

Long-Term Outlook

Presentation to:
Legislative Finance Committee
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Office of the Governor

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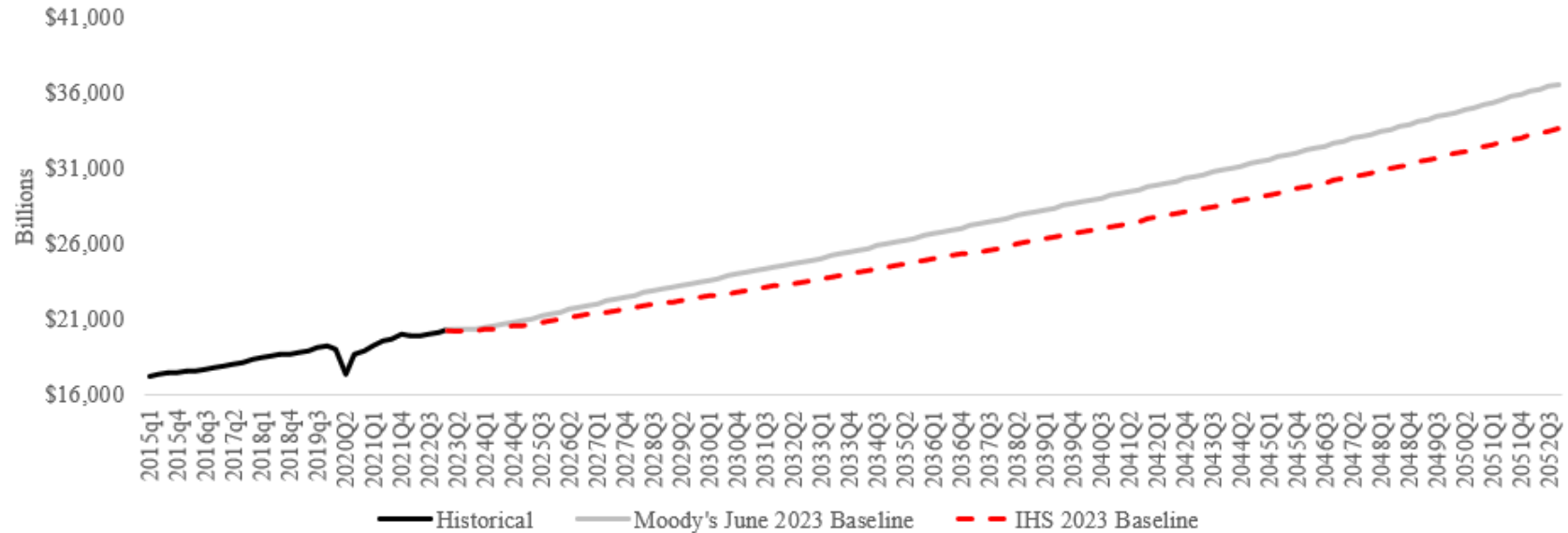
Introduction/Forecasts

- Baseline forecasts based on current data and assumptions
 - Built on economic, demographic, and industry indicators
- Absent
 - Future recessions
 - Future fiscal and monetary actions
 - Future technological innovations
 - Financial (or other) market shocks
 - Energy market shocks
 - Future wars or international events
 - Future state legislative actions
- Forecasts change
 - There are updates and revisions
- The variation around the baseline grows the further out you go.
- These models and estimates are useful for planning and discussion purposes
 - Budget and policy
- Main objective is to look at trends
 - With the most current available data and surmise - Where is the state is headed?

Economic Indicators

U.S. RGDP

U.S.A Real Gross Domestic Product: 2015 Q4 to 2023 Q1, Moody's Forecast 2023Q2-2052Q4, IHS Forecast 2023Q2-2052Q4



Source: GDP in billions of chained 2012 dollars, retrieved from [bea.gov](https://www.bea.gov). Moody's Analytics, IHS Markit

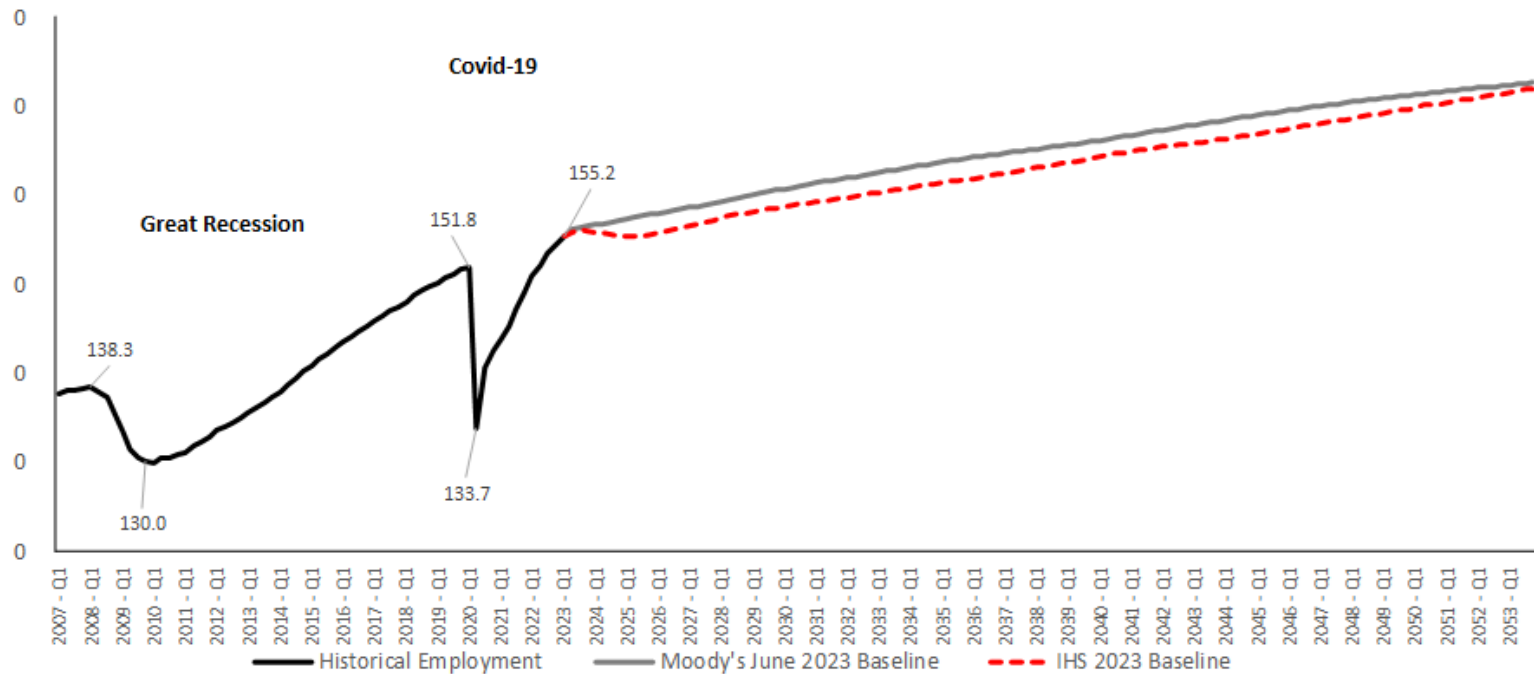
- Current national forecasters do not include a national recession in baseline forecasts
- Inflation continues to moderate in an environment of robust employment gains
- The Federal Reserve continues to balance inflation and labor market tightness against financial conditions
- Both Moody's and IHS expect growth to continue

U.S. Employment

U.S. Total Non-Farm Employment: 2007Q1 to 2023Q1

Moody's Forecast 2023Q2 to 2053Q4, IHS Baseline Forecast 2023Q2 to 2053Q4

(1,000s of jobs)

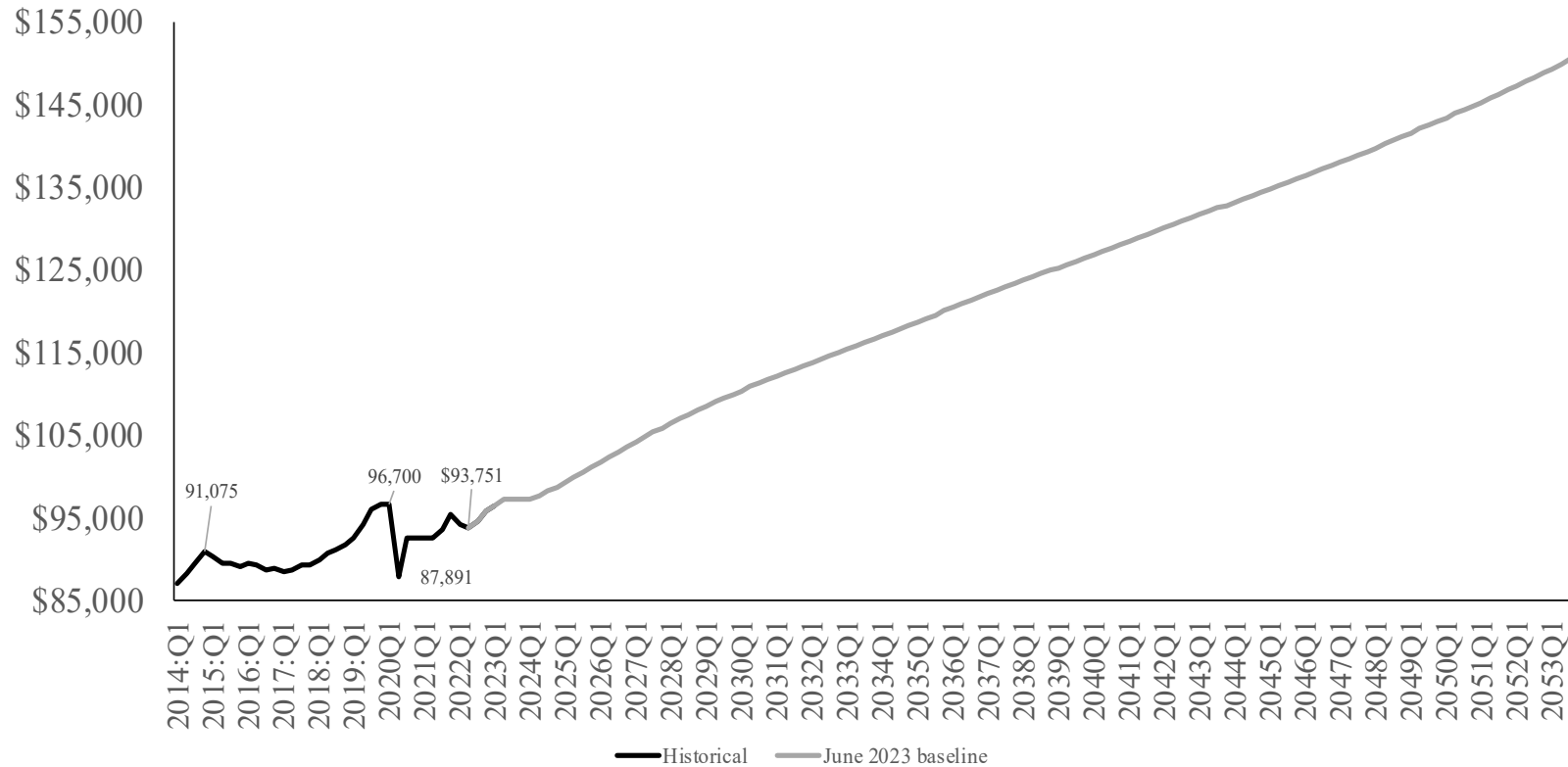


Source: Bureau of Labor Statistics

- National employment gains continue to exceed forecasters' expectations
- Competitive and tight labor market
- Signs of a labor market slow down are present, but they have not been substantial

N.M. RGSP

N.M. Real Gross Domestic Product 2014Q1-2023Q1, Moody's Forecasts 2023Q2-2053Q4

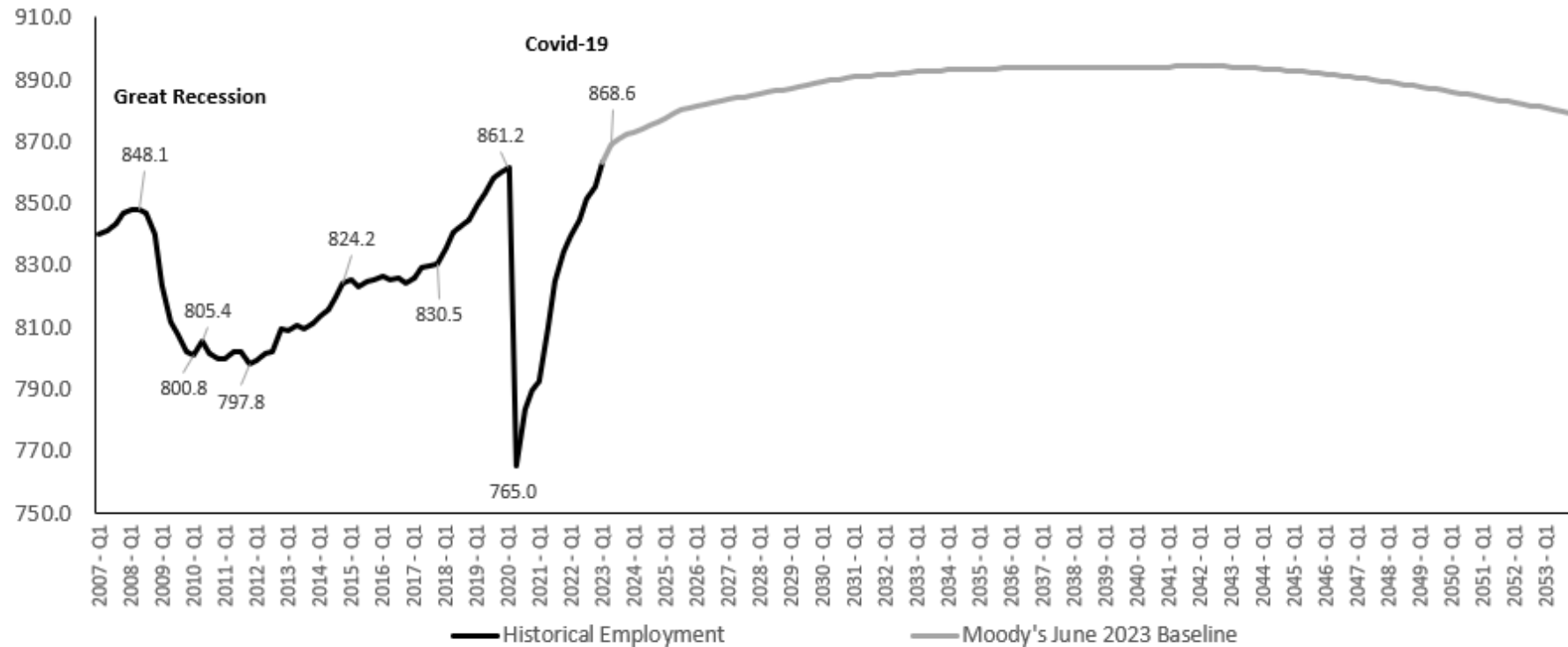


Source: Moody's July 2022 and November 2022 Baseline Scenario vs. Historical Values from the Bureau of Economic Analysis

- Current Moody's and University of New Mexico Bureau of Business and Economic Research (BBER) baseline forecast expect moderate to slow growth
- New Mexico's RGSP is estimated to average about 1.9% growth per quarter in the out years

N.M. Employment

**N.M.'s Quarterly Total Non-Farm Employment: 2007Q1 to 2023Q1, Moody's Forecast 2023Q2 to 2053Q4
(1,000s of jobs)**

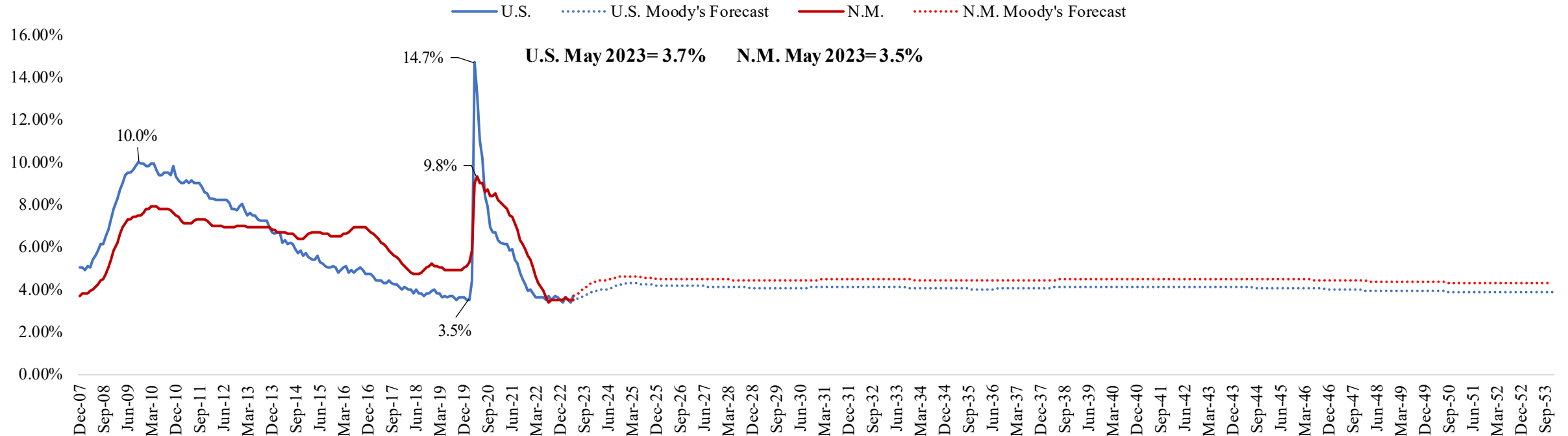


Source: Bureau of Labor Statistics

- New Mexico reached pre-pandemic employment in 2023 Q1
- Employment growth will moderate

U.S. and N.M. Unemployment

U.S. and N.M. Unemployment Rate (percent) : December 2007 to December 2053

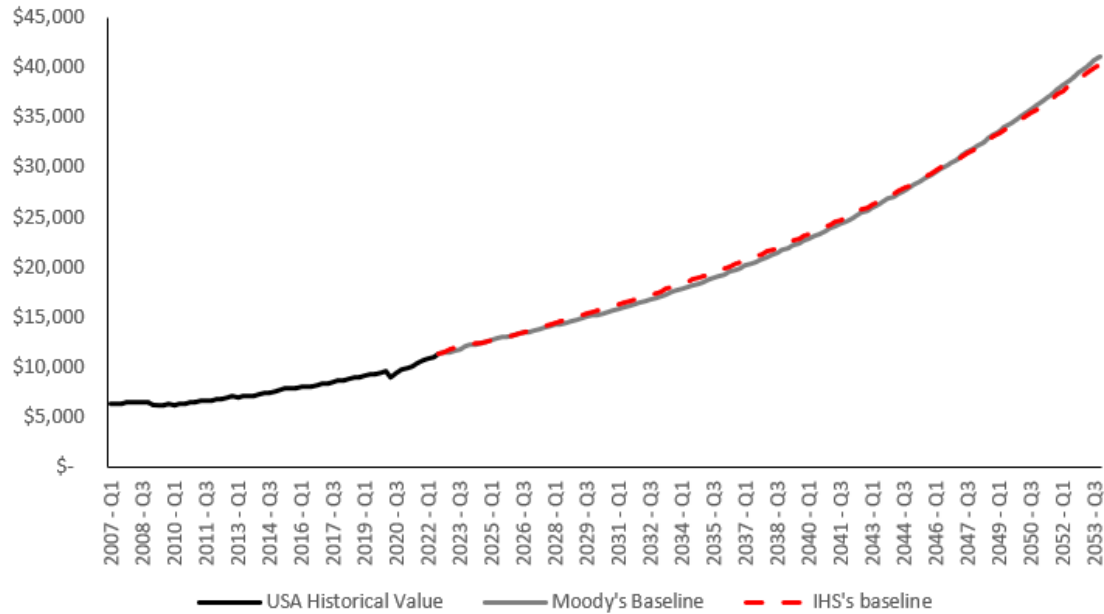


Source: bls.gov, seasonally adjusted

- The national unemployment rate peaked in April 2020 at 14.7% and has declined to 3.7% in May 2023
- The New Mexico unemployment rate peaked in May 2020 at 9.8% and has declined to 3.5% in May 2023

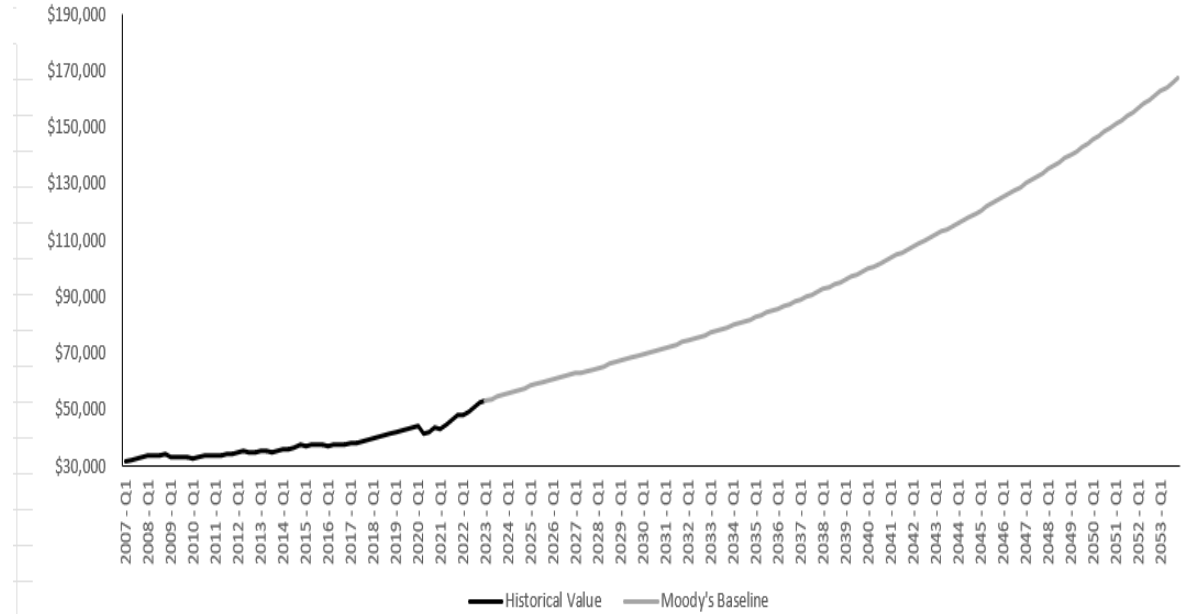
U.S. and N.M. Wages & Salaries

U.S.A Total Nominal Wages and Salaries by Moody's Analytics and IHS
CY 2007Q1 to 2053Q2



Source: bls.gov

N.M. Total Wages and Salaries by Moody's Analytics
CY 2007Q1 to 2053Q2



Source: bls.gov

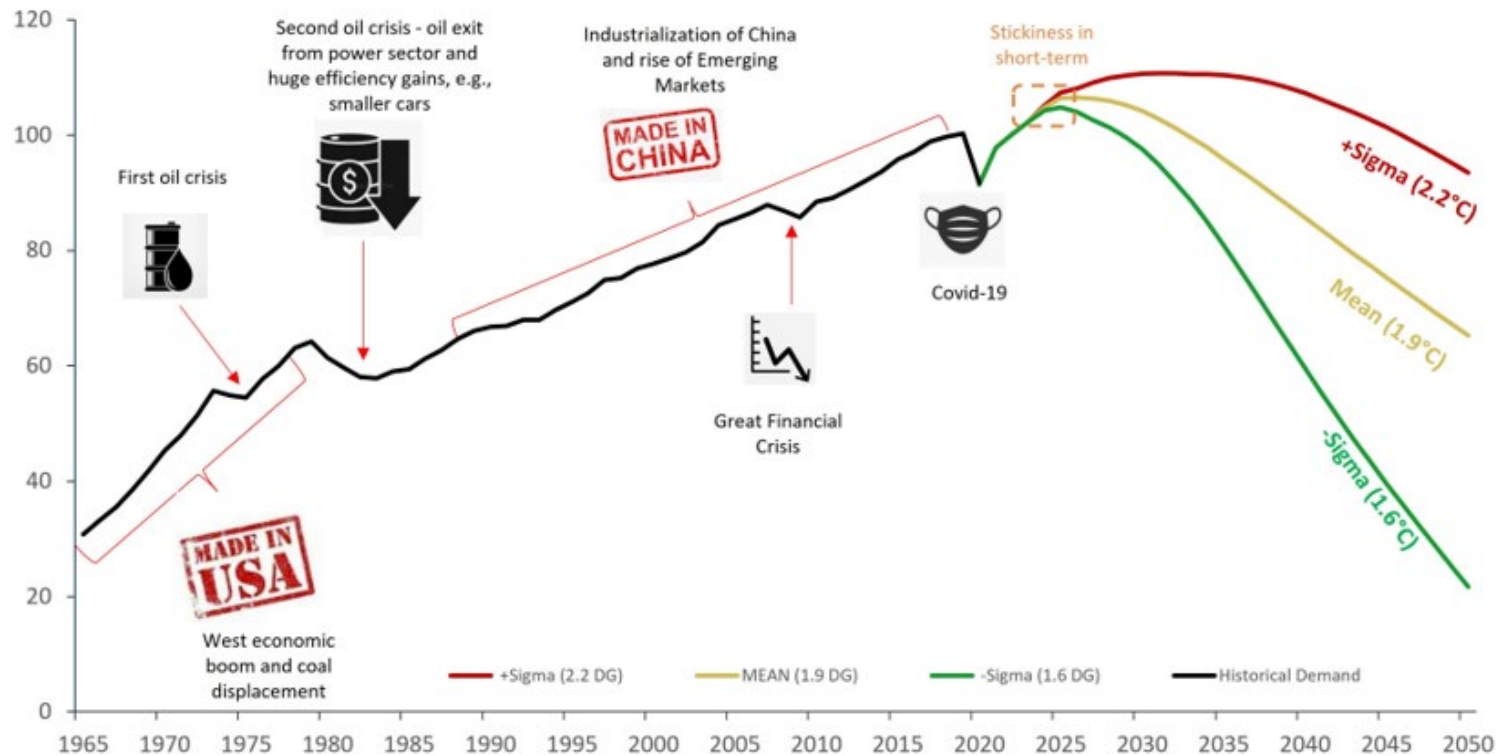
- Demographic trends and pandemic impacts on the labor market are among the main contributors to increases in wages and salaries
- Inflationary factors continue to place upward pressure on wages and salaries

Global Energy Transition

Global Energy Transition

Long-term oil demand scenarios and historical demand

Million barrels per day



Source: Rystad Energy Oil Market Transition Solution, Rystad Energy OilMarketCube

➤ Rystad Energy analysis suggests oil demand will be driven by three main drivers as the world becomes more electric and more fuel efficient.

➤ Global passenger vehicles

➤ 30% of global oil demand

➤ Faster transition driven by EVs

➤ Global commercial transport (trucks)

➤ 17% of global oil demand

➤ Slower transition

➤ Petrochemicals

➤ 15% of global oil demand

➤ Very difficult to decarbonize

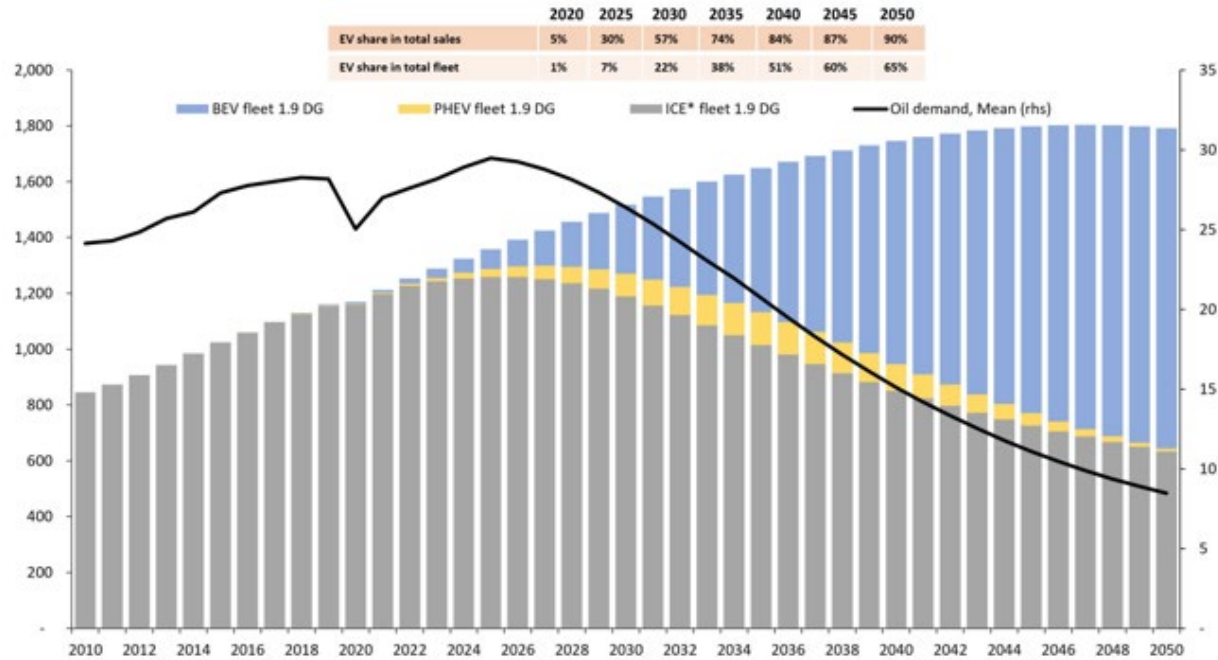
➤ Rystad produced 3 scenarios (on graph: +Sigma, Mean (baseline) and -Sigma) which correspond to varied climate, technological, and policy trajectories

Global Energy Transition

Global passenger vehicle fleet and oil demand

Million vehicles

Million barrels per day

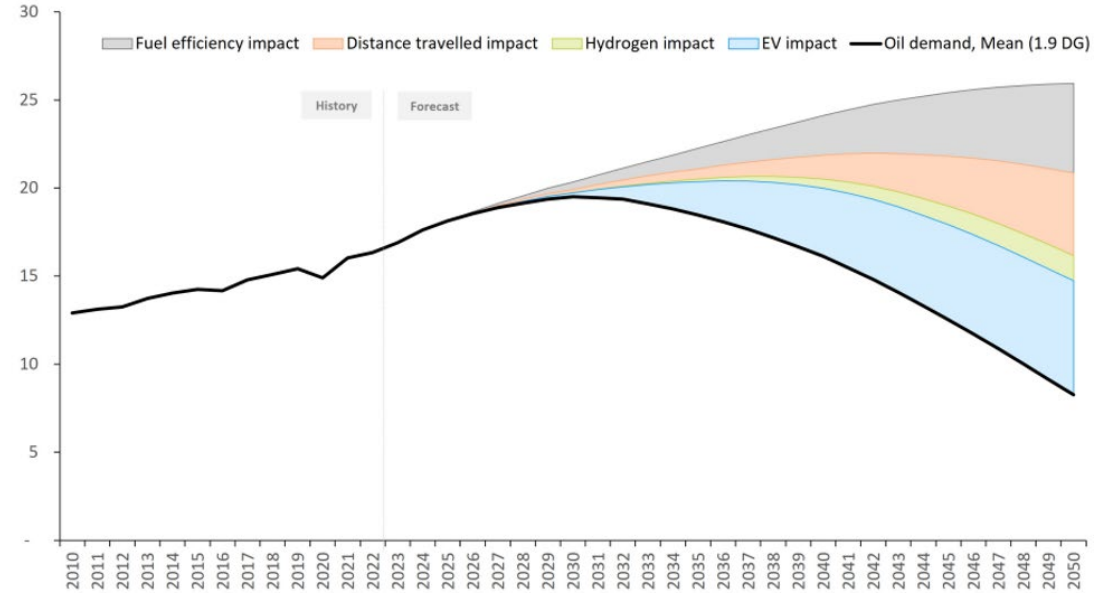


Source: Rystad Energy Oil Market Transition Solution, Rystad Energy OilMarketCube

- Rystad analysis states:
 - Global oil demand for passenger vehicles peaks in 2025
 - Rystad maintains electrification trend is irreversible due to strong investments in R&D by all major OEMs
 - Most important driver for the decline in oil demand in the next 30 years

Global trucks oil demand and energy transition impact

Million barrels per day



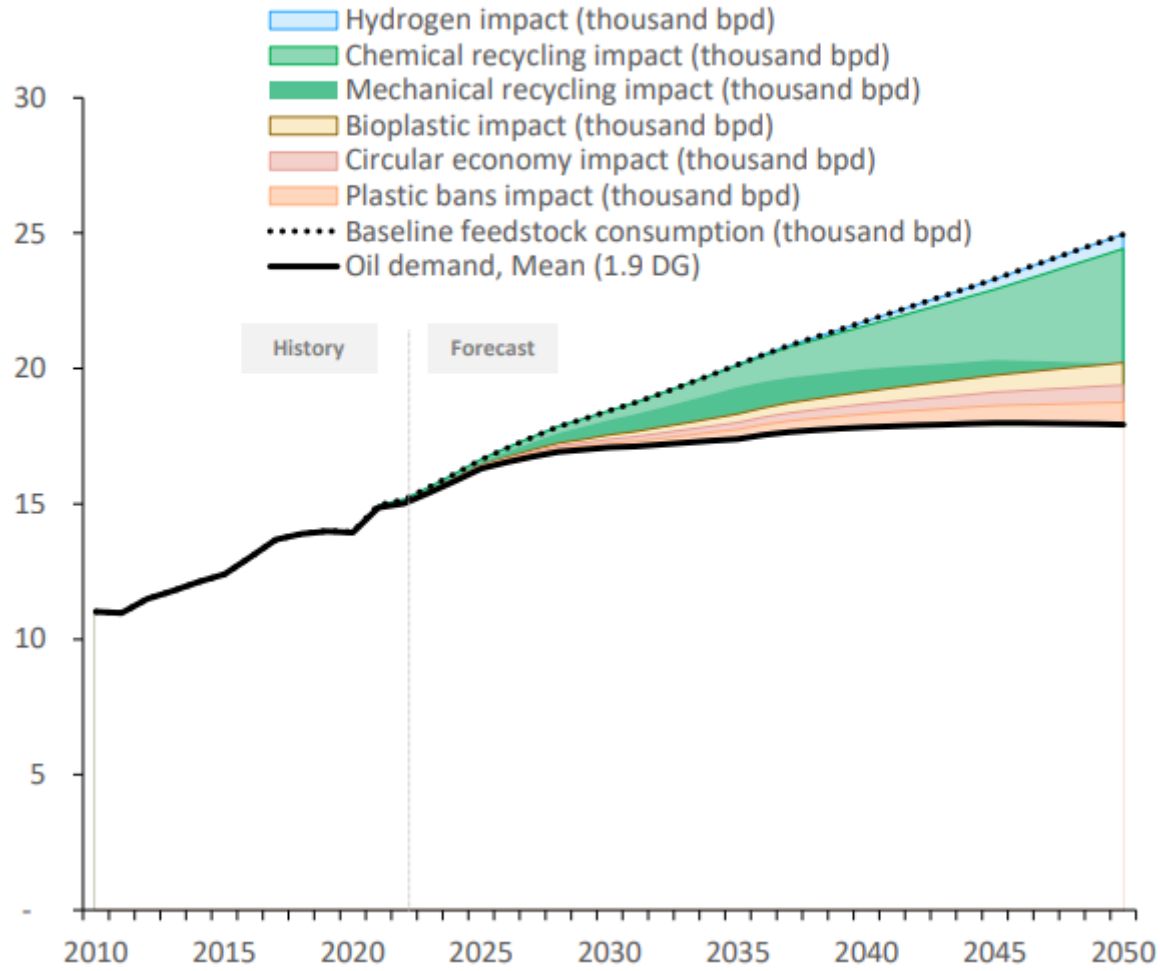
Source: Rystad Energy Oil Market Transition Solution, Rystad Energy OilMarketCube

- Oil demand for commercial road transport increases in near term
- Once technology matures it impacts hauling sector in mid-2030s and beyond
- Additionally impacted by fuel efficiency standards

Global Energy Transition

Petrochemicals demand and energy transition impact

Million barrels per day



- Petrochemical sector is unlikely to undergo a similar transition
- Very difficult to decarbonize
- Currently no viable substitutes for oil feedstock
- Oil demand in petrochemical sector is set to grow in the short term before stabilizing and plateauing in the medium term

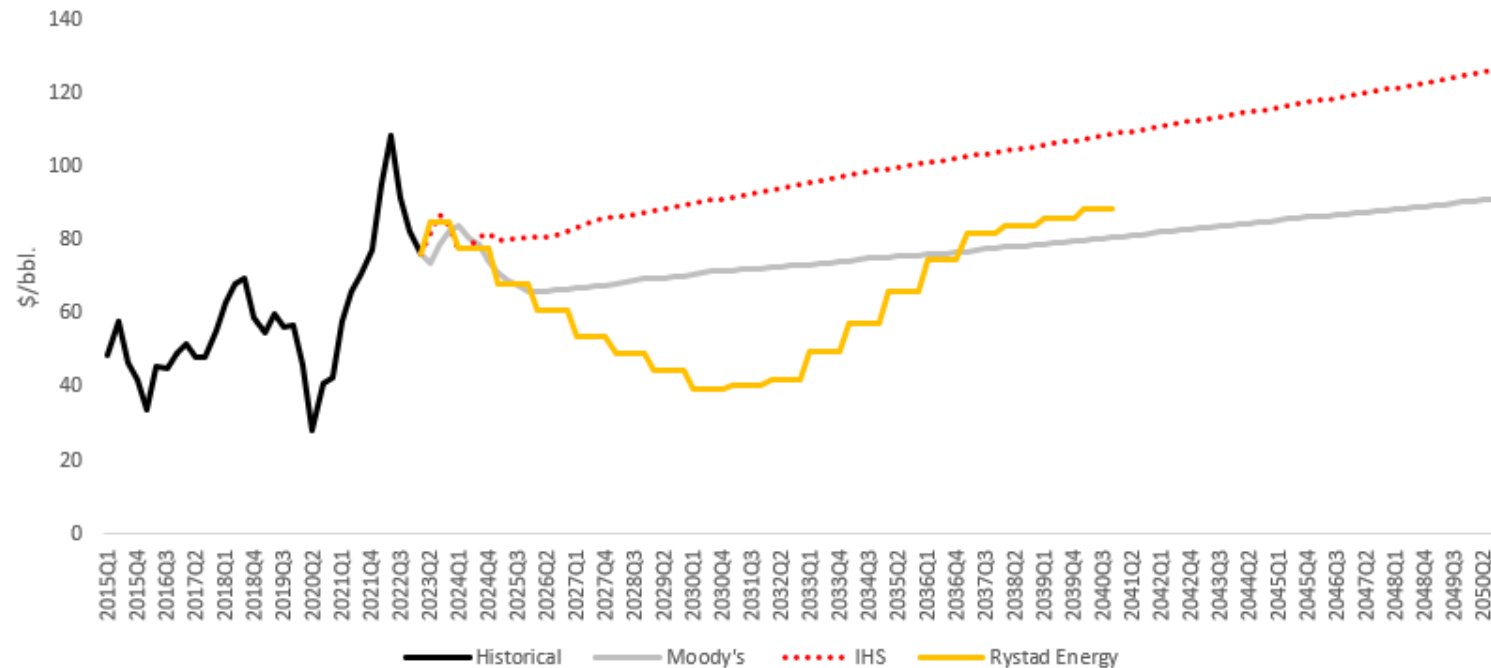
Oil & Natural Gas

U.S. Oil WTI Prices (Moody's, IHS, Rystad)

Moody's WTI Price Forecast (2023Q2 to 2050Q4)

IHS WTI Price Forecast (2023Q2 to 2050Q4)

Rystad Energy WTI Price Forecast (2023Q2 to 2040Q4)

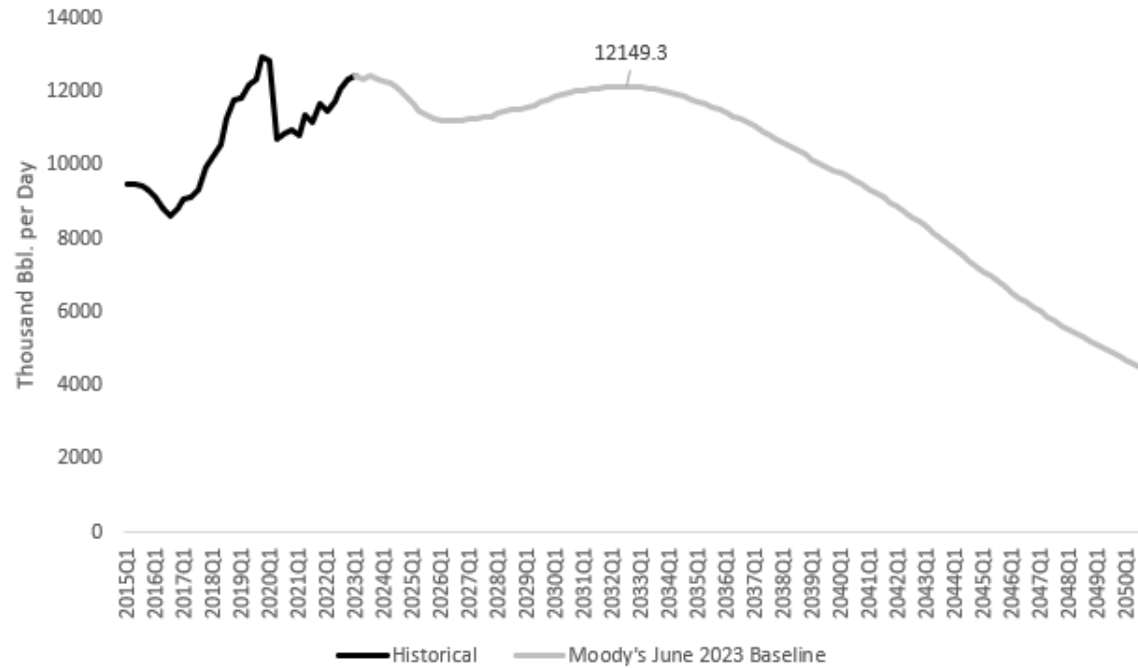


Source: Moody's Analytics, IHS Markit, Rystad Energy

- Three analytic firms view on oil prices
- Oil prices are inherently volatile and dependent on oil demand, inventory levels, OPEC+ decisions, and other factors

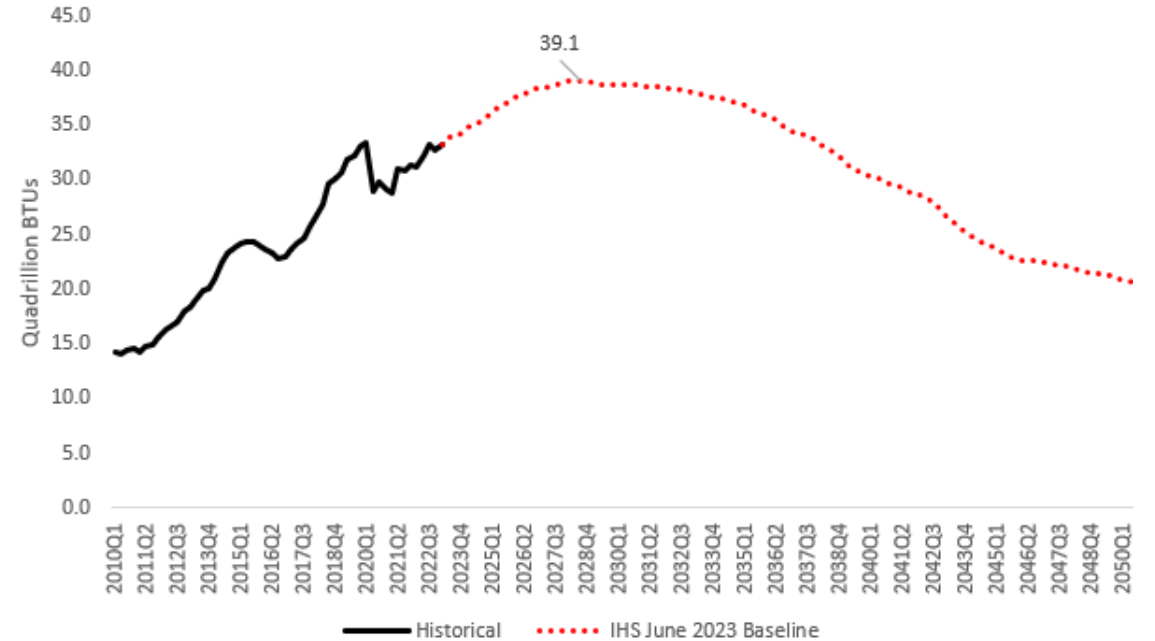
U.S. Oil Production (Moody's & IHS)

US Crude Oil Production Moody's Forecast (2022Q2 to 2050Q4)



Source: Moody's Analytics

US Crude Oil Production IHS Forecast (2022Q2 to 2050Q4)



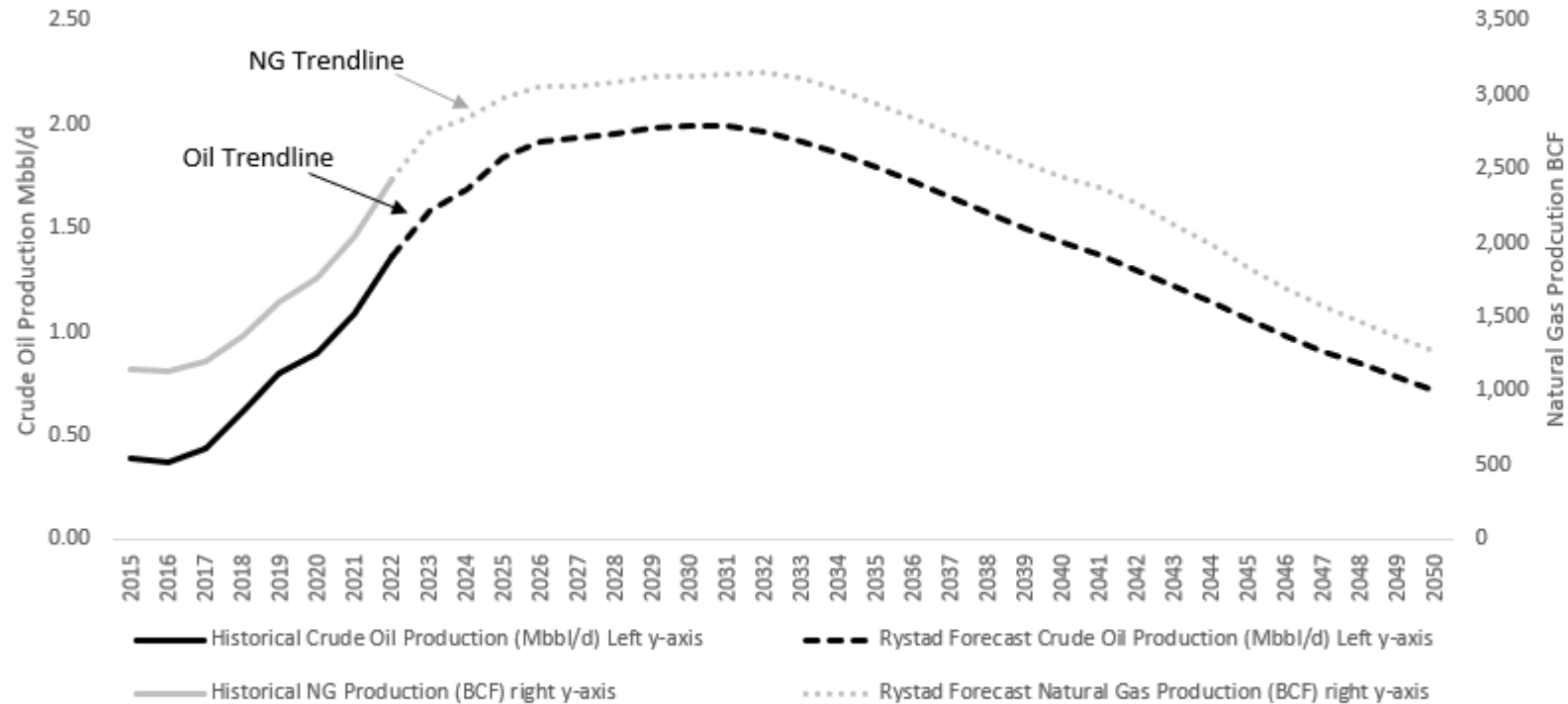
Source: IHS Markit

- Both national forecasters see U.S. oil production peaking between 2028 and 2033
 - IHS estimates U.S. oil production peak in 2028
 - Moody's estimates U.S. oil production peak in 2033

N.M. Oil Production Long-Term Forecast

NM Crude Oil Production Forecast (CY 2023 to 2050)

NM Natural Gas Forecast (CY 2023 to 2050)



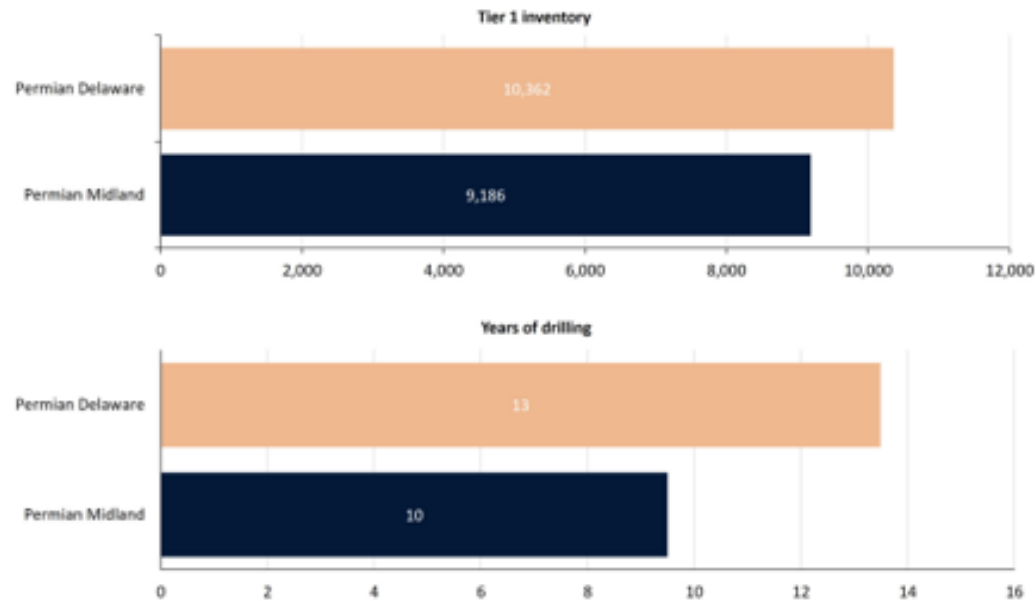
Source: Rystad Energy, Ucube

- N.M. specific forecast of oil and natural gas production falls inline with national expectations

N.M. Oil Production Detail

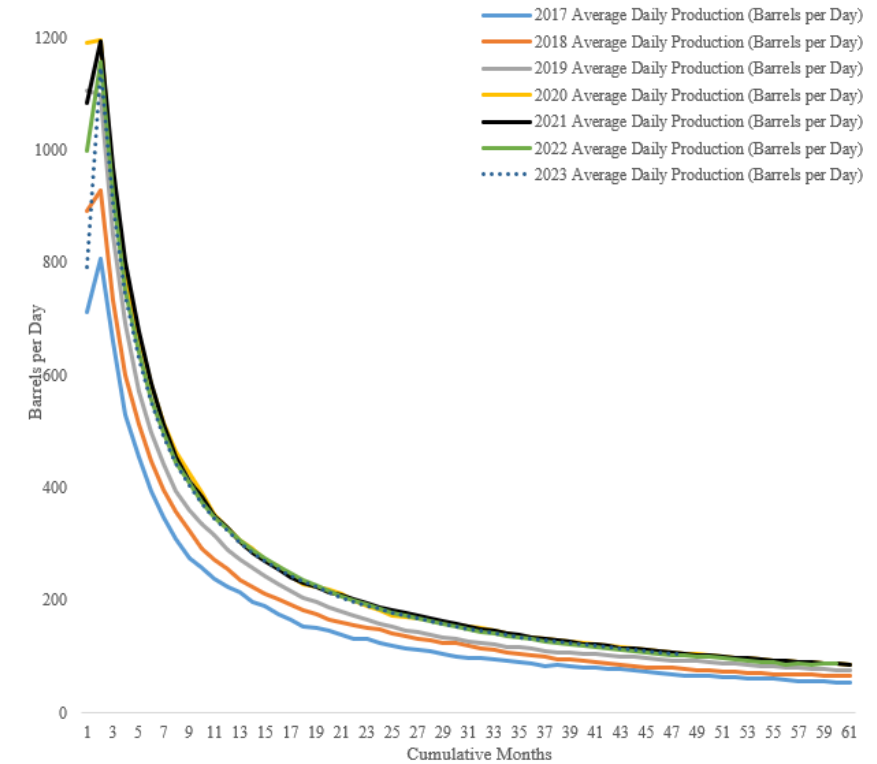
Remaining Tier 1 inventory in Permian Basin and years of drilling

Number of locations and number of years



Source: Rystad Energy ShaleWellCube, Rystad Energy UCube, Rystad Energy research and analysis

New Mexico Well Curves by Start-up Year



Source: Rystad Energy, ShaleWellCube

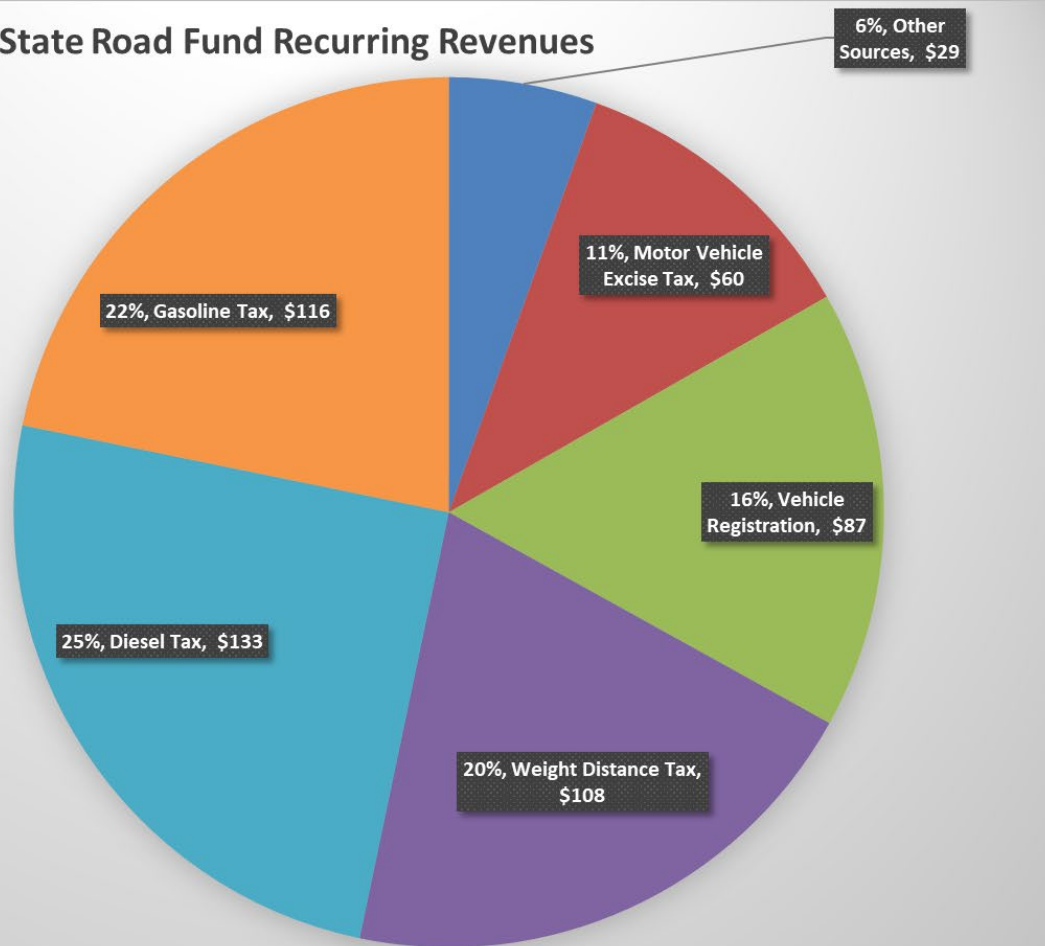
- Remaining years of drilling in the Permian Delaware at current pace in Tier 1 acreage are estimated at 13 years (Rystad Energy)

- Wells have high yields of production in the first few months but quickly drop off
- Drilling activity must keep pace in order to maintain high levels of production

N.M. State Road Fund

NM State Road Fund – Overview

State Road Fund Recurring Revenues

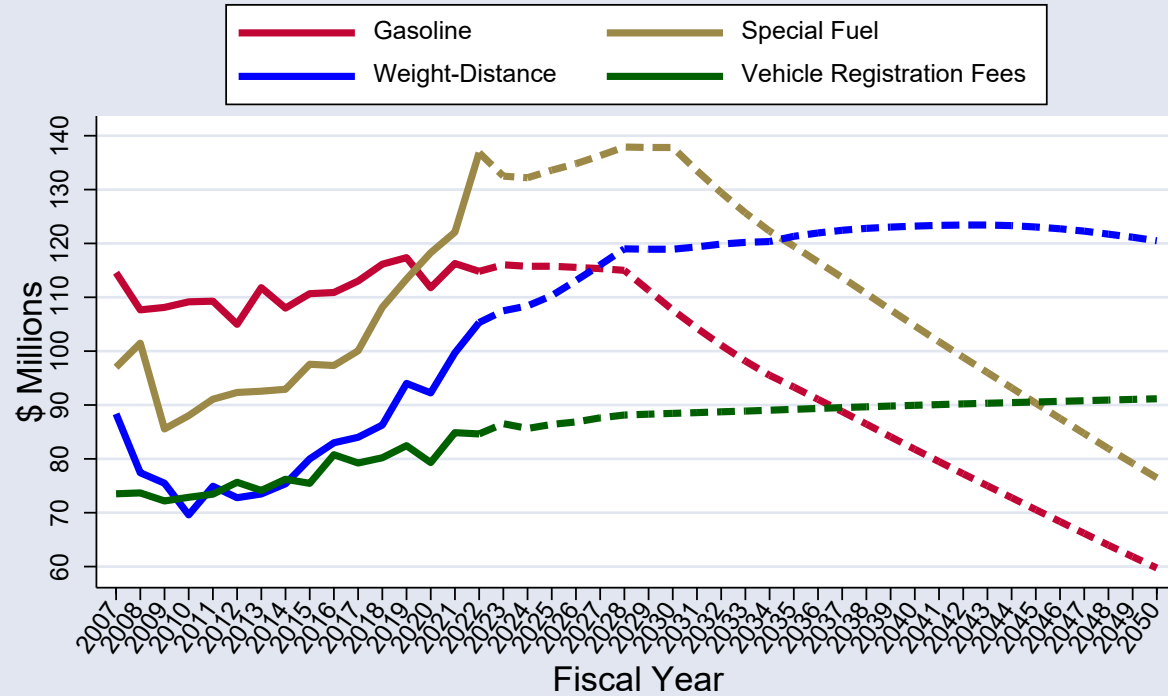


- State Road Fund received \$546 million in recurring revenues in FY22.
- NMDOT's July 2023 Road Fund Outlook forecasts the recurring revenues to grow ~0.1% in FY23
 - Growth in Motor Vehicle Excise and Weight/Distance taxes were offset by declines in Special Fuel and Trip Taxes
 - Since FY13, the State Road Fund recurring revenues have grown at an annual average rate of 4%.
- Biggest revenue sources are:
 - Gasoline Tax
 - Diesel Tax
 - Weight-Distance Tax
 - Vehicle Registration Fees

*Based on NMDOT's July 2023 Road Fund Outlook

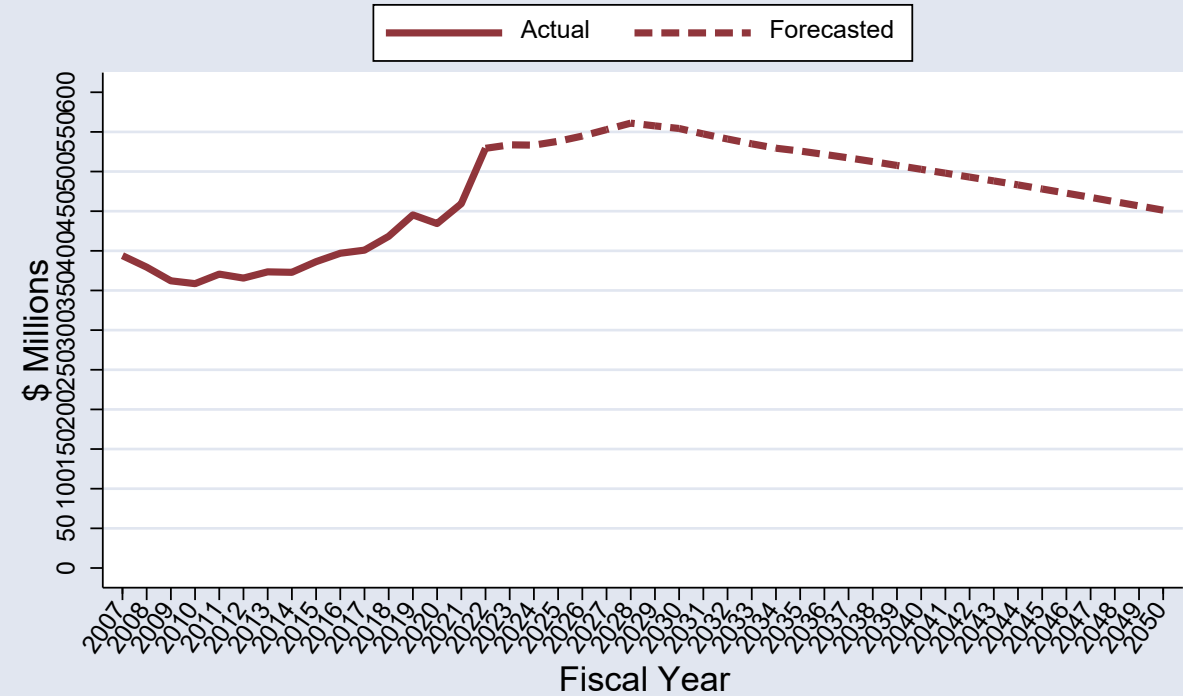
Long Term State Road Fund Outlook

Four Major State Road Fund Revenue Sources



Near term forecast based on NMDOT's July 2023 Road Fund Outlook.
Longer term forecast based on projections from IHS.

Total Road Fund Revenues



Near term forecast based on NMDOT's July 2023 Road Fund Outlook.
Longer term forecast based on projections from IHS.

- Over the next 5 years, State Road Fund revenues are expected to grow at an annual average rate of 1.0%, slowly shrinking thereafter.
 - Future short-term growth mainly driven by commercial vehicle revenue sources and is tied to overall economic activity.
 - Future long-term revenue expectations being pulled down by declining revenues from gasoline and diesel taxes based on assumptions around fuel economy standards and national trends towards increased adoption of electric vehicles.
- Usual caveats apply.

State Road Fund – Future Issues



- Road construction costs are expected to grow 160% between 2023 and 2050. 5.9% average annual growth rate.
- State Road Fund recurring revenue is expected to shrink 15% between 2023 and 2050. -0.6% average annual growth rate.

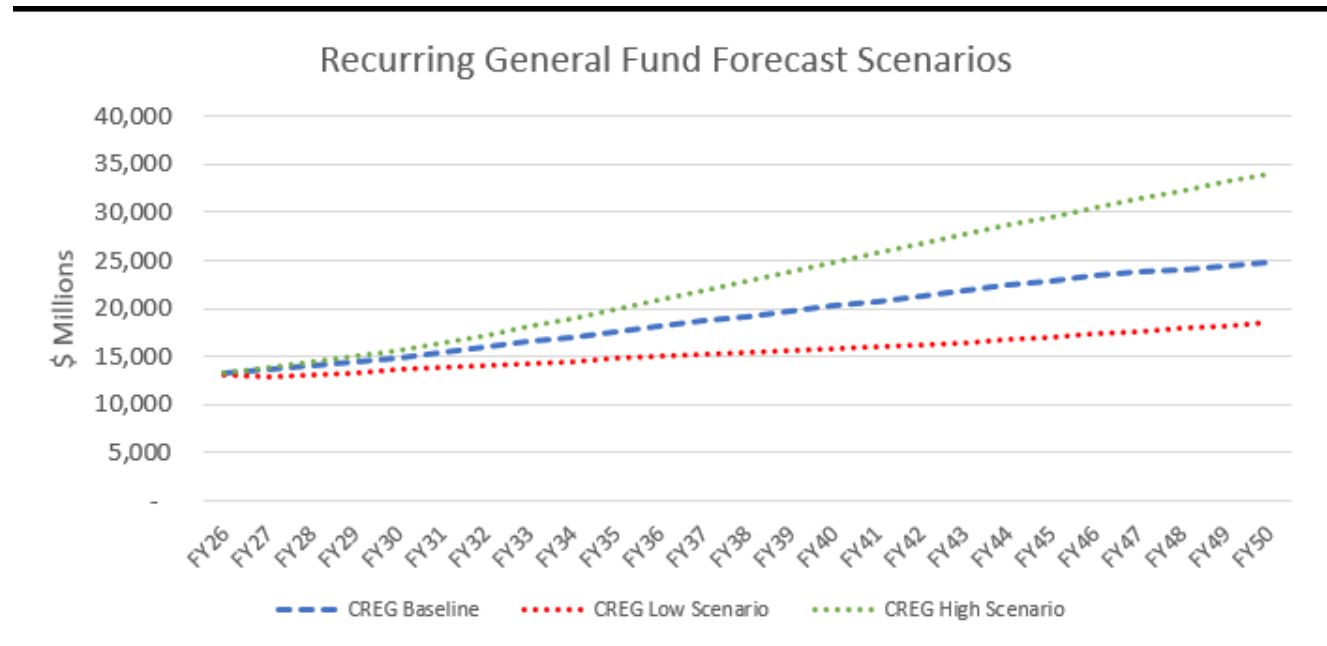
State Road Fund – Future Issues

- Weakening connection between road use and fuel use
 - Motor fuel taxes are New Mexico State Road Fund's largest revenue source
- New Mexico fuel taxes have not been revised since:
 - FY1996 – Gasoline Tax
 - FY2004 – Diesel Tax
- New Mexico's gasoline tax, at 17 cents per gallon,
 - 5th lowest in the nation
 - US average 31.2 cents per gallon
- New Mexico's diesel tax, at 21 cents per gallon,
 - 10th lowest in the nation
 - US average 33.64 cents per gallon
- New Mexico's passenger vehicle registration fees are significantly lower than the US average.
- Major concerns for future of State Road Fund – Increased fuel efficiency of vehicles and adoption of electric vehicles
- To mitigate the loss in fuel tax revenues, other states have explored:
 - Additional registration fees
 - Road User Charges

N.M. General Fund

General Fund Long-Term Forecast Scenarios

- Benchmarked to FY26 in the December 2022 forecast with 2023 legislative adjustments
 - In particular impact of SB-26
- Oil and Natural Gas forecast
 - Consensus analysis with State Investment Council and CREG
 - Assume Rystad Energy Oil and Natural Gas production turning points for New Mexico in baseline scenario, FY31 and FY33 respectively
- Assume GRT and PIT forecast adjustments for changes in oil and gas production
- High Scenario – assume Moody’s optimistic scenario for New Mexico economy, higher oil and natural gas prices and production
- Low Scenario – assume Moody’s mild recession in FY26 – FY27 coupled with low oil and natural gas prices and production



Source: IHS Markit, Moody's Analytics, Rystad Energy, CREG Analysis 2023

High Level Assumptions

Assume all state tax expenditures remain as per current law

Assume no change to federal level income tax

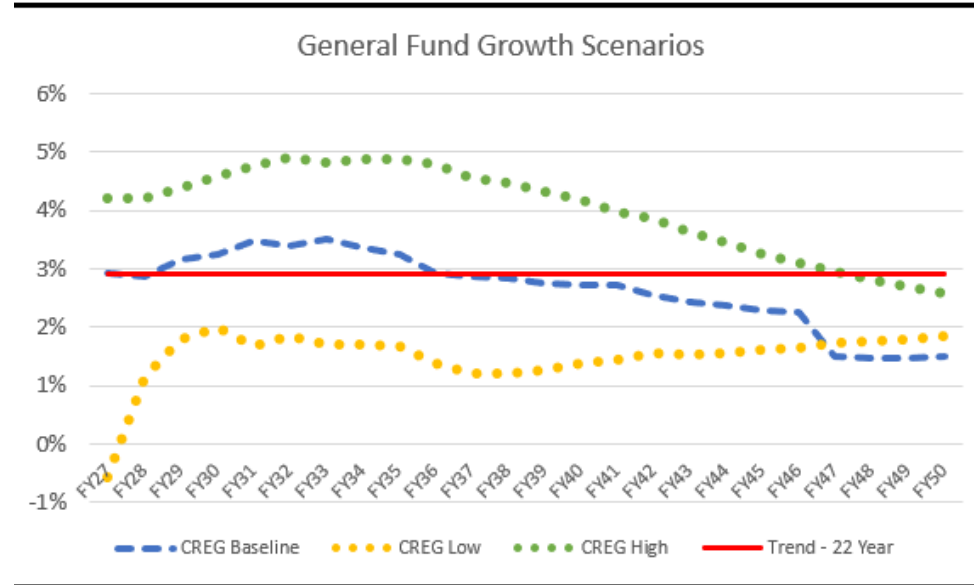
- Tax Cuts & Jobs Act (TCJA) renewed as baseline

Assume no change in current tax rates or personal or corporate income brackets

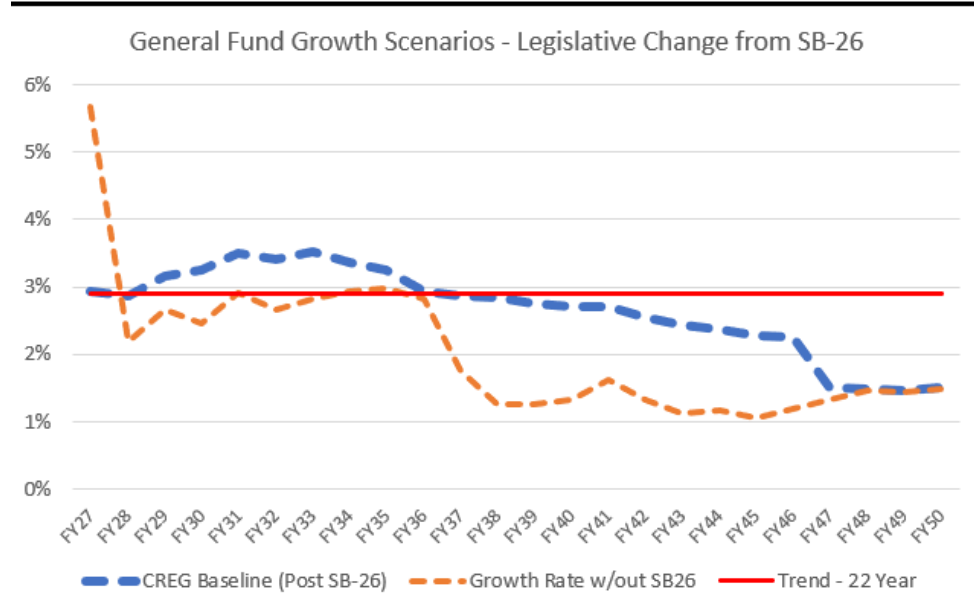
Assume no change in state population outlook – or labor force participation

General Fund Scenarios Outlook

- Trend Analysis, Extended to 22-year (2000-2022) Growth Rate for General Fund
 - The trend growth rate – centers the long-term outlook to current 22-year general fund growth
- Given near-term outlook for oil and gas, the baseline and high scenarios have growth rates at or above trend
- Past downturn in oil and natural gas production, growth rate in the baseline outlook drops below trend
- SB-26 legislation significantly regulates the general fund growth rate to stabilize the volatility (bottom graph)



Source: IHS Markit, Moody's Analytics, Rystad Energy, CREG Analysis 2023

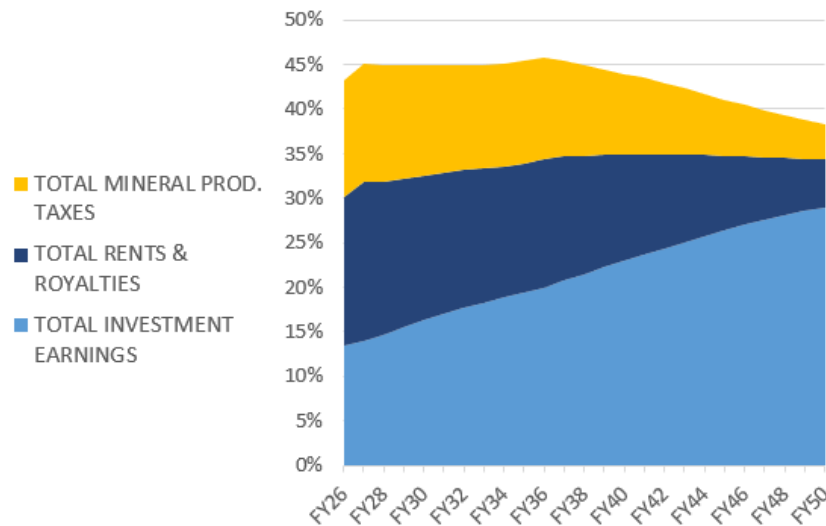


Source:CREG Analysis 2023

General Fund Component Growth

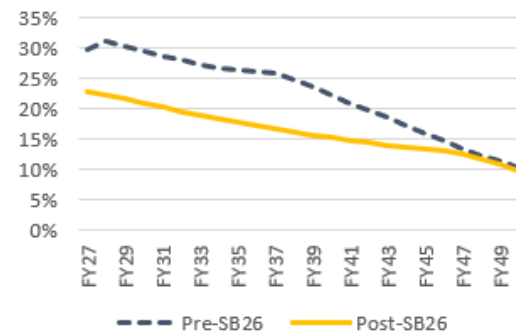
- Direct Severance Revenue as a percentage of General Fund declines from below 24% to 10% compared to without SB26 where the decline is from 30% to 10%
- Investment Earnings as a share of General Fund double in percentage from 15% to 33%

Revenue Source % Share of Recurring General Fund
Baseline without SB-26



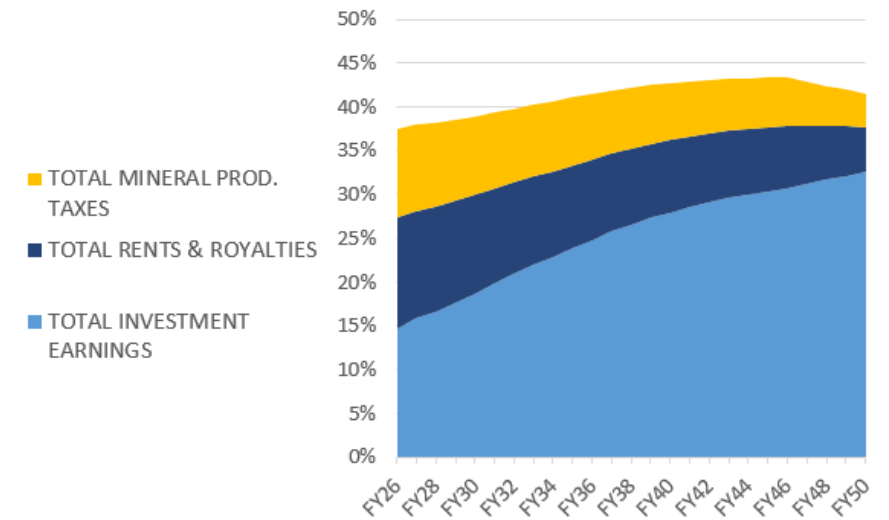
Source: CREG Analysis 2023

Direct Severance Revenue %
Share of General Fund



Source: CREG Analysis 2023

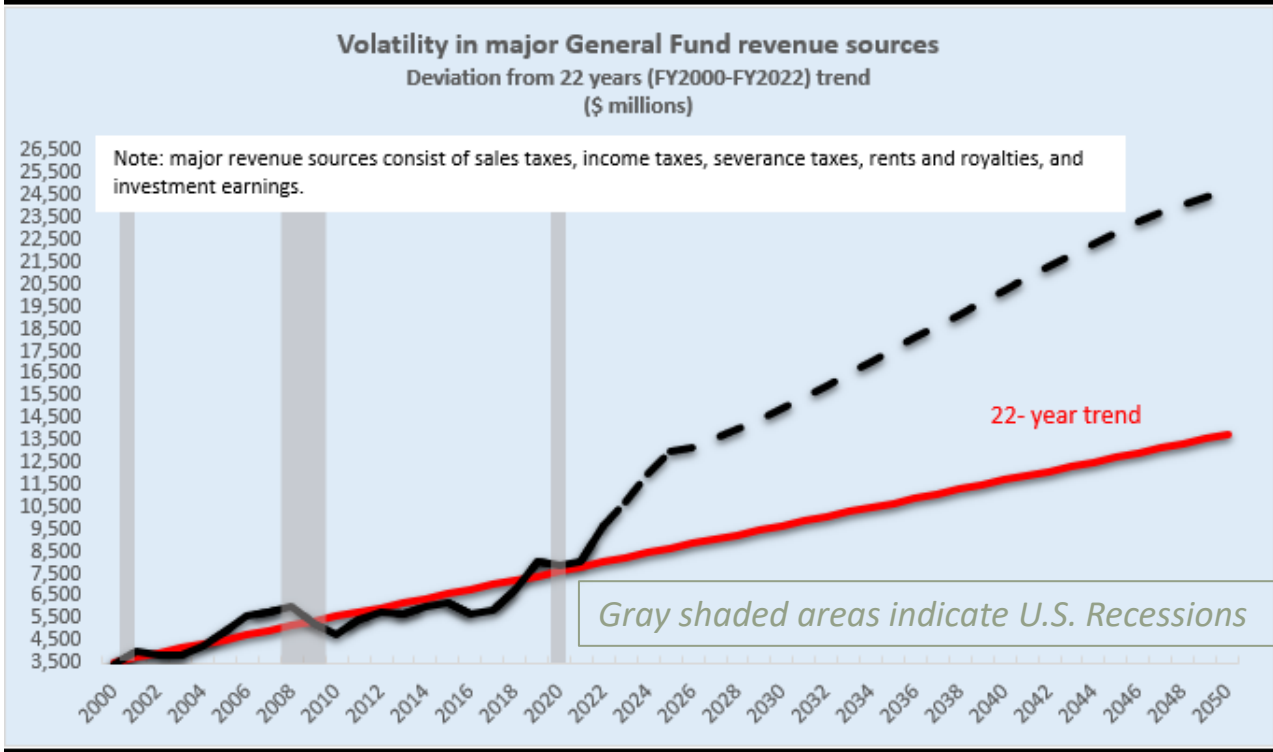
Revenue Source % Share of Recurring General Fund
Baseline with SB-26



Source: CREG Analysis 2023

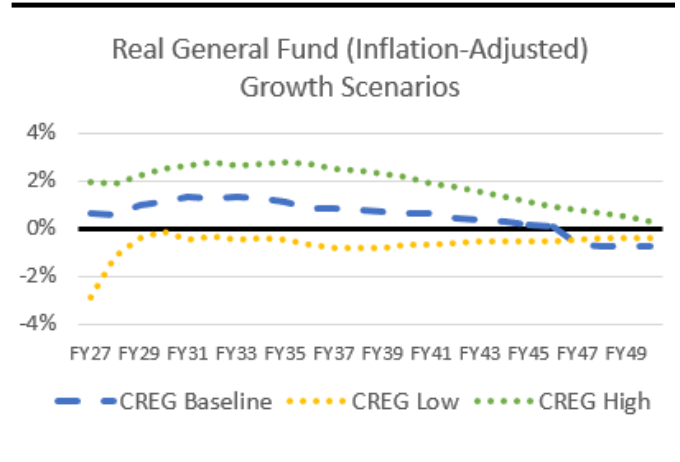
General Fund Scenarios Conclusion

- Adjusted for inflation, only the low scenario would see general fund contraction in near-term
- The forecast level is well above the 22-year trend level but
 - Growth rate drops below trend rate by FY37
 - Expect fluctuations around the long-term trend as there will be recessions and other noted risks below
- Risks and Sustainability of Long-Term Forecast
 - Recession Cycle
 - State Legislation
 - Federal Legislation
 - Federal Fiscal Policy
 - Size and Federal Funding: National Labs, Military Installations
 - Environmental Disaster Economic Impacts
 - Future Health Pandemic
 - Technology Innovations



Source: CREG Analysis 2023

➤ The models and estimates trends are useful for planning, budgeting, and policy purposes



Source: IHS Markit, CREG Analysis 2023