



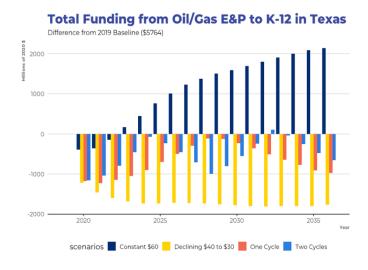
Over the past several decades, Texas' economy has grown, attracting a diversity of talent and industries to our state to create a thriving economy.

However, our state government, particularly public education, relies heavily on oil and gas exploration, making it vulnerable to the volatility of world oil markets.

Texas 2036 engaged Center for Houston's Future to assess the implications of the possibility of low-to-moderate oil prices for the foreseeable future and the resulting impact on Texas government revenues, in particular education funding.

Key Highlights:

- Today, oil and gas exploration accounts for roughly 250,000 direct jobs in Texas and about 10% of direct gross state product. Under "low-but-plausible" oil price scenarios, oil and gas production will likely not grow significantly from 2019 levels and could decline significantly by 2036.
- In some of these scenarios, public education funding in Texas, specifically the Permanent School Fund (PSF), would be negatively impacted over the next 15 years because of its dependence on revenues from oil and gas production.
- Given the possibility for funding from oil and gas production to fall, the Texas legislature must plan to diversify the state's budget the way the state has diversified the economy by developing proposals to cover projected budget deficits, particularly related to education funding.



These findings should lead to the Texas legislature taking immediate action by making structural improvements to the PSF and Emergency Stabilization Fund, as well as improvements to revenue forecasting. Longer-term options include establishing a commission to explore further diversification of the state's tax revenue base while minimizing the impact on economic growth and opportunity.

To view the full report and charts, visit https://texas2036.org/future-proofing-texas-school-funding/

Texas Education Funding Relies Heavily on Oil & Gas Industry

According to a recent report from the Center for Houston's Future (CHF), commissioned by Texas 2036, the state's budget – in particular, funding for Texas public schools – could potentially face difficulties over the next 15 years under certain scenarios if tax revenue declines in sources associated with oil and gas exploration and production (E&P) activity in Texas.

While lawmakers face the immediate budgetary pressures caused by the COVID-19 pandemic, this report suggests that additional focus should be directed toward long-term strategies for sustaining educational funding due to the potential volatility in Texas oil and gas E&P activity.

Since the 1980s, the Texas Legislature has worked to insulate state general revenues from fluctuations in the oil and gas industry. However, we estimate that state and local governments could see annual revenues and royalties from Texas E&P activity decline from 2019 totals by as much as 73% (\$9.7 billion per year) by 2036, the state's bicentennial.

Similarly, we estimate that state tax revenues stemming from E&P activity could drop from 2019 levels by as much as 74% (\$6.8 billion per year) and royalties to the Permanent School Fund (PSF) and Permanent University Fund (PUF) could decline by as much as 70% (\$1.5 billion per year) by 2036.

While much of this impact would hit state investment and rainy day funds, Texas public schools are still partially exposed to long-term industry trends due to reliance on revenue streams affected by Texas E&P activity – such as sales taxes, property taxes, and disbursements from the PSF.

CHF found that approximately 20% of Texas public school funding can currently be linked to the oil and gas industry. We calculate that if oil and gas prices steadily decline, Texas schools could experience a 30% (\$1.7 billion) decline in annual tax revenues and royalties from 2019 levels by 2036.

To better protect state finances, especially public schools, from risks associated with oil and gas market volatility, the report recommends that the legislature consider policies to:

- Streamline management of the PSF to protect the fund and maximize future distributions;
- Increase the targeted return on investment for the state's "rainy day" fund, the Economic Stabilization Fund (ESF);
- Improve the state's long-term revenue forecasting process;
- Diversify the state's tax base.

The data also highlights potential workforce implications for displaced workers, highlighting a continued need to upskill and reskill workers across many sectors who face both pandemic and future disruptions.

Future Proofing Education Funding Requires Building Oil Price Scenarios

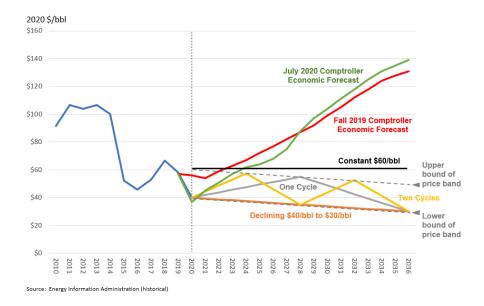
This report examined the potential implications for the Texas economy and budget – and state funds like the Permanent School Fund (PSF) and the Economic Stabilization Fund (ESF) that rely on income from Texas E&P activity – if world oil markets do not significantly improve by 2036. Four scenarios were formed by a panel of respected industry experts to examine possible outcomes over the next 15 years.

These scenarios represent the industry experts' perspectives for possible oil pricing, absent a significant upswing, taking into account international pressures, consumer demand shifts, and technological changes.

The scenarios include:

- (1) Constant \$60/barrel pricing;
- (2) Steadily declining \$40/barrel to \$30/barrel pricing;
- (3) One boom/bust cycle in the next 15 years; and
- (4) Two boom/bust cycles in the next 15 years.

For context, after a significant drop in pricing in March 2020, the benchmark West Texas Intermediate (WTI) prices steadied at around \$35-45/barrel while recently returning to the low \$50s



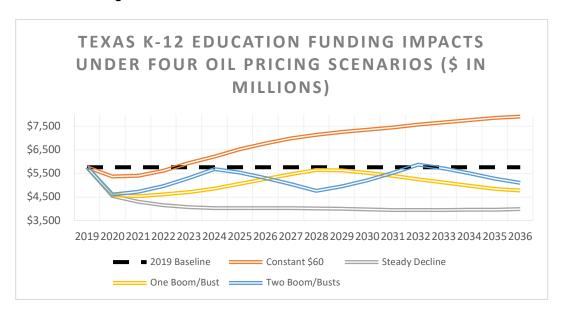
These pricing scenarios were then analyzed using sophisticated modeling techniques at the University of Texas's Bureau of Economic Geology to estimate Texas oil and gas production levels at the various price points in each scenario.

With production estimates, CHF was then able to estimate the economic, employment, and state revenue/royalty impacts at these various levels of production.

Public Schools Face Revenue Risks Absent Oil Market Recovery or Fiscal Reform

According to CHF's analysis, public education funding faces a large potential exposure to declining oil price scenarios.

By 2036, there is a \$4 billion estimated annual difference in statewide school funding contributions from Texas E&P activity between the highest-priced scenario (Constant \$60) and the lowest-priced scenario (Declining \$40 to \$30), and three of the four scenarios anticipate a net decrease in funding relative to 2019.



This analysis estimates anticipated impacts on funding relative to 2019 levels but does not account for the projected increases in education system costs due to enrollment increases and House Bill 3 reforms.

Demands for state education funding are likely to increase over the next 15 years, and under the scenarios studied, oil and gas related revenues may not be able to help the state meet this demand – absent reform or recovery.

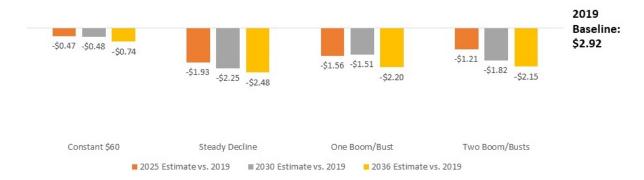
Negative impacts to sales and property taxes drive the potential hit to Texas public schools. Sales taxes provide the largest state source of school funding and can be significantly impacted by trends in the oil and gas sector.

Texas' Budget May Experience Sales Tax Decline Due to Declining Oil & Gas Exploration

While many may know that Texas state government relies heavily on state sales tax, with nearly 68% of the state budget coming from sales tax revenue, many may not realize the amount of sales taxes that come from oil and gas exploration.

In 2019, sales taxes on Texas E&P activity were estimated to represent over 7% of all Texas sales tax collections (approximately \$2.9 billion). Under all four scenarios examined in the study, this figure is projected to decline.

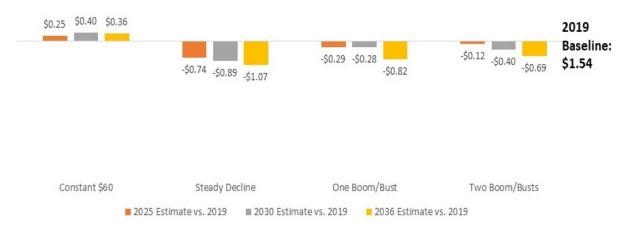
Impact on Texas Oil and Gas Sales Tax Collections Under Various Pricing Scenarios (billions of \$)



Local School Districts Would Also Not Be Spared If Oil & Gas Exploration Declined

Property taxes provide the primary source of funding for Texas public schools, and – while Texas does not have a state property tax – local collections can impact state financial obligations to school districts, as well as revenues derived from recapture. In 2019, Texas school districts collected an estimated \$1.5 billion in property taxes from oil and gas E&P, but this may decline if future oil market conditions are less favorable.



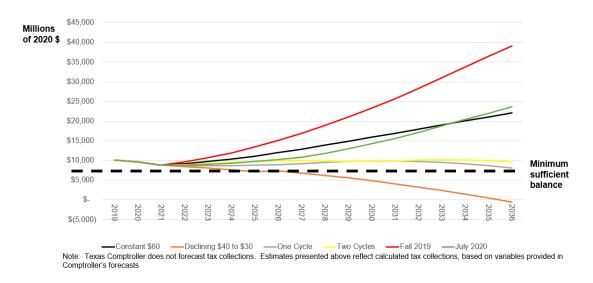


Potential Budgetary Impacts Extend Beyond Public Schools

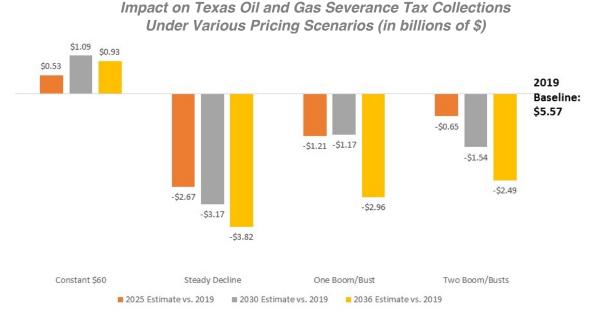
State revenue and budgetary impacts are not limited to public school funding. The ESF, which relies on oil and gas severance taxes, may face additional pressures over the next 15 years.

If the state continues to withdraw from ESF \$1.2 billion annually (the recent 10-year average), and ESF investment returns remain at around 1%, the ESF may drop below the sufficient balance under the "steady decline" scenario by the mid-2020s. Moreover, this analysis does not account for the likelihood that a larger-than-average withdrawal may be necessitated during the

2021 state budget process to compensate for declines in revenue collections suffered as a result of COVID.



In 2019, Texas oil and gas severance taxes combined to generate an estimated \$5.6 billion for the state, with collected revenues divided between general revenue, the State Highway Fund, and the ESF. Under three of four scenarios examined in this study, severance taxes are projected to decline by 2036.



Texas Employment Linked to Energy Driving the Need to Adapt

During most of the 20th century, the Texas economy was tightly coupled with the oil industry, rising and falling with state production. The Texas economy has significantly diversified since the oil market collapse of the mid-1980s, and oil booms and busts do not have as much economic impact.

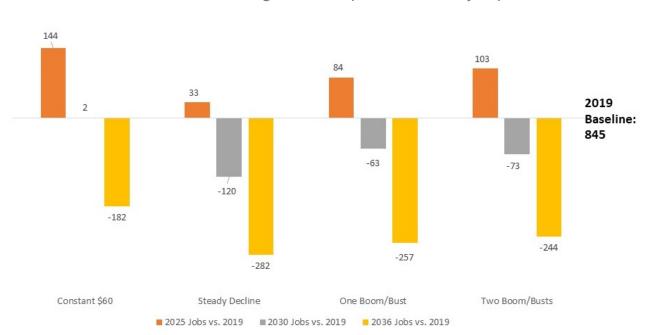
E&P activity, however, is still a major force in the Texas economy, accounting for roughly 250,000 direct jobs and about 10% of gross state product and is responsible for the creation of an even higher level of the state's employment due to a multiplier effect.

Moreover, some degree of economic volatility due to oil market swings remains: the effects of the COVID-19 pandemic – combined with the collapse in oil prices earlier in 2020 – caused E&P employment in Texas to fall by roughly 20%.

Under the "low-but-plausible" oil price scenarios that were analyzed, the state's macroeconomic activity stemming from the E&P sector would likely not grow significantly from 2019 levels and could decline by 25-50% by 2036.

Employment in the oil and gas industry will also be affected in the four scenarios, which means the Texas workforce will have to adapt to thrive.

The chart below estimates the direct employment impacts within the Texas E&P sector of the four different pricing scenarios.



Impact on Texas Oil and Gas Jobs Under Various Pricing Scenarios (in thousands of jobs)

Texas Can Reduce Its Risks by Diversifying Revenue Sources, Improving Long-Term Planning and Streamlining Operations

With so much riding on the oil/gas sector as a revenue source, the CHF report recommends that the legislature consider multiple options to improve state financial planning and prepare for potential destabilization of historical revenue sources. These areas of consideration include:

Strengthening the state's long-term financial forecasting capabilities.

- Streamlining PSF management to one entity to promote transparency and efficiency, as the endowment is run through both the State Board of Education and School Land Board.
- Diversifying the state's tax revenue base.
- Evaluating the investment options and targets for the ESF to increase its ability to provide stable backstop revenues to the state should severance taxes decline.

The Permanent School Fund – If Reformed – Offers Hope to Mitigate this Risk

Though it faces its own risks under these various oil pricing scenarios, largely due to potential decreases in royalties collected from Texas E&P activity, the Permanent School Fund – if reformed – could insulate the state from some of this volatility.

In 2019, the PSF received an estimated \$1.1 billion in royalties from oil and gas activity on state owned lands. Under three of four scenarios we project that royalties may decrease by 2036 – by as much as 69%. Compared to a steady \$1.1 billion deposited over 16 years, this scenario would leave nearly \$10 billion less available for investment and future distribution.

Despite this risk, CHF still estimates – under all four of its scenarios – that annual disbursements from the PSF to Texas public schools will be able to increase over time, as the investment returns generated by the fund (if maintained at recent levels) would exceed annual disbursements, given the PSF's large size.

However, the PSF's investment allocations may not be optimized to withstand shocks to the energy market due to historical limitations on investment classes and a bifurcated management structure that splits investment decisions between the School Land Board and the State Board of Education. Streamlining PSF management, and jointly managing the PSF as one investment fund, could provide additional protections for future disbursements and cost savings to the fund.