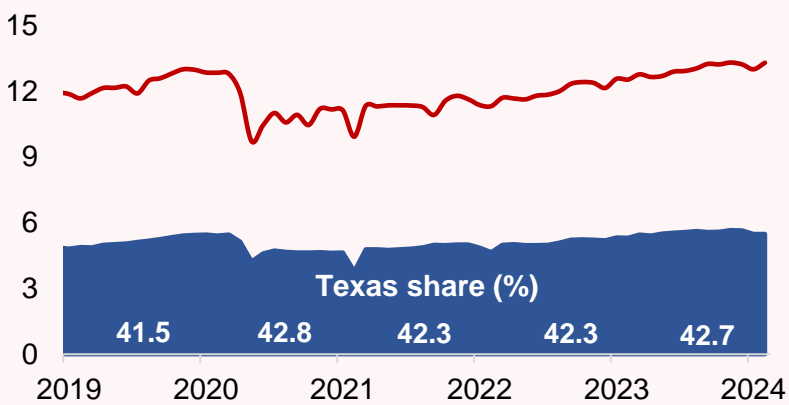
Thousand barrels per day oil-equivalent, kb/dae



**Strong productivity to start the year.** EIA estimates of rig productivity for February 2024 show continued increases year-over-year across the major Texas basins, including the Anadarko (+29.6% y/y), Eagle Ford (+28.2% y/y), Permian (+21.4% y/y), and Haynesville (+18.6% y/y).

U.S. and Texas crude oil production, Jan. 2019 – Feb. 2024

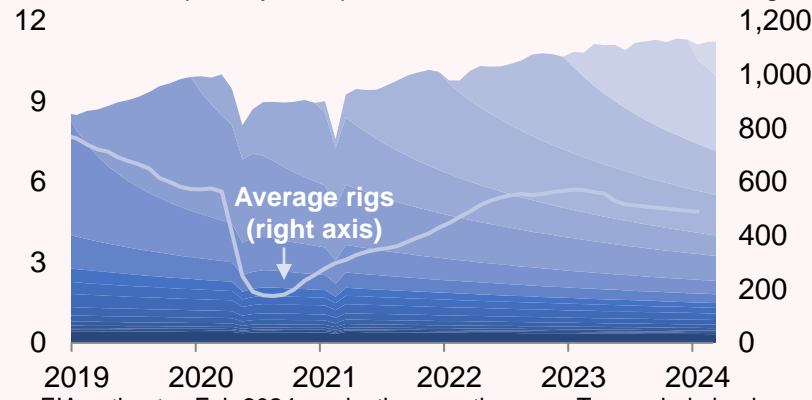
Million barrels per day (mb/d)



**Texas' share rose.** In 2023, Texas accounted for 42.7% of U.S. crude oil production, the highest share since 2020.

Texas shale basin wellhead oil & natural gas production

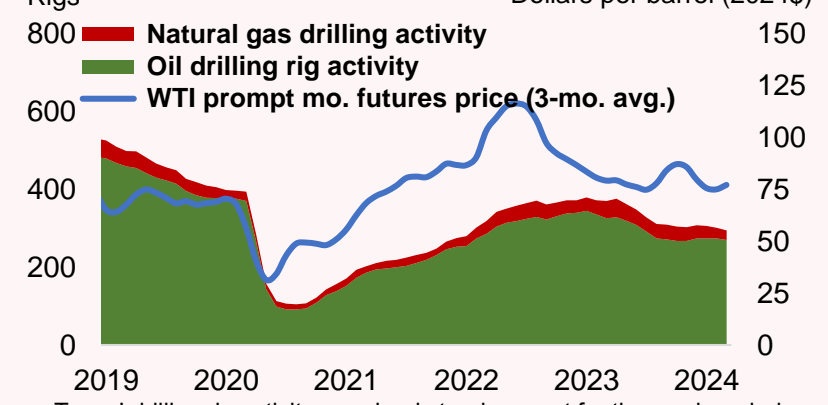
Million barrels per day oil-equivalent



EIA estimates Feb 2024 production growth across Texas shale basins has been mixed, with increases year-over-year in the Permian (+6.3% y/y) and Eagle Ford (+3.6% y/y) but decreases in the Haynesville (-0.2% y/y) and Anadarko (-1.2% y/y) regions.

Texas drilling activity and WTI crude oil futures prices

Rigs Dollars per barrel (2024\$)



Texas' drilling rig activity remained steady on net for the week ended Mar. 22 per Baker Hughes. Texas had 270 oil-directed rigs (down by 1 rig w/w) and 24 natural gas-directed rigs (up by 1 rig w/w).

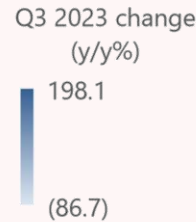
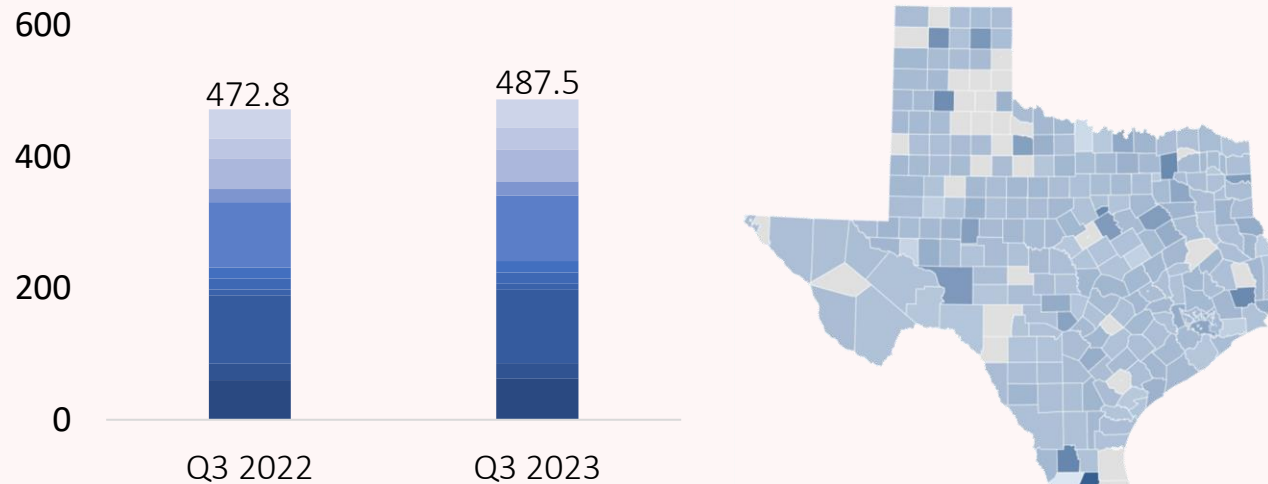
# Texas' oil and natural gas industry's jobs and wages have continued to grow



- ▶ Texas' oil and natural gas industry employment rose by 3.1% y/y in Q3 2023 with half of the job growth in upstream support services and another nearly 20% in oil & gas field machinery and equipment manufacturing, per data the latest data (released on Feb. 21, 2024) from the U.S. Census Bureau and Texas Workforce Commission
- ▶ Q3 2023 industry wage growth of 3.6% y/y was nearly on par with job growth of 3.1% y/y, which reflected an easing of inflationary pressures

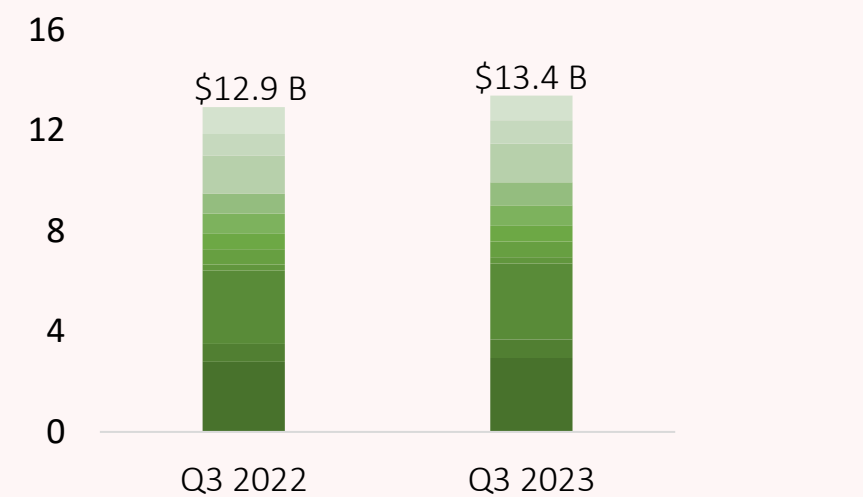
## Texas oil and natural gas industry direct employment rose by +3.1% y/y in Q3 2023

Thousand Jobs



## Texas oil and natural gas industry direct wages rose by +3.6% y/y in Q3 2023

Billion dollars



- Oil & gas extraction
- Support activities for o&g ops.
- Petroleum refineries
- Gas stations & fuel dealers
- All other\*
- Pipeline construction
- Oil & gas drilling
- Natural gas distribution
- Petrochemical mfg.
- Pipeline transportation
- Oil & gas field mach. and eq. mfg.

\* Other industry segments include petroleum and pet. product wholesalers, lubricant mfg., asphalt mfg., industrial sand mining, nitrogenous fertilizer mfg., basic organic chem. mfg., plastics and resin mfg.





**R. Dean Foreman, Ph.D.**  
**dforeman@txoga.org**

