S&P Global
Market Intelligence

North Dakota Revenue Outlook

Presentation to North Dakota Legislative Council by S&P Global Market Intelligence

Thursday, March 13th, 2025

S&P Global
Market Intelligence

North Dakota Tax Revenue Outlook

Fiscal year forecast

Revenue Source	2023-25 Biennium		2025-27 Biennium		2027-29 Biennium	
	Fiscal Year 2024 Actual	Fiscal Year 2025 Forecast	Fiscal Year 2026 Forecast	Fiscal Year 2027 Forecast	Fiscal Year 2028 Forecast	Fiscal Year 2029 Forecast
Sales and use tax	**1,200,161,377**	**1,240,156,393**	**1,280,257,499**	**1,312,568,681**	**1,369,088,008**	**1,434,295,928**
	4.0%	***3.3%***	***3.2%***	***2.5%***	***4.3%***	***4.8%***
Motor vehicle excise tax	**174,919,202**	**163,547,252**	**166,962,364**	**176,062,595**	**187,084,389**	**198,965,282**
	2.4%	***-6.5%***	***2.1%***	***5.5%***	***6.3%***	***6.4%***
Individual income tax						
Total individual income tax collections	566,298,985	542,526,995	573,521,112	599,154,451	621,509,214	634,786,978
	-19.0%	*-4.2%*	*5.7%*	*4.5%*	*3.7%*	*2.1%*
Transfer to refund reserve accounts	(211,297,204)	(115,000,000)	(122,000,000)	(127,000,000)	(132,000,000)	(135,000,000)
Net individual income tax collections	**355,001,781**	**427,526,995**	**451,521,112**	**472,154,451**	**489,509,214**	**499,786,978**
	-26.5%	***20.4%***	***5.6%***	***4.6%***	***3.7%***	***2.1%***
Corporate income tax						
Total corporate income tax collections	301,392,914	313,382,348	318,471,351	303,942,590	313,197,697	313,060,112
	-18.2%	*4.0%*	*1.6%*	*-4.6%*	*3.0%*	*0.0%*
Transfer to refund reserve accounts	(24,000,000)	(53,000,000)	(54,000,000)	(51,000,000)	(53,000,000)	(53,000,000)
Net corporate income tax collections	**277,392,914**	**260,382,348**	**264,471,351**	**252,942,590**	**260,197,697**	**260,060,112**
	-10.2%	***-6.1%***	***1.6%***	***-4.4%***	***2.9%***	***-0.1%***

- The percentages reflect the change from the prior fiscal year.

Optimistic and pessimistic scenarios

Revenue Source	2023-25 Biennium Baseline	2023-25 Biennium Optimistic	2023-25 Biennium Pessimistic
Sales and use tax	2,440,317,770 *14.5%*	2,470,939,515 *16.0%*	2,365,504,687 *11.0%*
Motor vehicle excise tax	338,466,454 *9.6%*	346,614,607 *12.3%*	326,244,226 *5.7%*
Net individual income tax	782,528,776 *-16.6%*	816,182,866 *-13.1%*	736,962,404 *-21.5%*
Net corporate income tax	537,775,262 *3.1%*	544,261,184 *4.3%*	529,636,715 *1.5%*

Revenue Source	2025-27 Biennium Baseline	2025-27 Biennium Optimistic	2025-27 Biennium Pessimistic
Sales and use tax	2,592,826,181 *6.2%*	2,667,208,366 *7.9%*	2,147,403,042 *-9.2%*
Motor vehicle excise tax	343,024,958 *1.3%*	377,327,454 *8.9%*	291,571,215 *-10.6%*
Net individual income tax	923,675,563 *18.0%*	1,005,140,618 *23.2%*	742,403,663 *0.7%*
Net corporate income tax	517,413,941 *-3.8%*	629,207,010 *15.6%*	421,550,920 *-20.4%*

Agriculture Outlook

Key Considerations

- **US tariffs have been or will be imposed on Canada, Mexico, China and the EU.** On March 4 US tariffs were increased to 20% on imports from China, on top of existing tariffs already in effect for many Chinese goods. The US has postponed imposing 25% tariffs on most goods imported from Canada and Mexico until April 2.

- **President Trump is also taking steps to impose reciprocal tariffs on all major trading partners staring on April 2**. The reciprocal tariff plan will not only consider tariffs on trading partners, but also value-added taxes, and non-tariff barriers to trade and be evaluated by HS tariff lines

- **Mexico states it will not levy tariffs against US corn exports.** USDA Secretary Brooke Rollins held trade discussions virtually on March 10 with her counterparts in Mexico and Canada where Mexican Agriculture Secretary Julio Berdegué offered reassurances Mexico will not hit US corn with import restrictions.

- **Record agricultural imports fueled record monthly trade deficit in January.** US agricultural exports fell to $14.41 billion in January while agricultural imports rose to a record $20.66 billion, resulting in a record trade gap of $6.25 billion. The data put US agricultural exports at $63.97 billion so far in Fiscal Year (FY) 2025 while imports are now at $75.95 billion, leaving a deficit of $11.98 billion.

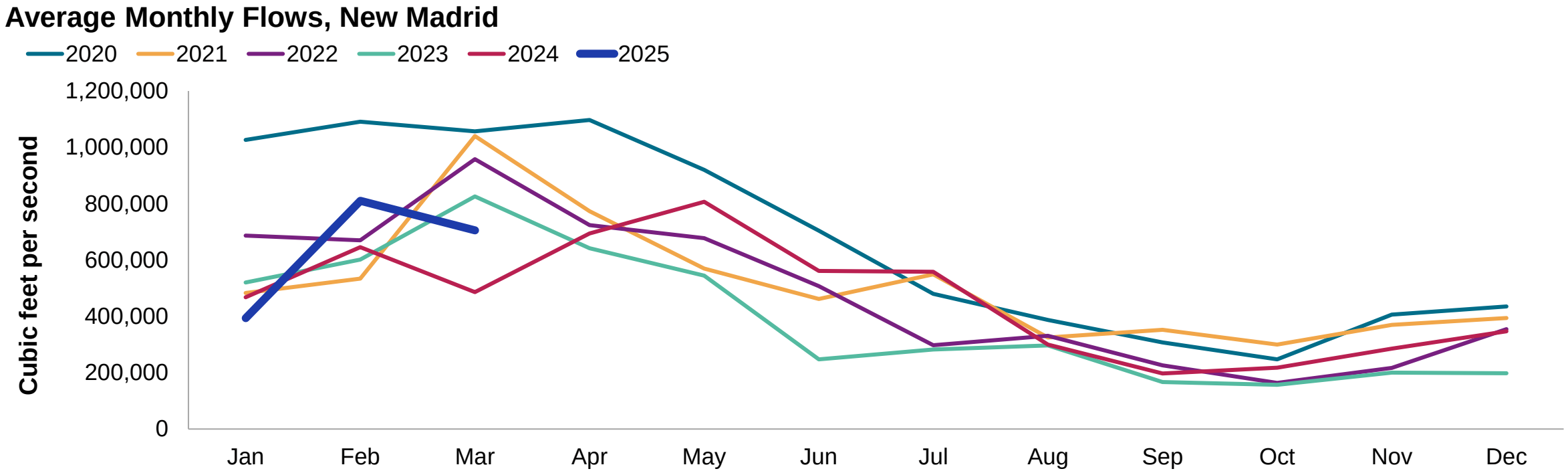
Key Considerations continued

- **Year-round E15 delayed in Ohio, South Dakota.** EPA announced Friday (Feb. 28) that year-round sales of E15 would be delayed in Ohio and South Dakota after the two states requested the delay so that infrastructure can be put in place. The waiver to allow year-round sales of E15 will be in place for Illinois, Iowa, Minnesota, Missouri, Nebraska, and Wisconsin.

- **Mexican Senate clears constitutional ban on GMO corn planting.** Mexico's Senate Wednesday approved a constitutional reform measure that would ban cultivation of genetically modified (GM) corn. The lower House last week cleared the measure. It now must be approved by the local legislatures in 17 of the 32 Mexican states. The language does not make any mention of imports.

- **Port deal reached with Panama Canal**. A consortium led by American asset manager BlackRock reached agreement on the purchase of stakes in two ports in the Panama Canal via a deal worth nearly $23 billion. The deal would include Hong Kong-based CK Hutchison's 90% ownership of Panama's Balboa and Cristóbal ports, strengthening US influence over the key trade route.

Despite an optimistic start of the year, water flows on the Mississippi River are trending downward for the month of March



Source: USGS

Earlier estimates suggested an increase in farm incomes, however, the impacts of US tariffs and trade war impacts are expected to cause a decline in farm incomes

US Farm Income

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
(Billion Dollars)															
Cash income statement:															
Cash receipts from farm marketings															
Crops	195.8	194.9	196.0	193.8	202.5	246.0	282.8	267.4	247.3	235.2	232.7	237.4	243.8	248.1	252.9
Livestock	162.7	175.6	176.1	175.6	165.0	196.4	259.8	249.6	272.4	278.4	253.7	253.3	257.7	261.7	267.1
Total farm marketings	358.5	370.4	372.1	369.3	367.5	442.4	542.6	516.9	519.7	513.6	486.4	490.7	501.5	509.8	519.9
Direct government payments	13.0	11.5	13.7	22.4	45.6	26.0	15.6	12.3	9.3	44.1	13.0	15.0	15.0	12.5	12.5
Farm-related income	27.9	31.2	29.1	34.7	34.3	32.2	51.8	53.7	52.0	45.6	42.5	41.2	40.1	40.4	40.7
Gross cash income	399.4	413.2	414.8	426.5	447.4	500.6	610.0	582.9	581.1	603.2	541.8	546.9	556.6	562.7	573.2
Cash expenses	303.8	311.9	311.4	317.3	326.5	345.4	399.9	426.1	423.0	420.1	413.9	413.2	418.8	424.3	435.8
Net cash income	95.6	101.3	103.5	109.2	120.9	155.2	210.1	156.8	158.1	183.2	128.0	133.7	137.8	138.5	137.4
Farm income statement:															
Gross cash income	399.4	413.2	414.8	426.5	447.4	500.6	610.0	610.0	582.9	581.1	603.2	541.8	546.9	556.6	562.7
Nonmoney Income	17.1	18.3	19.1	18.4	18.5	20.8	22.6	22.5	23.5	25.1	25.2	24.0	23.2	22.9	23.1
Inventory adjustment	-4.2	-6.1	-8.5	-15.0	-9.8	-3.2	-14.8	3.8	-9.7	-3.3	-0.2	-2.0	-2.9	-4.4	-4.3
Gross farm income	412.3	425.4	425.5	429.8	456.1	518.2	617.7	608.4	589.9	568.9	561.0	558.5	558.9	566.7	575.0
Total Expenses	349.9	349.7	343.1	347.8	357.3	372.0	435.7	609.2	594.9	625.0	566.8	568.9	576.9	581.2	591.9
Realized Net Farm Income	66.6	81.8	90.9	97.0	108.6	149.4	196.9	143.5	147.3	173.4	117.9	122.2	125.5	125.4	124.0
Net Farm Income	62.3	75.7	82.4	82.0	98.8	146.3	182.0	147.3	137.6	170.1	117.7	120.2	122.6	121.1	119.7
Deflated Net Farm Income \1	46.0	54.8	58.3	57.1	67.9	96.1	111.7	87.2	79.6	95.5	63.9	64.0	63.9	61.8	59.9

\1 Deflated by the GDP Implicit Price Deflator, 2000=100
Note: Shaded years are forecasts
Source: S&P Global Commodity Insights.

- As a result of the 2024 end-of-year federal aid package, 2025 net farm income has been revised significantly higher. Total government payments have been increased to $44.1 billion, leading to a net farm income projection just under $170 billion.
- This forecast has not incorporated any negative trade effects from retaliatory tariffs.

Farm asset values are expected to decline over the next several years due to decline in farmland values as well as livestock and poultry values

Balance Sheet of the US Farming Sector

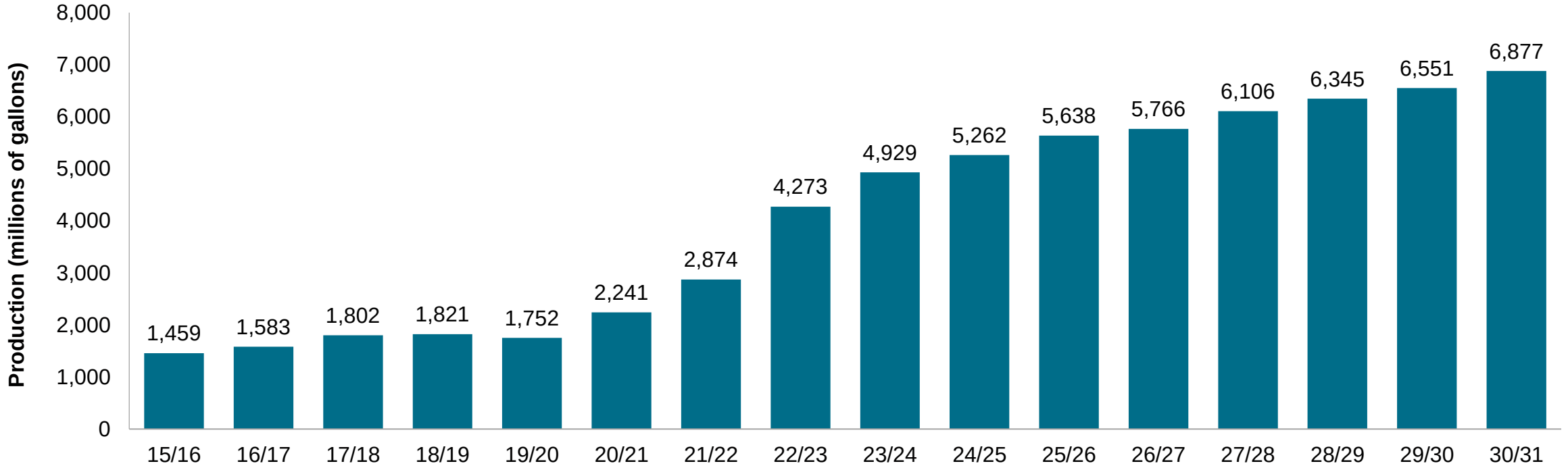
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
(Billion Dollars)															
Farm assets															
Real estate	2,401.4	2,472.8	2,502.6	2,519.9	2,596.8	2,822.5	3,156.4	3,338.8	3,523.6	3,540.4	3,478.9	3,483.0	3,487.1	3,513.2	3,536.6
Livestock and poultry	109.0	107.1	97.1	99.2	98.3	104.1	108.7	127.5	141.2	136.8	130.0	130.0	128.8	129.1	130.5
Machinery and motor vehicles	255.4	272.3	271.0	279.0	278.8	308.3	312.1	339.3	354.5	362.0	367.7	369.3	371.3	377.8	383.0
Crops stored	55.7	56.8	59.7	49.6	50.6	58.1	72.2	66.5	56.3	54.5	60.5	66.6	69.4	72.4	74.8
Purchased inputs	14.9	15.8	16.1	13.9	14.0	18.3	21.2	20.2	20.8	20.0	18.7	18.3	18.7	18.8	19.9
Financial assets	78.1	81.1	72.6	87.5	92.0	112.7	117.9	121.9	123.8	132.7	114.6	116.6	119.9	121.7	124.9
Total farm assets	2,914.4	3,005.9	3,019.1	3,049.1	3,130.5	3,424.1	3,788.4	4,014.3	4,220.2	4,246.5	4,170.3	4,183.7	4,195.2	4,233.1	4,269.6
Farm Liabilities															
Real estate	226.0	236.2	245.8	267.9	288.6	324.4	334.4	344.6	360.2	371.3	365.1	365.7	366.1	368.6	371.0
Nonreal estate	148.2	154.2	156.8	152.6	152.6	149.9	161.8	174.4	181.8	186.3	182.5	185.6	187.7	190.9	194.7
Total farm liabilities	374.2	390.4	402.6	420.5	441.3	474.3	496.2	519.0	542.0	557.6	547.6	551.3	553.7	559.5	565.7
Farm Equity	2,540.3	2,615.5	2,616.5	2,628.6	2,689.3	2,949.8	3,292.3	3,495.4	3,678.2	3,688.9	3,622.8	3,632.4	3,641.5	3,673.5	3,704.0
Debt/Equity Ratio	0.15	0.15	0.15	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Debt/Asset Ratio	0.13	0.13	0.13	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13

\1 Deflated by the GDP Implicit Price Deflator, 2000=100
Note: Shaded years are forecasts
Source: S&P Global Commodity Insights.

- Farm assets are expected to decline over the next few years, driven by declines in real estate, livestock, and poultry values. However, real estate values are projected to begin appreciate in 2028.
- The debt to equity ratio and the debt to asset ratio is expected to remain steady through the forecast period.

US bio-distillate production is expected to grow steadily through the decade

US bio-distillate production outlook



Source: S&P Global Commodity Insights.

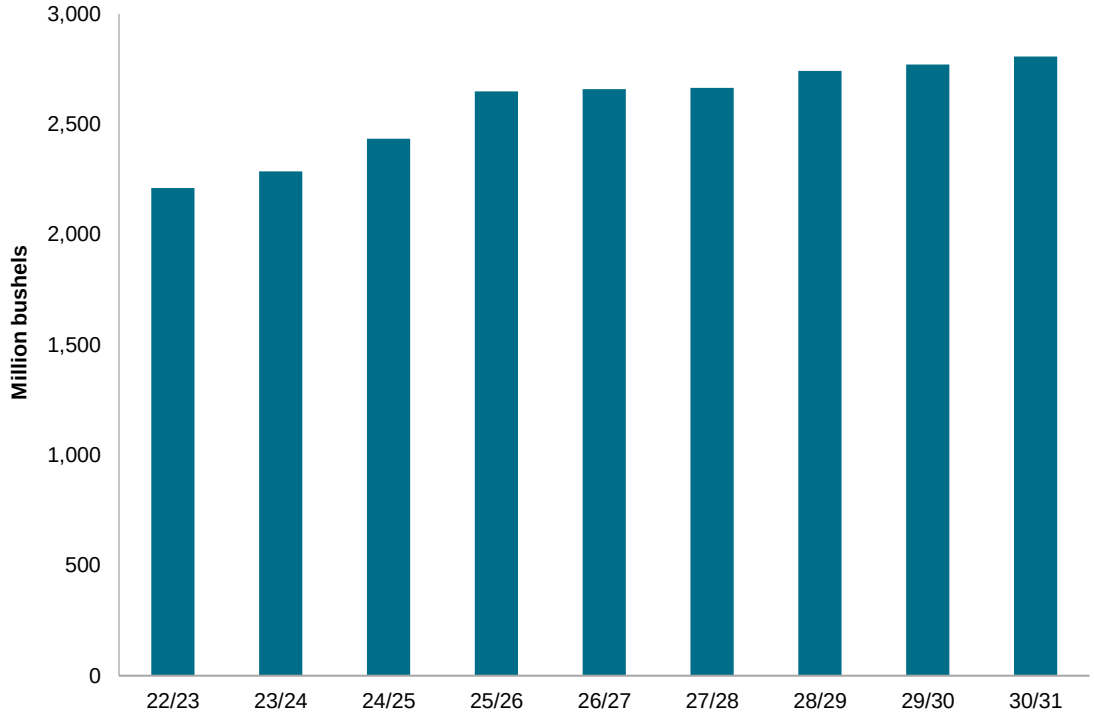
- Soybean oil production for bio-distillate increased from 1,705 million gallons to 1,829 million gallons in 2024/25. Production is expected to increase to 2,008 million gallons in 2025/26.
- Longer term, we continue to forecast a robust soy oil demand from the bio-distillate sector. Demand will also increase for corn and canola oil with canola rising at a faster pace longer term. Other feed stocks will continue to play a pivotal role in meeting the expanding mandate.

US soybean prices declined dramatically due to the US-China trade war

U.S. SOYBEAN COMPLEX FUNDAMENTALS	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
Prices (Dollars Per Bushel)	$14.20	$12.40	$9.89	$9.49	$9.71	$9.81	$9.36	$9.39	$9.98
Soybean to Corn Price Ratio	2.2	2.7	2.3	2.5	2.5	2.3	2.2	2.2	2.3
Acreage (Million Acres)									
Planted Area	87.5	83.6	87.1	83.3	86.1	84.0	85.8	85.4	82.5
Harvested Area	86.2	82.3	86.1	82.4	85.2	83.1	84.9	84.5	81.7
Harvested Area % of Planted	99%	98%	99%	99%	99%	99%	99%	99%	99%
Yield (Bushels Per Acre)	49.6	50.6	50.7	53.0	53.3	53.8	54.3	54.9	55.4
Supply (Million Bushels)									
Beginning Stocks	274	264	342	514	962	1,191	1,269	1,287	1,302
Production	4,270	4,162	4,366	4,370	4,539	4,472	4,611	4,637	4,530
Imports	25	21	15	15	15	15	15	15	15
Total Supply	4,569	4,447	4,724	4,898	5,516	5,678	5,895	5,939	5,847
Domestic Disappearance (Million Bushels)									
Crush	2,212	2,287	2,435	2,650	2,659	2,665	2,742	2,771	2,808
Seed & Residual	114	123	75	86	116	119	125	123	122
Total Domestic Disappearance	2,326	2,410	2,510	2,736	2,775	2,785	2,867	2,895	2,929
Exports	1,980	1,695	1,700	1,200	1,550	1,624	1,741	1,743	1,639
Total Disappearance	4,305	4,105	4,210	3,936	4,325	4,409	4,608	4,637	4,569
Ending Stocks	264	342	514	962	1,191	1,269	1,287	1,302	1,278

Note: Shaded years are forecasts
Source: S&P Global Commodity Insights.

US soybean crush outlook



Source: S&P Global Commodity Insights

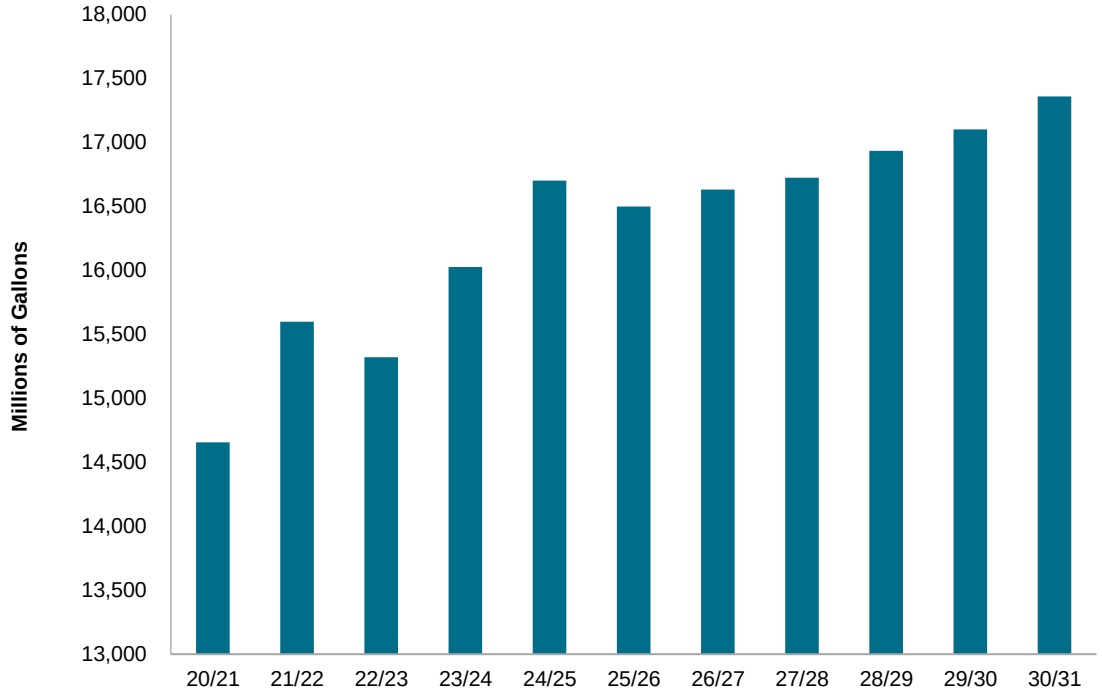
- US and Chinese tariffs are expected to remain in place for the foreseeable future and to have a significant impact on soybean futures. The price for 24/25 declined by $0.62 a bushel whereas the 25/26 market price declined by $0.80 per bushel.
- The old crop export forecast declined by 150 million bushels as we expect some additional business from alternative destinations amid falling soybean prices. For the new crop, exports are expected to decline 400 million bushels from the previous forecast to reflect no Chinese buying of US soybeans. This reflects the view that the US-China trade war will continue through the new crop.
- While China's tariffs will only lead to a 100 million bushel increase in old crop carryout, the market will price in the full effect of the trade war during the 25/26 marketing year.

US corn prices declined due to lower priced soybeans caused by the US-China trade war

U.S. CORN FUNDAMENTALS	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
Prices (Dollars Per Bushel)	$6.54	$4.55	$4.30	$3.80	$3.85	$4.20	$4.21	$4.33	$4.37
Acreage (Million Acres)									
Planted Acres	88.2	94.6	90.6	93.5	90.8	91.4	91.0	89.8	89.7
Harvested Acres	78.7	86.5	82.9	85.3	82.8	83.4	83.0	81.9	81.9
Harvested Area % of Planted	89%	91%	92%	91%	91%	91%	91%	91%	91%
Yield (Bushels Per Acre)	173	177	179	183	185	187	189	191	193
Supply (Million Bushels)									
Beginning Stocks	1,377	1,360	1,763	1,505	1,833	1,987	2,240	2,425	2,483
Production	13,651	15,341	14,867	15,603	15,309	15,615	15,698	15,662	15,839
Imports	39	28	25	25	39	39	39	39	39
Total Supply	15,066	16,729	16,655	17,133	17,181	17,641	17,977	18,126	18,360
Domestic Disappearance (Million Bushels)									
Total Domestic Disappearance	12,044	12,673	12,600	12,900	12,919	12,945	13,089	13,144	13,299
Exports (Million Bushels)	1,662	2,292	2,550	2,400	2,275	2,455	2,463	2,499	2,539
Total Disappearance (Million Bushels)	13,706	14,966	15,150	15,300	15,194	15,400	15,552	15,643	15,838
Ending Stocks (Million Bushels)	1,360	1,763	1,505	1,833	1,987	2,240	2,425	2,483	2,522

Note: Shaded years are forecasts
Source: S&P Global Commodity Insights.

US ethanol production outlook



Source: S&P Global Commodity Insights.

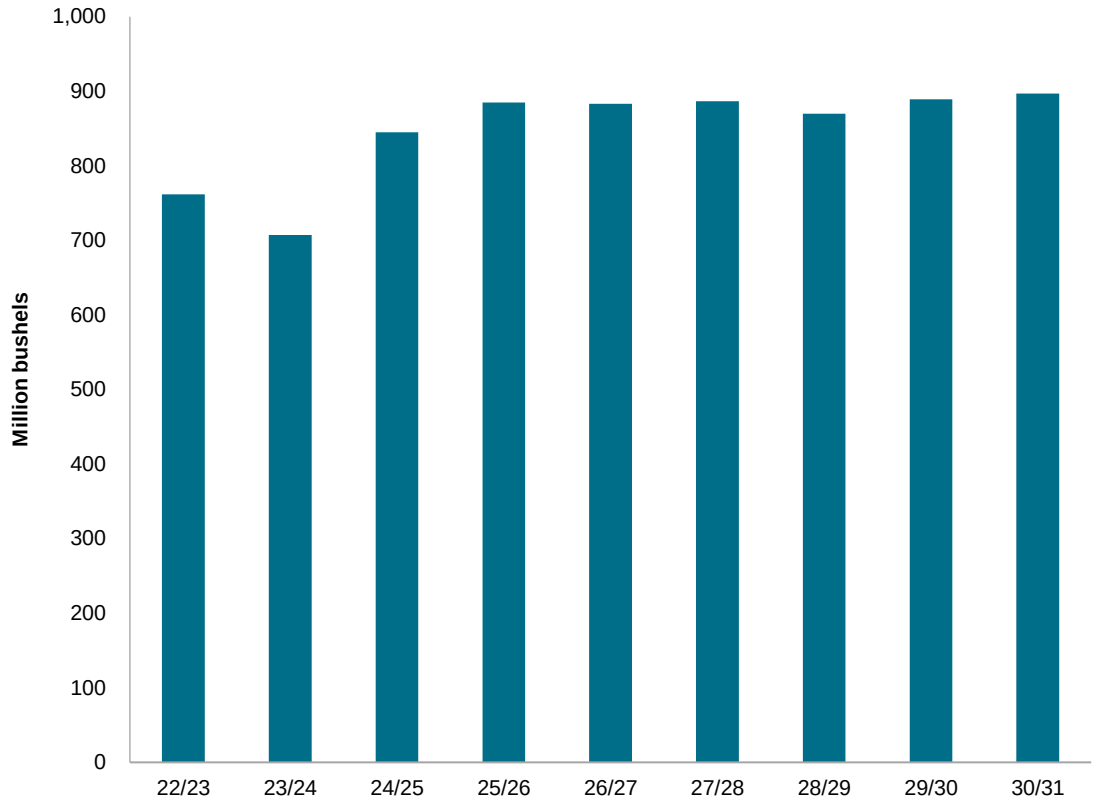
- The price forecast for corn declined due to Chinese tariffs weighing on the soybean market. Corn prices are forecasted to be $4.30 per bushel for 24/25 and $3.80 per bushel for 25/26. Although China has levied an additional 15% tariff on US corn, this likely will not impact US exports as China has been largely absent from US corn exports this marketing year
- Although Mexico has signaled it will not levy tariffs on corn at this time, a change in this stance represents a significant downside risk to our export forecast as Mexican demand has composed nearly 50% of total US corn exports so far in 24/25; however, US corn will likely remain competitive as about 65% of US exports to Mexico are transported via rail which poses a significant advantage to ocean freight.
- Canada is a significant share of US ethanol exports, composing an average 36% from Sep-Dec this marketing year—an average 4.3% of total US ethanol production. Canada's tariffs on US goods have yet to include ethanol, but if this changes, we could see a downside risk as large as 100 million bushels to our corn used for ethanol forecast.

US wheat prices declined due to the impacts of trade disputes

U.S. WHEAT FUNDAMENTALS	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
Prices (Dollars Per Bushel)	$8.83	$6.96	$5.60	$5.90	$5.55	$5.21	$5.52	$5.64	$5.49
Wheat to Corn Price Ratio	1.35	1.53	1.30	1.55	1.44	1.24	1.31	1.30	1.26
Acreage (Million Acres)									
Planted Acres	45.8	49.6	46.1	47.1	46.9	47.3	46.3	47.4	47.6
Harvested Acres	35.5	37.1	38.5	38.4	38.2	38.4	37.6	38.5	38.7
Harvested Area % of Planted	78%	75%	83%	81%	81%	81%	81%	81%	81%
Yield (Bushels Per Acre)	46.5	48.7	51.2	50.5	51.3	51.7	52.3	52.7	53.1
Supply (Million Bushels)									
Beginning Stocks	674	570	696	806	835	890	972	1,052	1,161
Production	1,650	1,804	1,971	1,936	1,958	1,989	1,964	2,029	2,055
Imports	122	138	135	125	111	108	110	111	110
Total Supply	2,446	2,512	2,803	2,867	2,903	2,986	3,047	3,192	3,325
Domestic Disappearance									
Food Use	972	961	968	974	971	975	973	974	979
Seed	68	62	64	63	64	62	64	65	62
Feed & Residual	74	85	120	110	95	90	88	104	84
Total Domestic Disappearance	1,114	1,108	1,152	1,147	1,130	1,128	1,125	1,143	1,125
Exports	762	707	845	885	883	887	870	889	897
Total Disappearance	1,876	1,815	1,997	2,032	2,013	2,014	1,995	2,032	2,022
Ending Stocks	570	696	806	835	890	972	1,052	1,161	1,303

Note: Shaded years are forecasts
Source: S&P Global Commodity Insights.

US wheat exports outlook



Source: S&P Global Commodity Insights.

- US wheat futures tumbled again this week amid vanishing weather risks in the US Plains, but, more importantly, US tariffs put on China and retaliatory measures hitting US grains and oilseeds. This is due to concerns that retaliatory measures against corn and soybean exports may impact future plantings of wheat.
- Wheat inspections remained stable and increased by 14.3 million bushels last week, totaling 574 million since the beginning of the marketing year. Export sales remained steady, with 12.4 million bushels of additional net sales in the week, putting total commitment at 746 million bushels, still roughly aligned with our forecast.

US beef production continues to decline while prices remain strong

US Cattle Sector Fundamentals

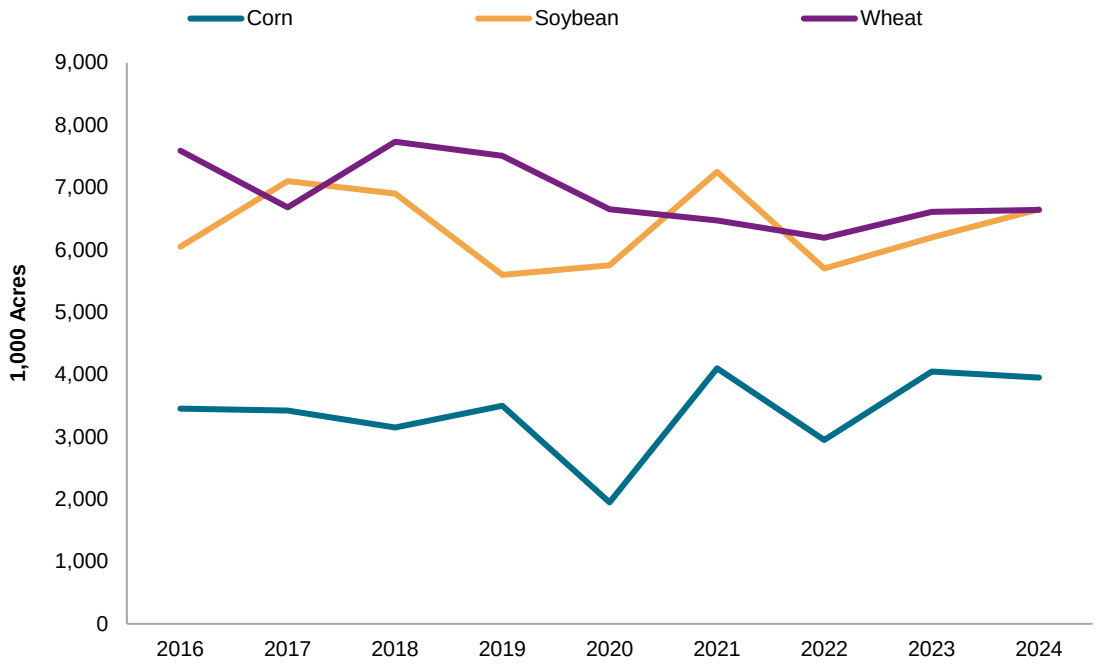
Item	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Cattle															
Beef Cow Inventories (Jan 1, million head)	30.2	31.2	31.5	31.8	31.3	30.8	30.0	28.9	28.2	28.3	28.4	29.7	30.7	30.8	30.9
Boxed beef cutout (dollars per cow)	206.8	209.9	214.0	222.6	238.9	279.3	263.9	298.0	307.2	353.6	281.6	273.3	269.5	268.4	272.0
Beef															
Beef retial price (Dollars per pound)	$5.96	$5.91	$5.92	$6.04	$6.38	$7.25	$7.59	$7.98	$8.23	$8.42	$7.53	$7.27	$7.15	$7.10	$7.19
Production (mil lbs)	25,221	26,228	26,867	27,148	27,153	27,938	28,291	26,964	26,987	26,193	26,022	27,152	27,932	28,603	28,691
Imports (mil lbs)	3,015	2,993	2,999	3,057	3,342	3,311	3,391	3,727	4,636	4,733	4,784	4,788	4,778	4,742	4,666
Exports (mil lbs)	2,556	2,860	3,155	3,022	2,956	3,446	3,536	3,038	2,987	2,700	2,659	2,777	2,908	3,060	2,987
Domestic use (mil lbs)	25,673	26,371	26,665	27,167	27,484	27,828	28,109	27,717	28,659	28,194	28,117	29,128	29,780	30,264	30,367

\1 Deflated by the GDP Implicit Price Deflator, 2000=100
Note: Shaded years are forecasts
Source: S&P Global Commodity Insights

- Overall cattle and calf inventories in the US were flat year over year at 86.9 million head at the start of 2025. Given the persistently strong consumption rates even in the face of record prices, the industry continues to see incentives to expand supply. In 2026, total cattle inventories are set to remain flat year over year at 87.2 million head, although gains in the overarching cattle herd are expected in 2027 and the following years.
- In 2025, beef production is expected to ultimately retreat by 2.9% year over year to 26.19 billion pounds. For 2026, beef output is set to drop by a lighter 0.7% year over year to 26.02 billion pounds, before increasing in 2027 and beyond.
- US beef consumption during 2025 is forecast to retreat by 1.6% year over year to 28.19 billion pounds, driven more by a lack of supply. Domestic use rates are expected to pick back up in 2027 and for several years afterward, as improved supply allows suppressed demand to recover.
- Beef prices in 2025 are projected to increase to new record highs, after previously doing so in 2024 and 2023. The 2025 boxed beef cutout is set to jump up to an average price of $353.6 per hundredweight (cwt), marking a 15.1% year-over year increase over 2024.
- In 2026, beef prices are set to fall by a notable 20.4% year over year to $281.6 per cwt, however, support from high demand rates will limit the full capacity of the decrease, meaning that beef values in the long run are to remain in a historically high range.

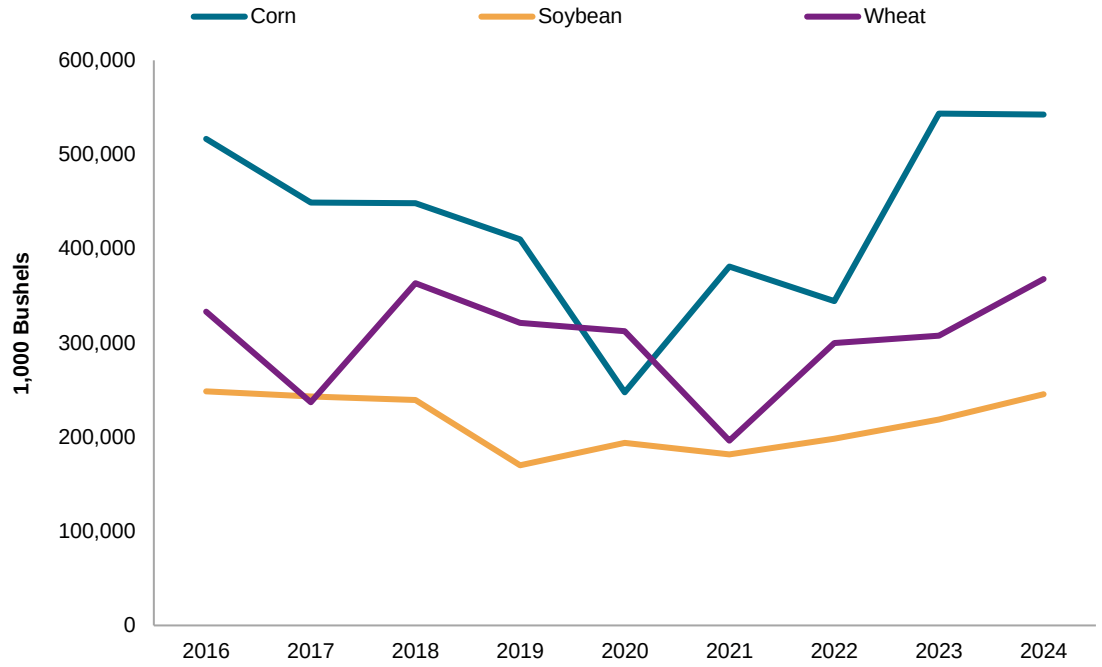
Soybeans are the top crop in North Dakota by acres planted in 2024, yet corn remains the top crop by yield

North Dakota crop plantings



Source USDA NASS.

North Dakota production by crop

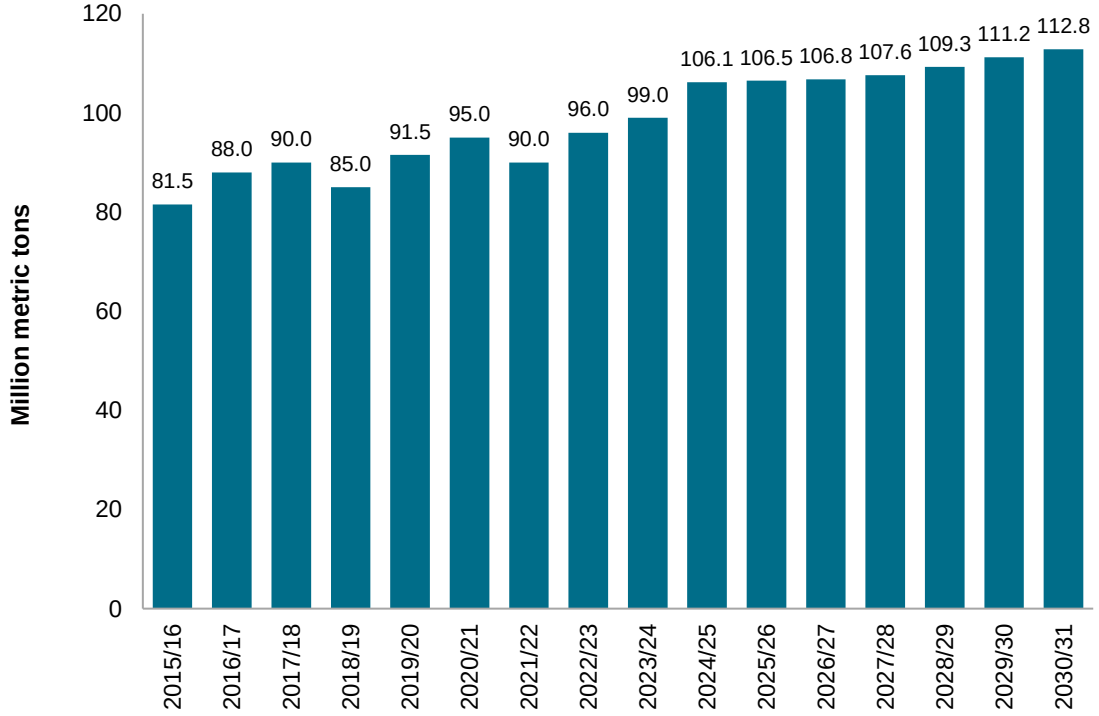


Source: USDA NASS

- For 2024/25, North Dakota soybeans has slightly surpassed wheat in terms of acres planted by 10,000 acres. Corn acres planted decreased slightly year over year.
- Due to fewer acres planted corn production in North Dakota was lower in 2024 compared to 2023, but favorable yields made the kept the decline around 1 million bushels. Meanwhile, soybean production increased by 32 million bushels and wheat production increased by 59.9 million bushels.

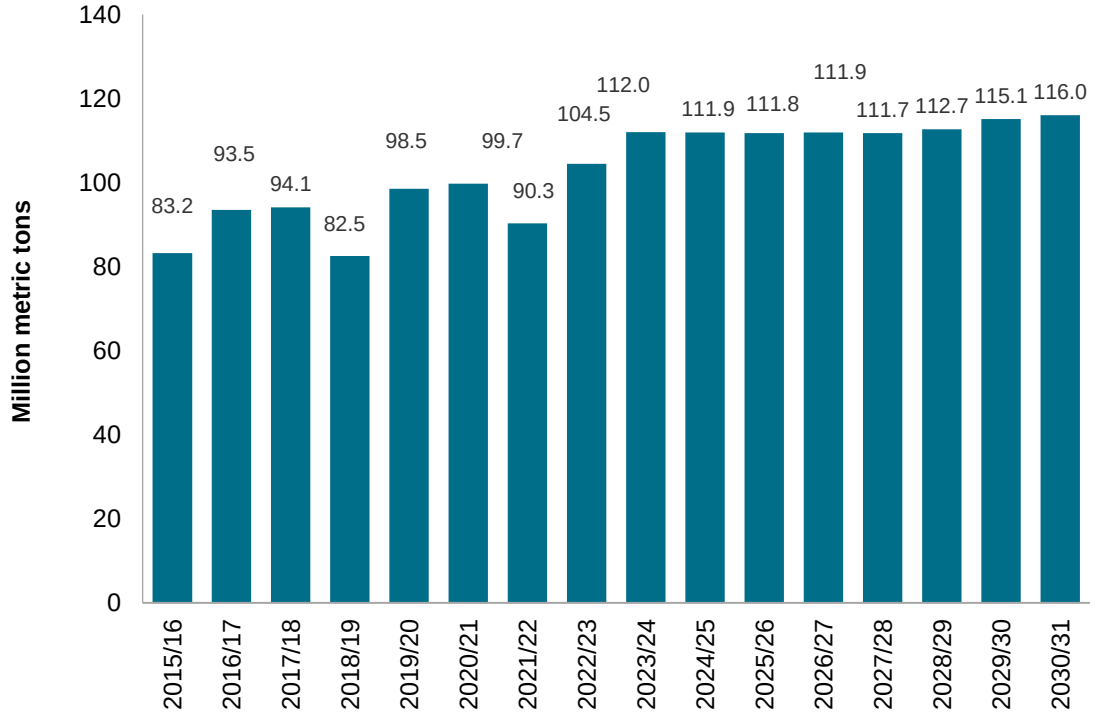
China’s imports of soybeans are expected to remain steady over the next several years

China soybean crush outlook



Source: S&P Global Commodity Insights.

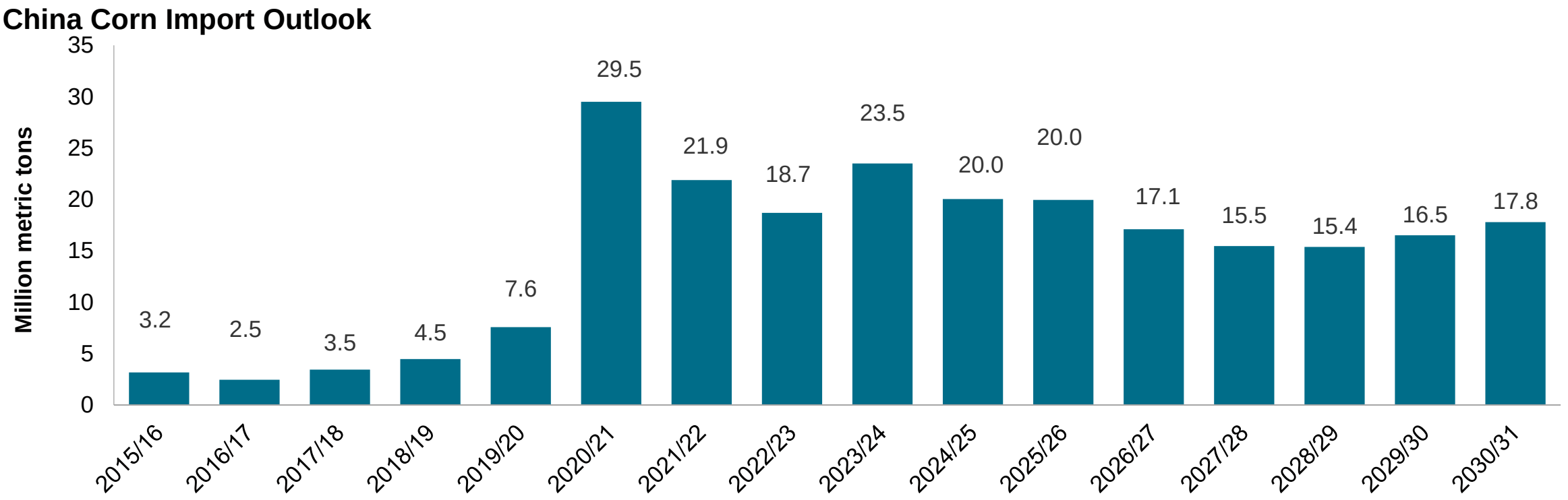
China soybean import outlook



Source: S&P Global Commodity Insights

- China’s soybean crush numbers are expected to increase slightly in 2025/26 and continue rising through 2029/30. However, crush demand growth is expected to be slower than in the 2010s due to slowing economic growth.
- Chinese import demand for soybeans to remain steady through the forecasted period. This is due to China’s push for increasing domestic production of agricultural commodities.

China’s corn imports will remain elevated relative pre-COVID levels, but are projected to decline over the next decade

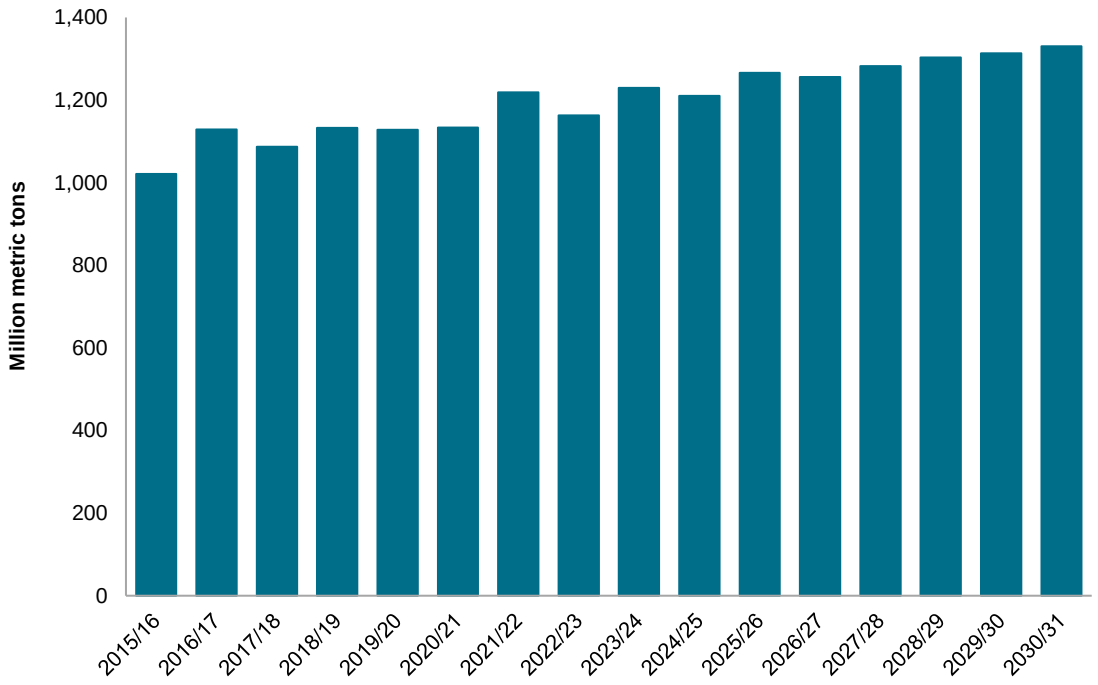


Source: S&P Global Commodity Insights

- For 2025/26, China’s corn imports expected to remain steady at 20.0 MMt. However, corn imports for 2024/25 fell short of the original forecasts.
- Chinese corn imports will continue to be historically large, but imports are expected to decline throughout the decade due to a renewed emphasis on agricultural self-sufficiency by Beijing.

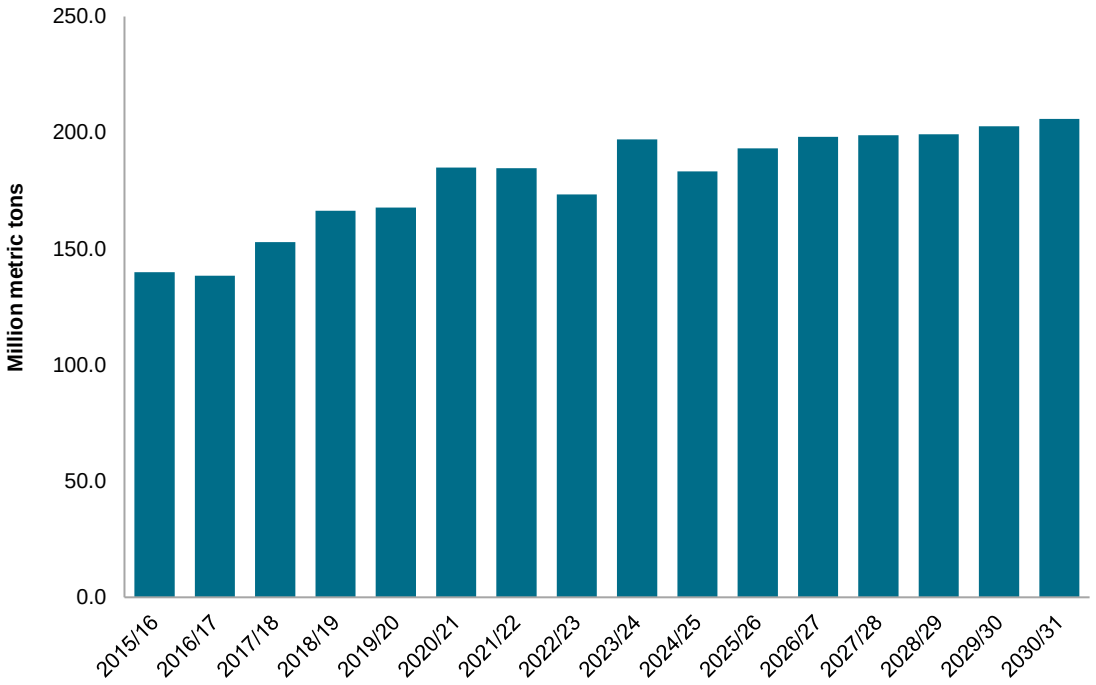
Global corn production is forecasted to increase in the US, Brazil and China while Africa is forecasted to import more corn through the end of the decade

Global corn production



Source: S&P Global Commodity Insights.

Global corn imports

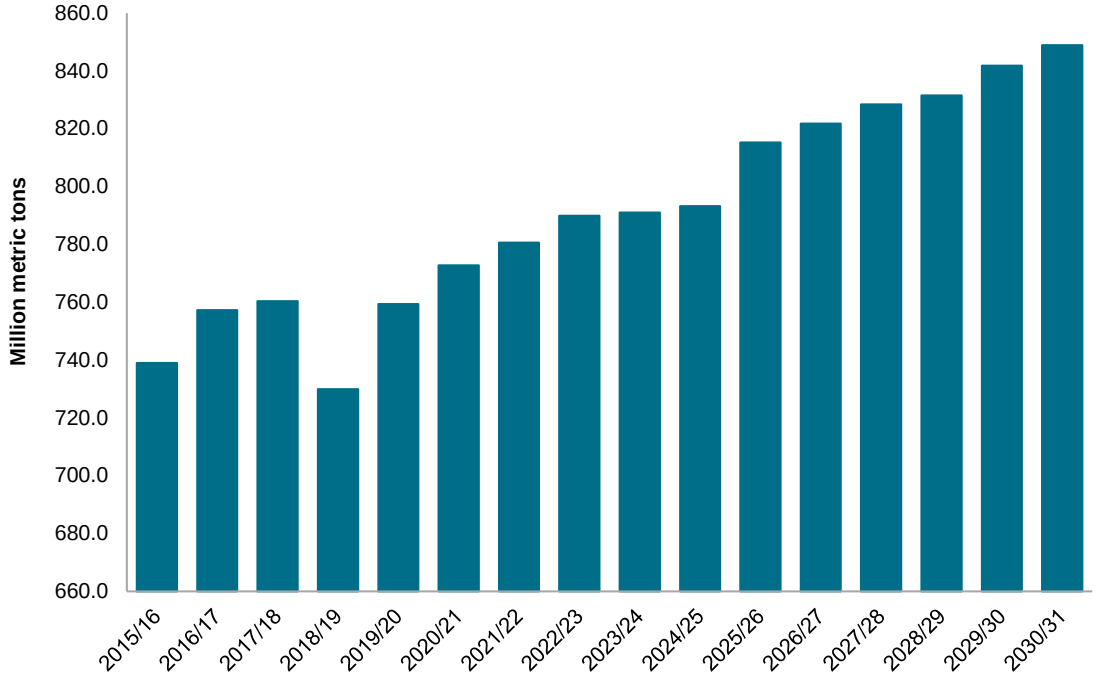


Source: S&P Global Commodity Insights.

- Global corn production declined slightly in 2024/25 by 19.7 MMt for a total of 1,210 MMt with the declines coming from the US, Argentina, Russia, and Ukraine. Production is expected to rebound in 2025/26 by 55.9 MMt for a total of 1,266 MMt with sizeable increases occurring in Brazil, Europe, Ukraine, and Russia,. Globally supplies are projected to increase steadily through the decade to a total of 1,331 MMt by 2030/31 with the majority of increases coming from China, Brazil, and the US.
- Global corn imports decreased by 13.9 MMt in 2024/25 for a total of 183.2 MMt. China was the primary driver of this trend as it imported 10.3 MMt less in 2024/25 compared to 2023/24. Imports will rebound by 9.9 MMt to 193.2 MMt as imports from China and Africa increase. Global corn imports are projected to grow steadily through 2030/31 by 22.6 MMt for a total of 205.9 MMt with growing African demand more than offsetting declines in demand from China.

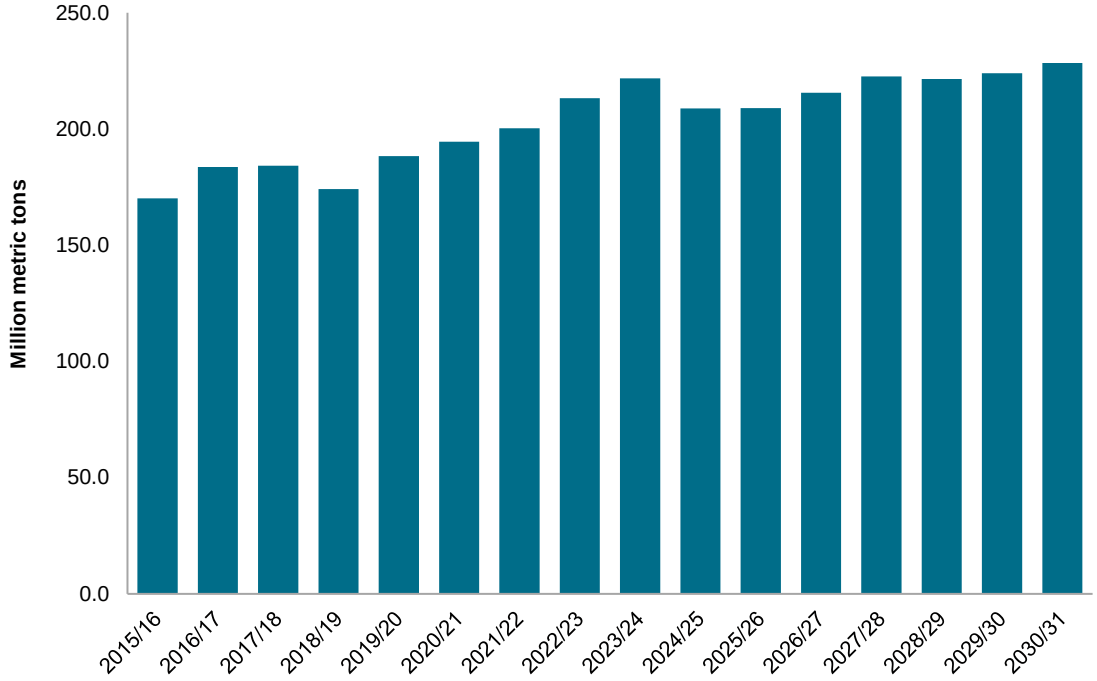
While global wheat production will grow steadily through 2030, global wheat imports are projected to grow at a much slower pace

Global wheat production



Source: S&P Global Commodity Insights.

Global wheat imports

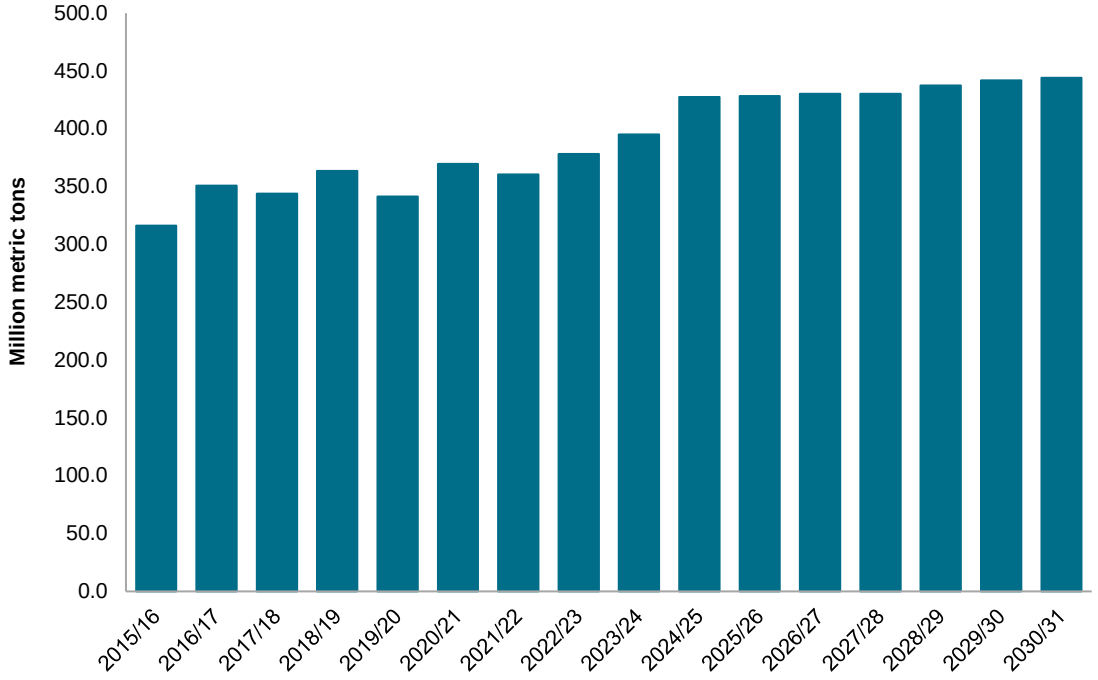


Source: S&P Global Commodity Insights.

- Global wheat production grew slightly in 2024/25, increasing 2.2 MMt to a total of 793.2 MMt. While Canada, the US, Argentina, and Australia experienced strong harvests, this was partially offset by poor yields in Russia and Europe. Production is projected to grow by 22.0 MMt in 2025/26 with the increases originating in Russia and Europe. Global supplies of wheat is expected to grow by 55.6 MMt by 2030/31 to a total of 838.9 MMt with the main increases coming from the EU and Ukraine.
- Global wheat imports declined by 13.0 MMt for a total of 208.8 MMt with the decline being driven by lower imports from China, Turkey, and Indonesia. Imports are expected to remain steady in 2025/26. While global imports are expected to increase to 228.3 MMt by 2030/31, it will be 2027/28 before global wheat imports surpass levels experienced in 2023/24.

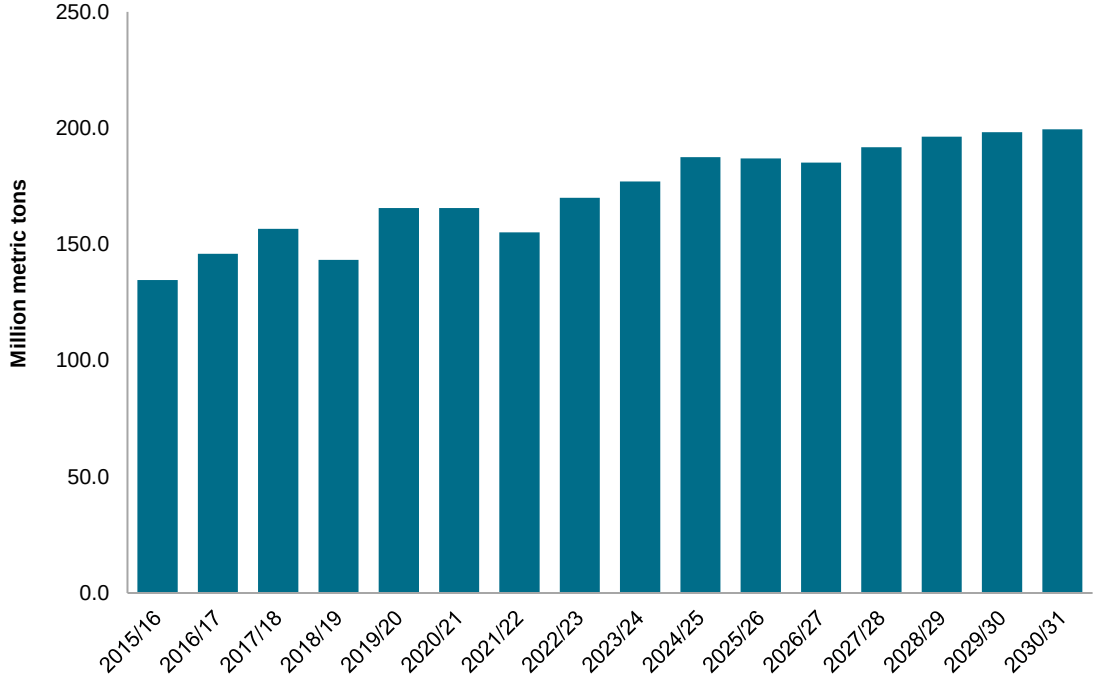
Global soybean production and imports are expected to steadily grow through the forecasted period

Global soybean production



Source: S&P Global Commodity Insights.

Global soybean imports



Source: S&P Global Commodity Insights.

- Global soybean production product increased to 427.5 MMt in 2024/25, a 32.5 MMt increase from 2023/24. This increase in global production is being driven by increased supplies from Brazil, the US, and Argentina. Production in 2025/26 will remain steady. Sustained acreage growth in LATAM, driven by Brazil, and increasing global yields will result in a forecasted global soybean harvest of 444.0 MMt in 2030/31.
- World soybean imports increased by 10.5 MMt in 2024/25 for a total of 187.6 MMt with the increases being concentrated in Europe, Eurasia, and Asia. Imports will decline slightly in 2025/26. Through the forecasted period, imports are projects to remain relatively steady and grow slowly through the decade to a total of 199.5 MMt by 2030/2031.

North Dakota Energy Outlook

The interplay of U.S. sanctions, OPEC+ production strategies, and fluctuating oil prices will shape the global crude oil market dynamics in 2025 and beyond

Sanctions and Oil Prices

- Sanctions under President Trump will remain in the near term, but there is uncertainty farther out
- Trump pressured OPEC+ to increase oil production when gasoline prices rose to $3.10/gal and Dated Brent was just below $80/b with the intention of keeping Brent in the mid $70s
- The relationship between crude oil prices and gasoline prices is variable; Dated Brent averaged $80.25/b in January 2025, with U.S. retail gasoline at $3.10/gal.

OPEC+ Production and Capacity

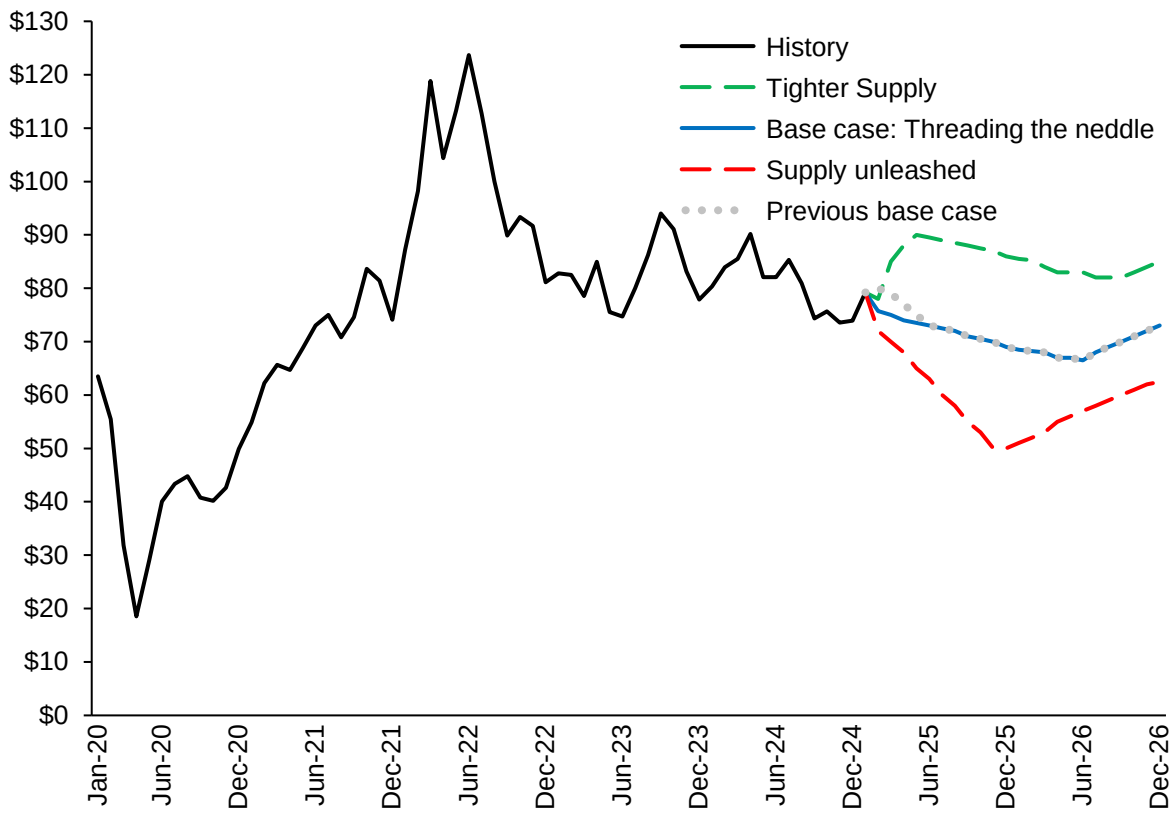
- OPEC+ has over 6 million b/d of spare capacity and aims to increase oil production.
- The timing of OPEC+ responses to Trump's calls for increased output will depend on group unity and logistical considerations.
- U.S. sanctions announced on January 10 are still creating logistical challenges for Russia and Iran, impacting oil export volumes.

Demand, Supply Growth, and Price Outlook

- Global crude oil demand is projected to grow by 495,000 b/d in 2025 and 520,000 b/d in 2026, while production growth is expected to exceed demand.
- Dated Brent prices are projected to average $74/b in 2025 and $69/b in 2026, down from $81/b in 2024.
- Key production changes include a downward revision of Iranian production and an upward revision for U.S. crude oil production growth.

Short-term price forecast - The base case outlook suggests $69-$75/b range — assuming OPEC+ lowers its production growth target for 2025

S&P Global Commodity Insights Dated Brent price outlook ($/b)



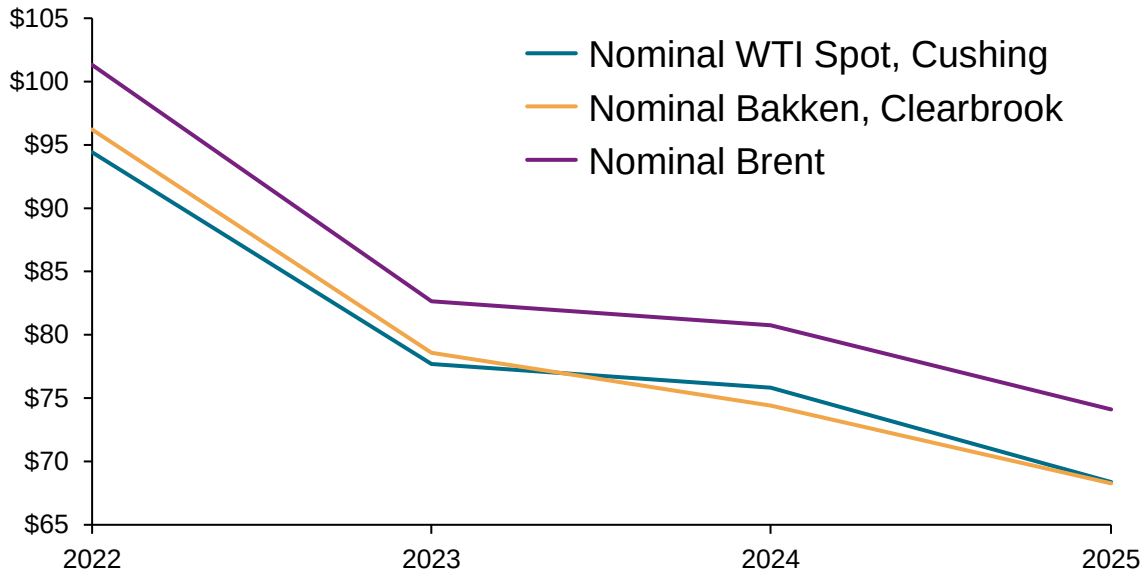
	2024	2025	2026
Historical	$ 81		
Market Management (Base case)		$ 73	$ 69
Falling oil supply (Tighter Supply)		$ 86	$ 83
Demand weakness (Supply unleashed)		$ 62	$ 57

- **Risks of OPEC+ Production Increases:** The risk of extra OPEC+ production is supported by the White House and OPEC+ members. The December through January 2025 base case Dated Brent outlook average is $73/b.
- If OPEC+ implements full production increases, global crude oil inventory could build rapidly, potentially causing prices to drop significantly, possibly into the $50-$60/b range.
- **Opportunities for Tightening the Market:** Onshore crude inventories outside China remain low, creating some room for modest production increases. Expectation of further cuts from Iran will be more than offset by OPEC+ increases pushing the outlook lower

Data compiled February 2025.
Source: S&P Global Commodity Insights.

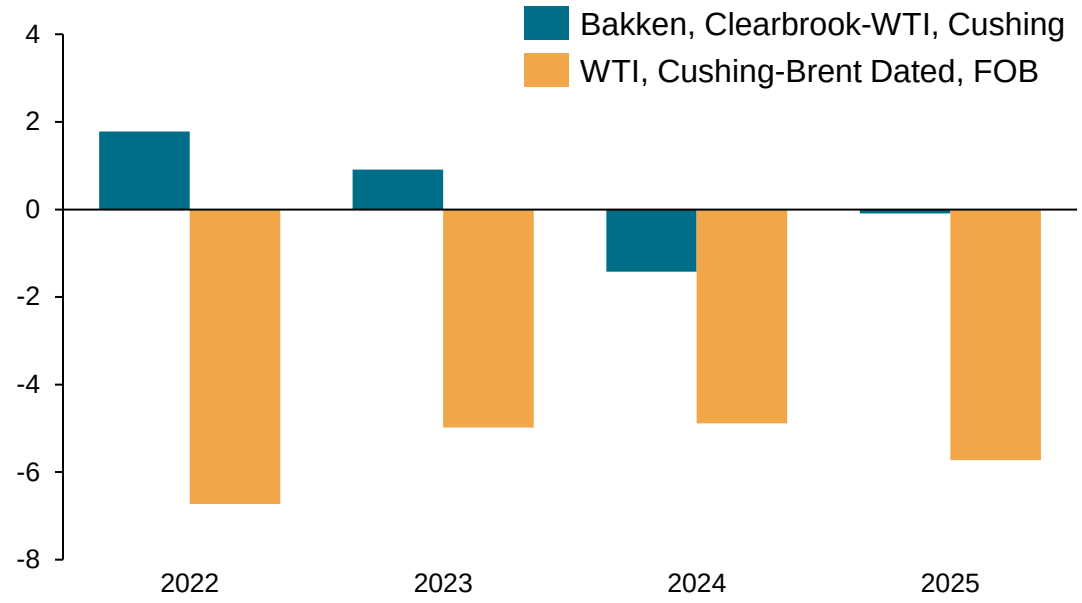
S&P Global projects a slight decline in 2025 oil prices due to OPEC+ planned increase in oil production from late 2024 and in 2025

Comparison between Bakken Clearbrook, WTI and Brent ($/b)



Data compiled February 2025.
Source: S&P Global Commodity Insights.

Price differentials for Bakken, Clearbrook - WTI and for WTI-Brent ($/b)

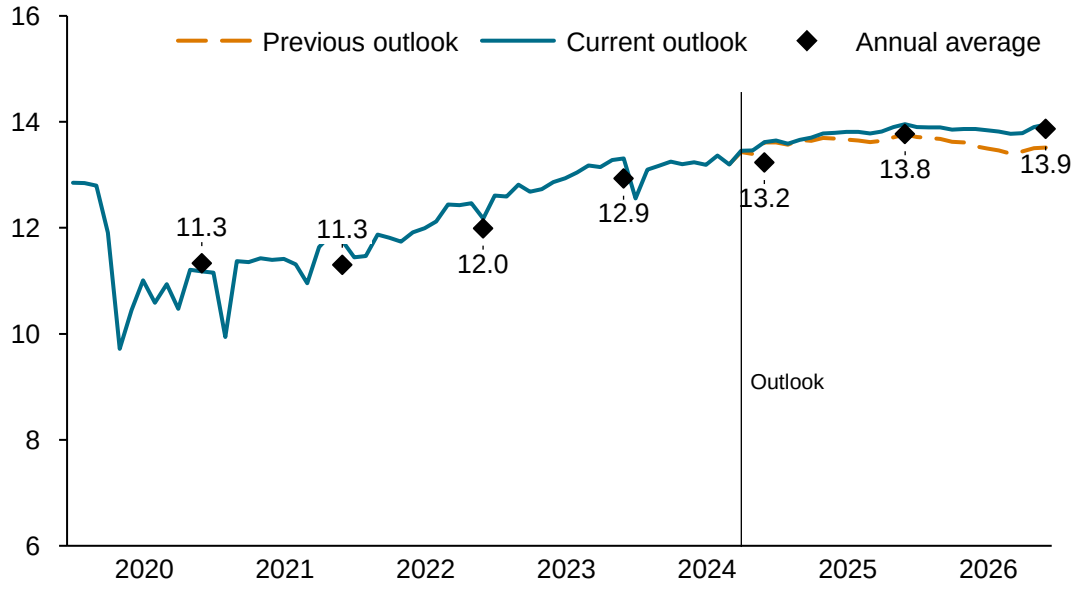


Data compiled February 2025.
Source: S&P Global Commodity Insights.

- As of February 17th, 2024, the WTI price stands at $70.9/b reflecting a decrease of about 8.9% compared to last month. Brent is about $74.8/b, or $3.9/b higher than WTI.
- Bakken crude oil price at Clearbrook is tied to WTI. Bakken oil competes against other light crudes in the region primarily in the Chicago-Midwest market, the US Gulf Coast and the US East Coast, depending on transportation economics. Bakken price is expected to close the differential against the WTI in 2025 due to sweet spot exhaustion.

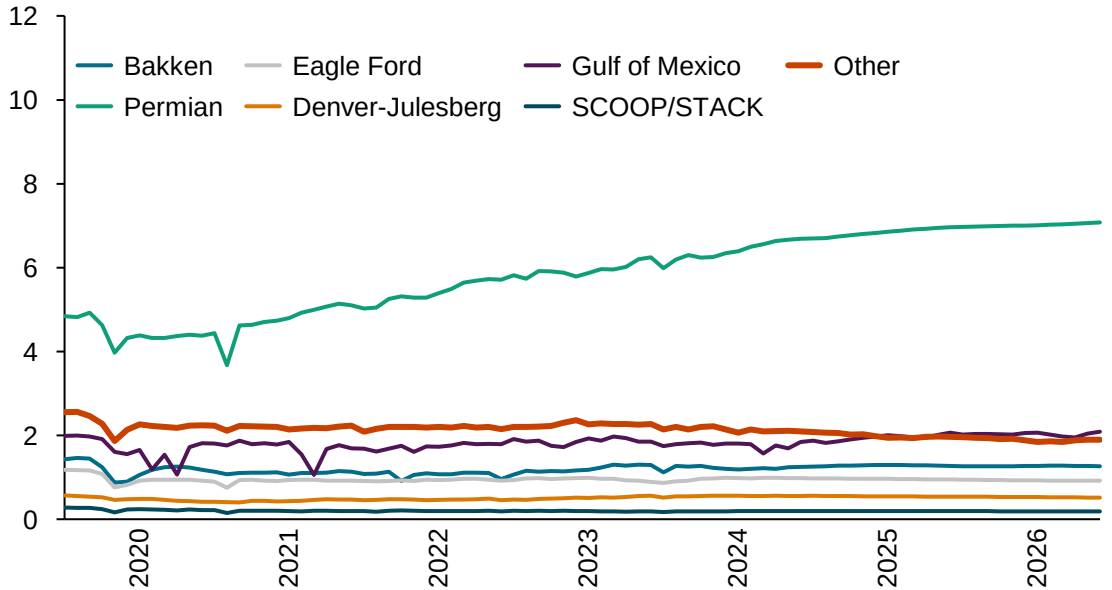
US crude oil production: Average output expected to be around 13.8 million b/d in 2025, and 13.9 million b/d in 2026, an increase compared to the last outlook

Monthly US crude oil production (million b/d)



Data compiled February 2025.
Source: S&P Global Commodity Insights.

US crude oil production by basin (million b/d)



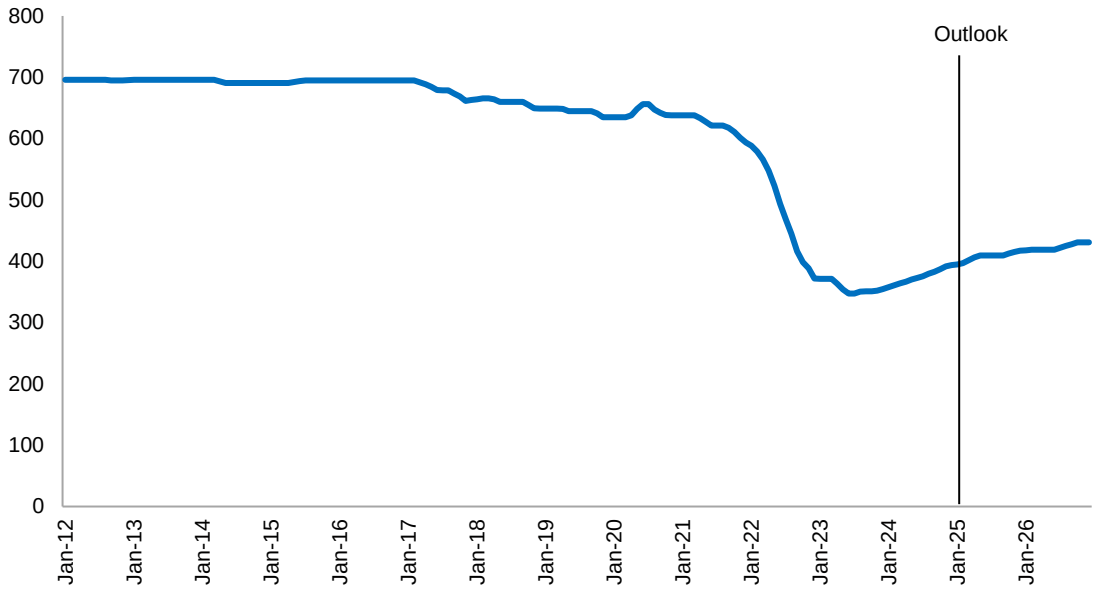
Data compiled February 2025.
Source: S&P Global Commodity Insights.

- US oil production approaching 14 million b/d
- The industry is using higher planning prices than the S&P price outlook

- The Permian continues to grow through 2026 while other US basins face decline or stagnation
- US production growth will be driven primarily by the Permian, with some increases coming out of the Gulf of Mexico

As of February 21, 2025, the U.S. SPR inventory stood at 395 million barrels, just over half of its 714 MMbbl capacity as global crude inventories ramp up through May

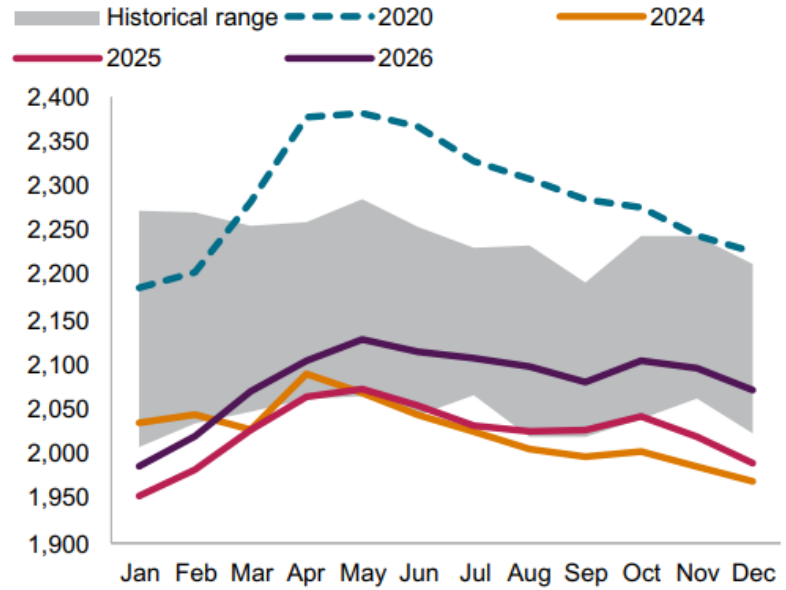
US SPR inventories, MMbbl



Data compiled December 2025.

Source: S&P Global Commodity Insigts.

Observable non-China global commercial crude oil inventories (billion barrels)



Data compiled Feb. 25, 2025.

Source: S&P Global Commodity Insights.

- US inventories are expected to grow slightly in the near term with White House intentions to fill up the remaining capacity
- Global crude inventories will build through March in 2025, and 2026 is expected to add to this in a similar fashion

ND production update: permitting has been going up, but rig activity and producing well counts decreased month-on-month which could flatten production growth

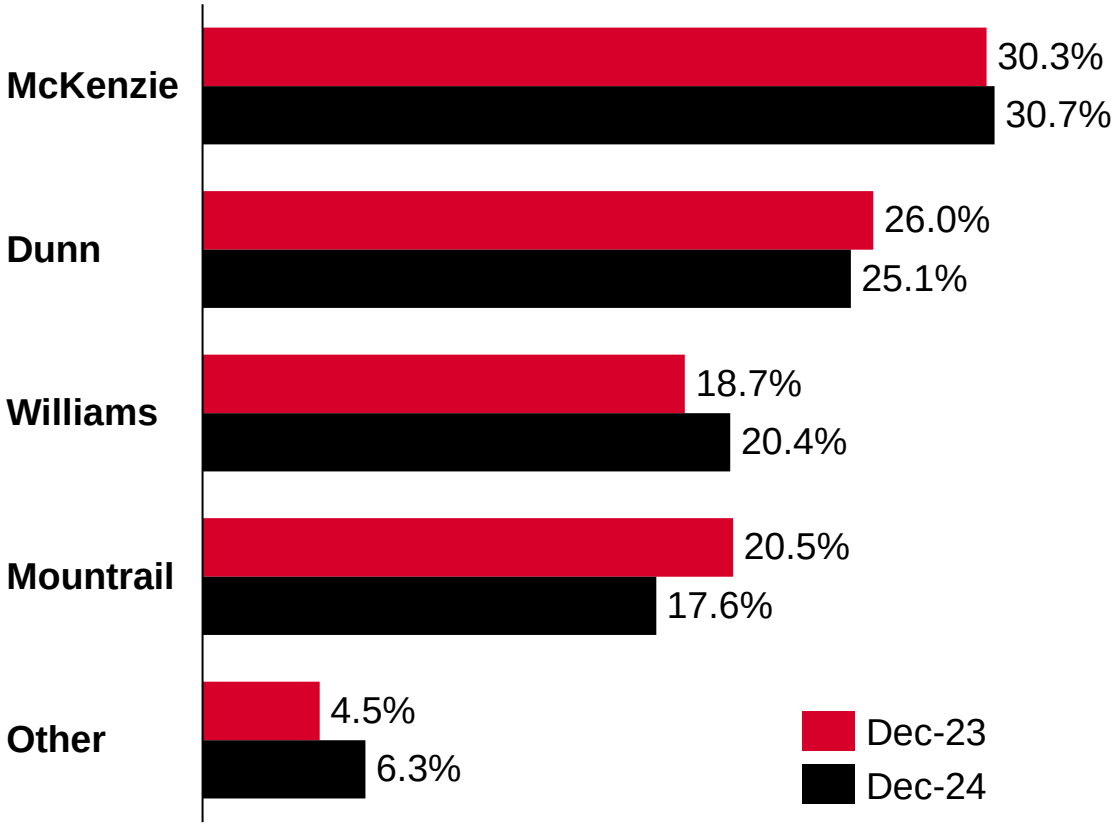
Item	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Change[2]
Oil Production(MMBbl/d)	1.18	1.20	1.18	1.22	1.19	N/A	⇔
Gas Production(Bcf/d)	3.53	3.56	3.42	3.47	3.37	N/A	⇔
Wells Permitted	100	100	111	78	87	108	↑
Rig Count	38	38	39	37	36	33	↓
New Wells Completed	97	58	95	98	89	78[1]	↓
Wells Waiting on Completion (DUC Wells)	383	376	331	301	288	N/A	⇔
Producing Well Count	19,116	19,200	19,334	19,286	19,207[1]	N/A	⇔

- New well and rig activity is still impacted from mergers and acquisitions activity and local seasonal issues
- Rising permitting activity indicates that rig levels could improve
- Drilling - activity is expected to increase slightly as operators continue to maintain a permit inventory of approximately 12 months
- DUC inventory has slowly moved downward as rig levels drop.
- DUC conversion will be critical to maintaining production levels in the near term

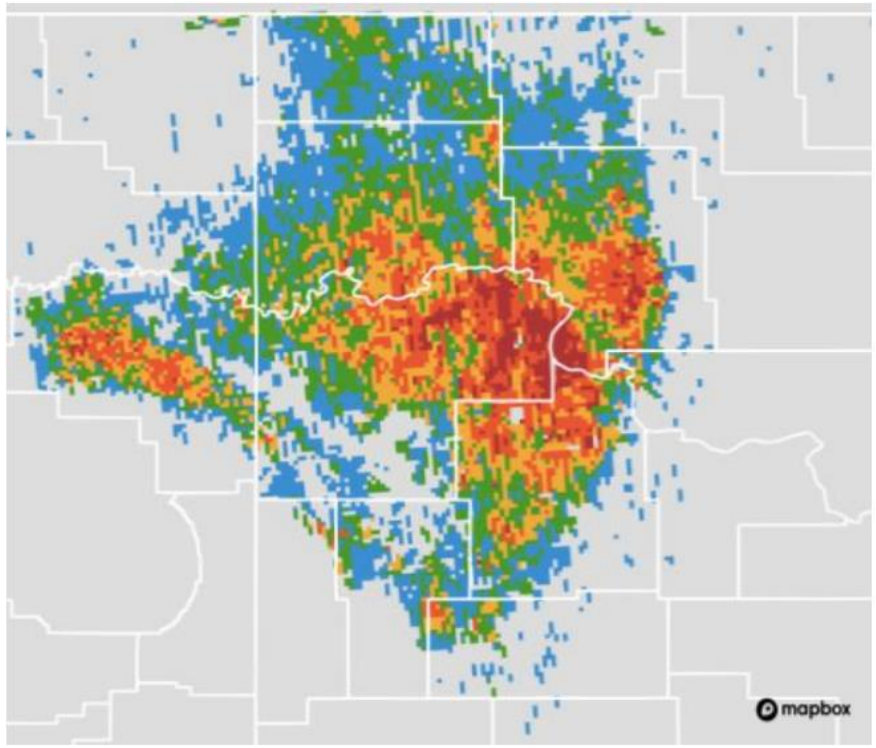
Source: North Dakota Department of Mineral Resources Director's Cut (as on 17th February)
Notes: 1. Preliminary number, it will be adjusted/updated in next updates 2. The change refers to the period from Dec-24 to Jan-25
3. Inactive wells include temporarily shut-wells or other wells that may resume production in the near future

Historical production by county – 4 counties 94% of all production. McKenzie and Williams counties are producing more in December than they were in prior years

Historical oil production by county
% by county



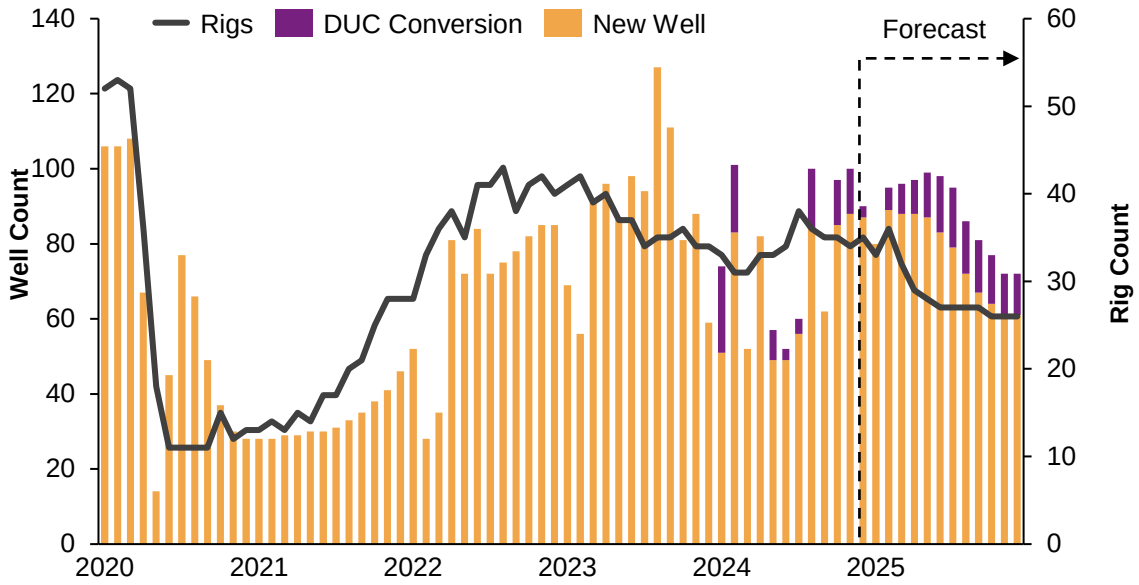
Bakken quality



Screenshot as of Sept. 6, 2023.
Source: S&P Global Commodity Insights upstream E&P content (Energy Studio: Impact).
Underlying base map provided by © Mapbox and © OpenStreetMap.org contributors.

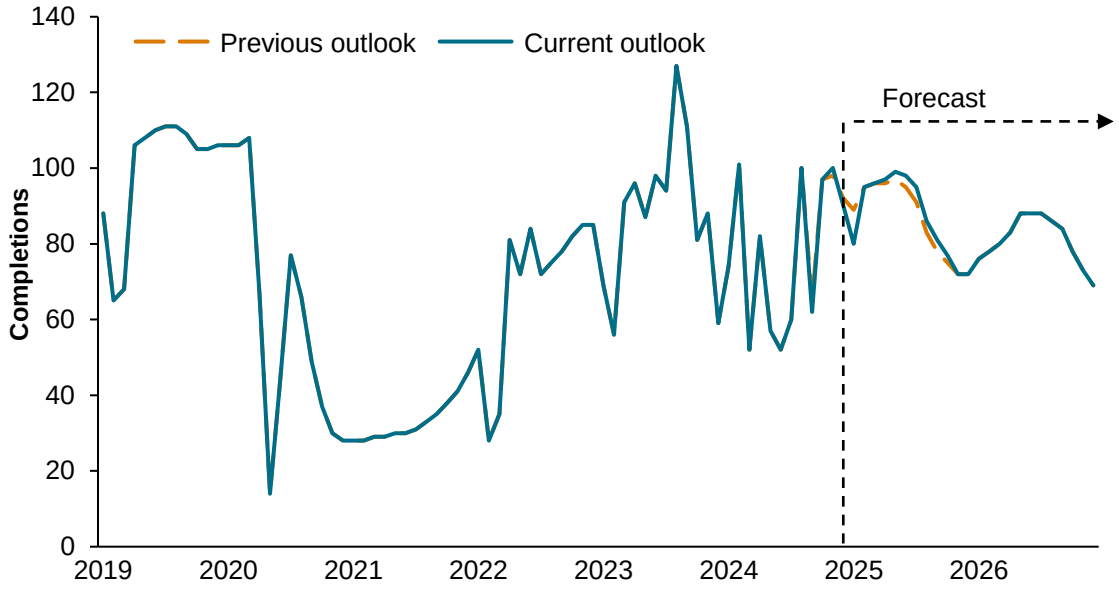
The latest monthly forecast considers roughly 87 completions per month in 2025, increased from 82 per month, on average accompanied by a moderate decrease in rig counts

Bakken historical and forecast well count and rigs



Data compiled February 2025.
Source: S&P Global Commodity Insights.

Bakken Base Case Completion Forecast

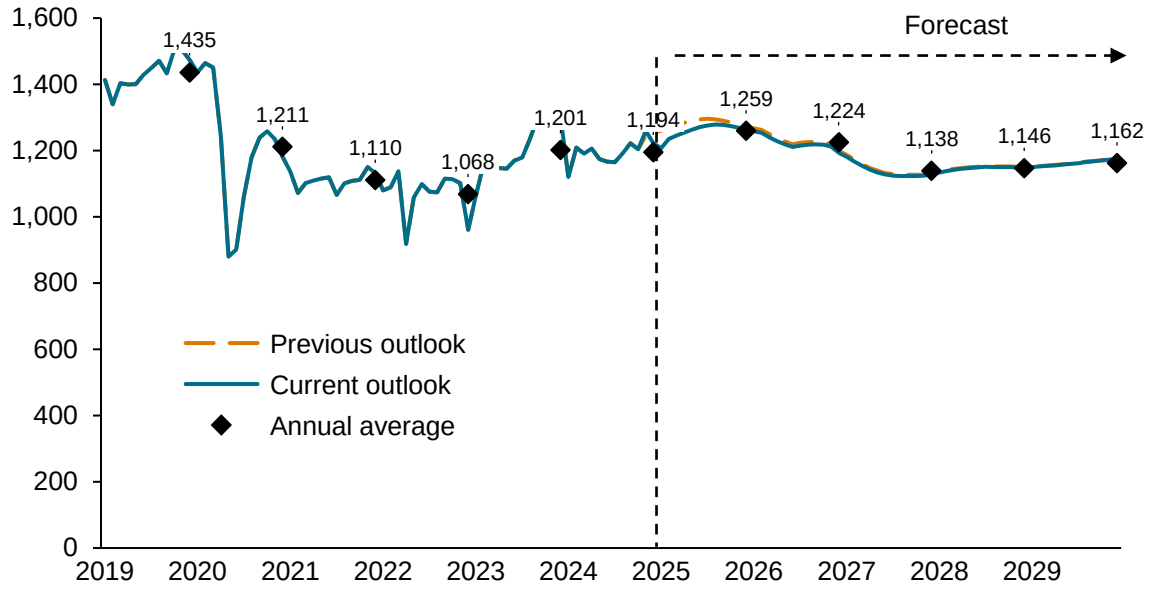


Data compiled February 2025.
Source: S&P Global Commodity Insights.

- The February 2025 short-term well completion forecast is slightly higher than last month
- New well counts will be up in 2025 despite lower rig activity with rigs moving away form DUC development
- The new well count plus the DUC conversions will support increased production in the near term

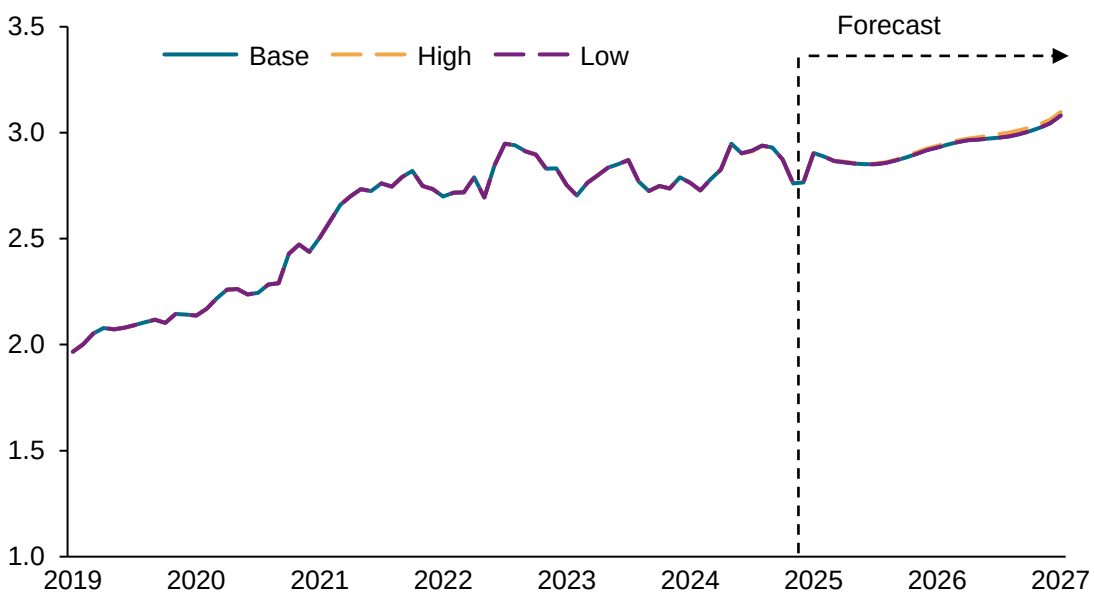
Bakken Oil production to remain steady at well over 1.2 Million b/d through 2026

Bakken Base Case Oil Production Forecast (thousand b/d)



Data compiled February 2025.
Source: S&P Global Commodity Insights.

Bakken Historical GOR And Forecast By Case (Mcf/Bbl)

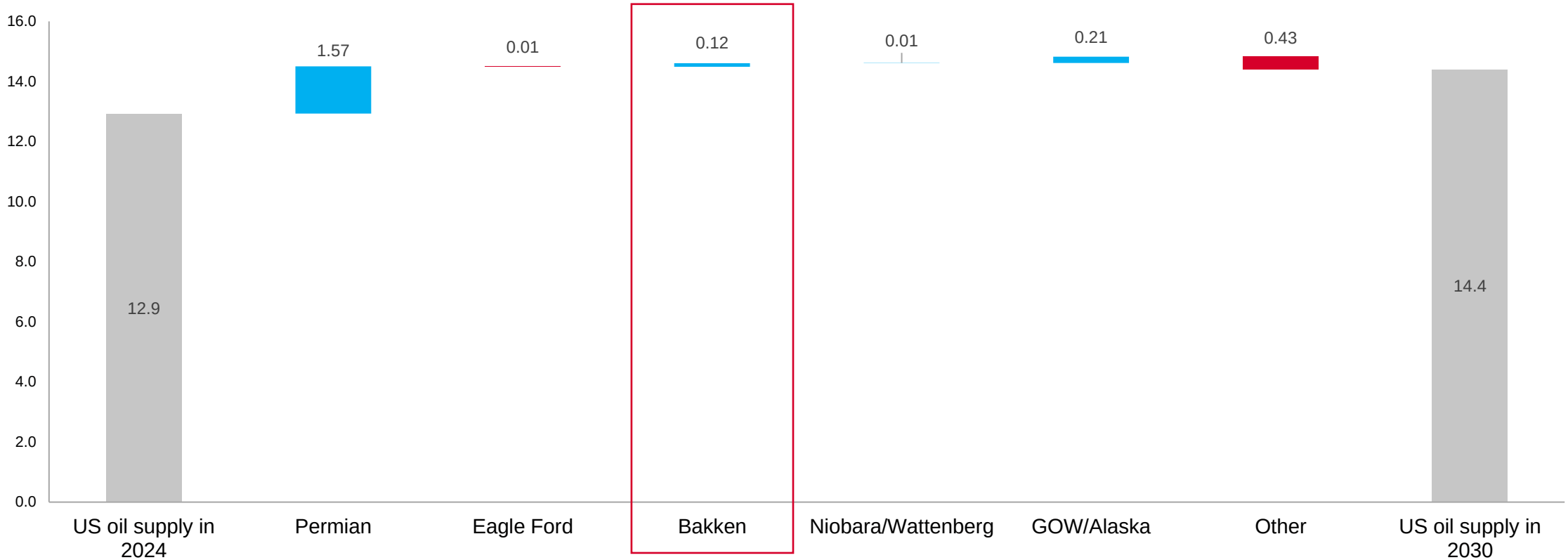


Data compiled February 2025.
Source: S&P Global Commodity Insights.

- North Dakota production increased compared to December 2024, according to state data, and will ramp up later in 2025 as rig leveld are currently low. DUC conversion will be critical in maintaining production levels in the near term.
- The production outlook drop year-to-year is attributed to cutbacks in spending resulting from increased mergers and acquisitions in the basin and some impact from local seasonal events
- Oil production will decline in 2026 as the core areas become exhausted and rig counts continue to drop

Production in 2030 will be around 14.4 MMbbls/day, of which 1.3 MMbbls/day will come from the Bakken

US oil production outlook by play to 2030 (million b/d)

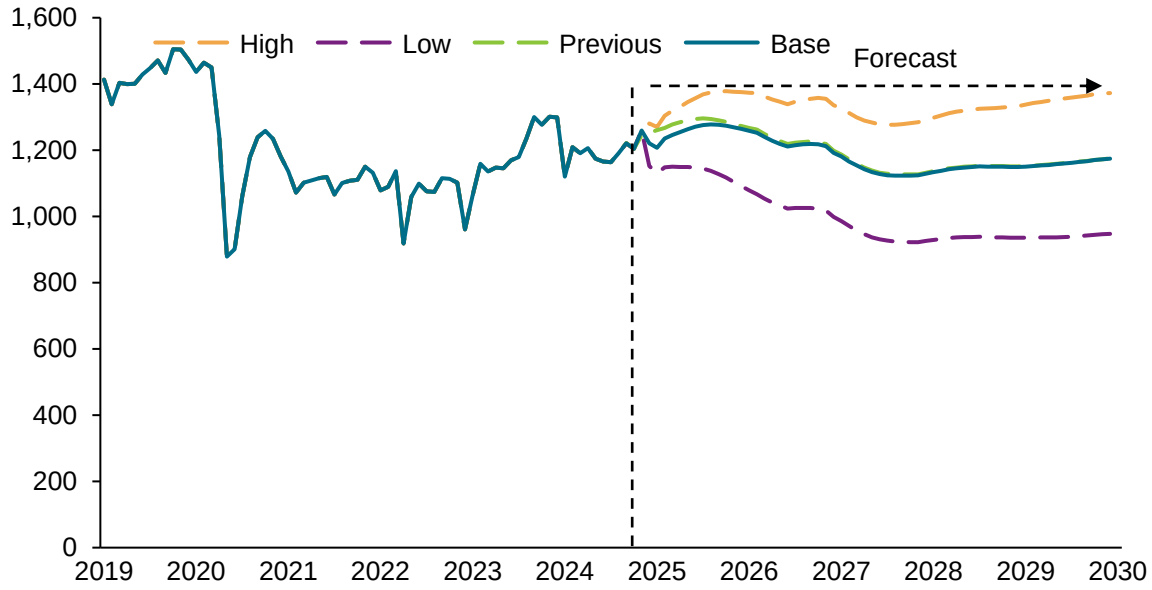


Data compiled February 2025.

Source: S&P Global Commodity Insights.

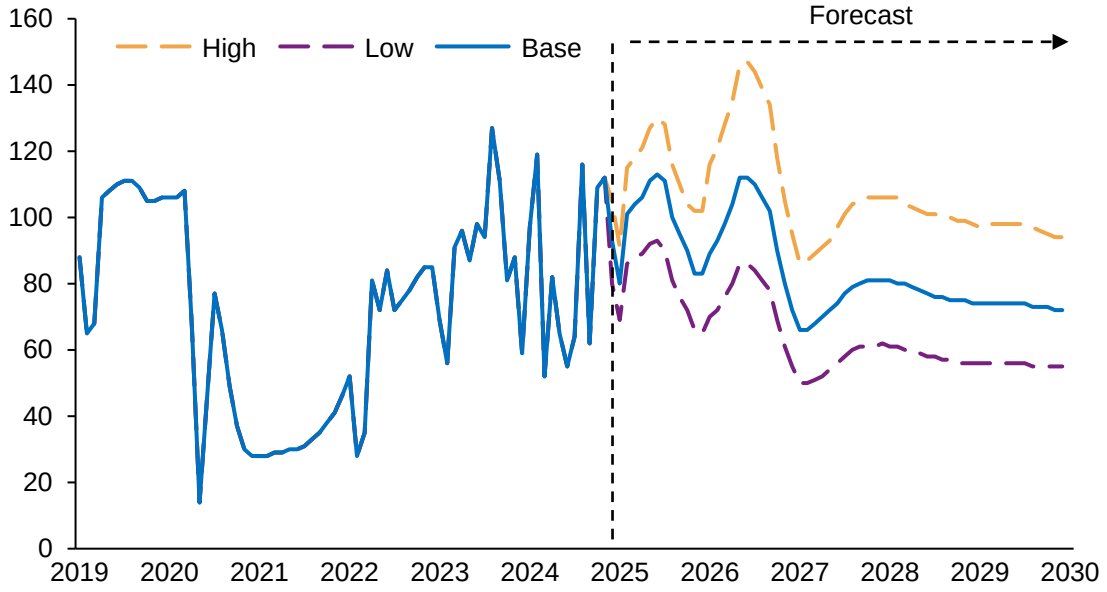
Bakken oil production base case needs oil prices in the $70s per barrel to get production levels to 1.2 million b/d by 2026

Bakken Historical Oil Production And Forecast By Case (thousand b/d)



Data compiled February 2025.
Source: S&P Global Commodity Insights.

Bakken Historical Well Count And Forecast By Case (Total Completions)



Data compiled February 2025.
Source: S&P Global Commodity Insights.

- The high case has an oil production rate of about 1.35 million b/d by 2026 with a 20% higher price than the Base case. The higher price outlook pushes the well completions to 100-150 per month range.
- The low case considers a 17% weaker oil price than the one for the base case leading to lower reinvestment rates. In the low case wells coming online could be lower than ~70 per month, and oil production could drop below 1.0 million b/d. The low case also considers the shut down of the Dakota Access Pipeline (DAPL), which is currently being litigated.

S&P Global
Market Intelligence

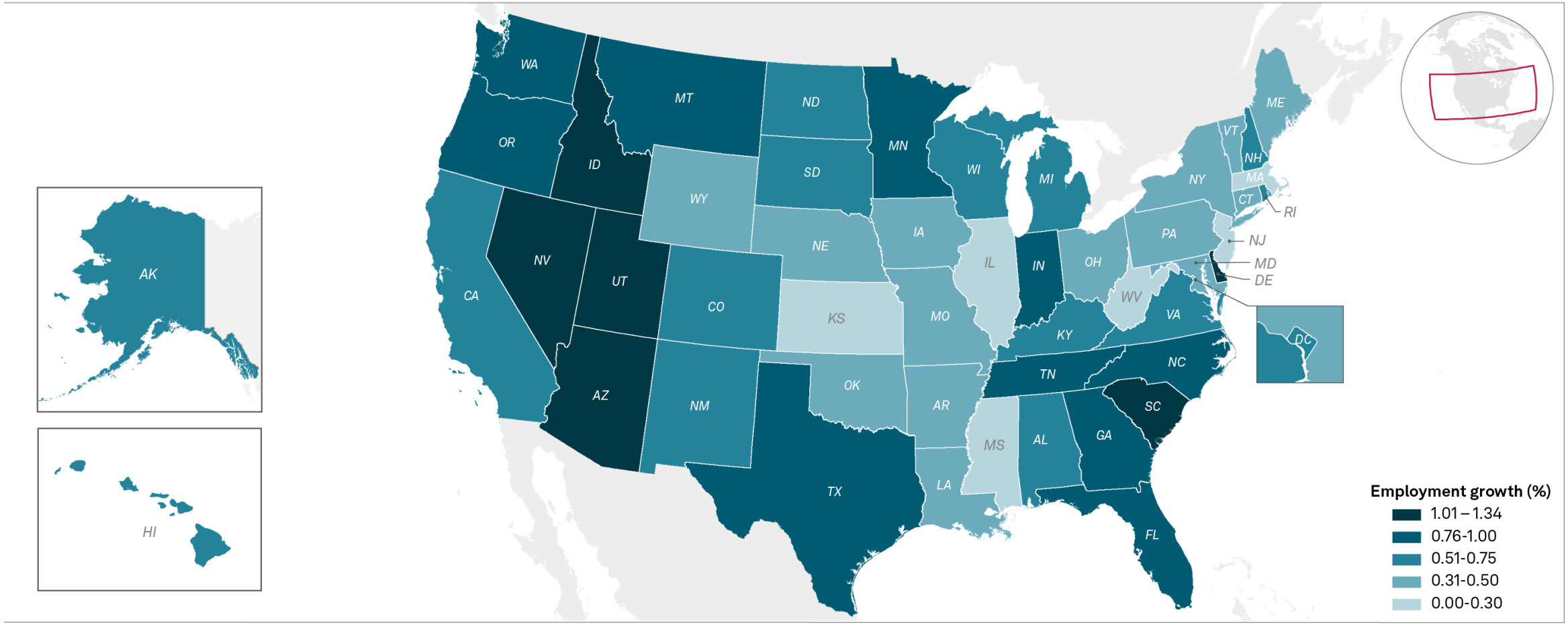
Economic Outlook: North Dakota

US regional economies overview

- A maturing business cycle, stubborn inflation, and lingering labor market tightness dampened employment growth across US states and regions in the second half of 2024. The South led job gains this fall, followed by the West, Northeast and Midwest, but the difference between them has narrowed to a few tenths of a percent.
- Over the course of 2024, consumer price index inflation fell in the South and West, where it had been highest; stayed steady in the Midwest; and accelerated in the Northeast, largely due to shelter costs — a reversal of pandemic-era trends that saw home prices rising most rapidly in the South and West.
- Job growth will decelerate in 2025 across all regions and turn flat to modestly negative in the bottom-performing states. Prospects for 2025 remain shaky given weakening consumer demand and the prospect of rising US tariffs and retaliation. Migration trends will benefit states in the South and Rocky Mountain regions.

Payrolls will continue to expand across all states in 2025

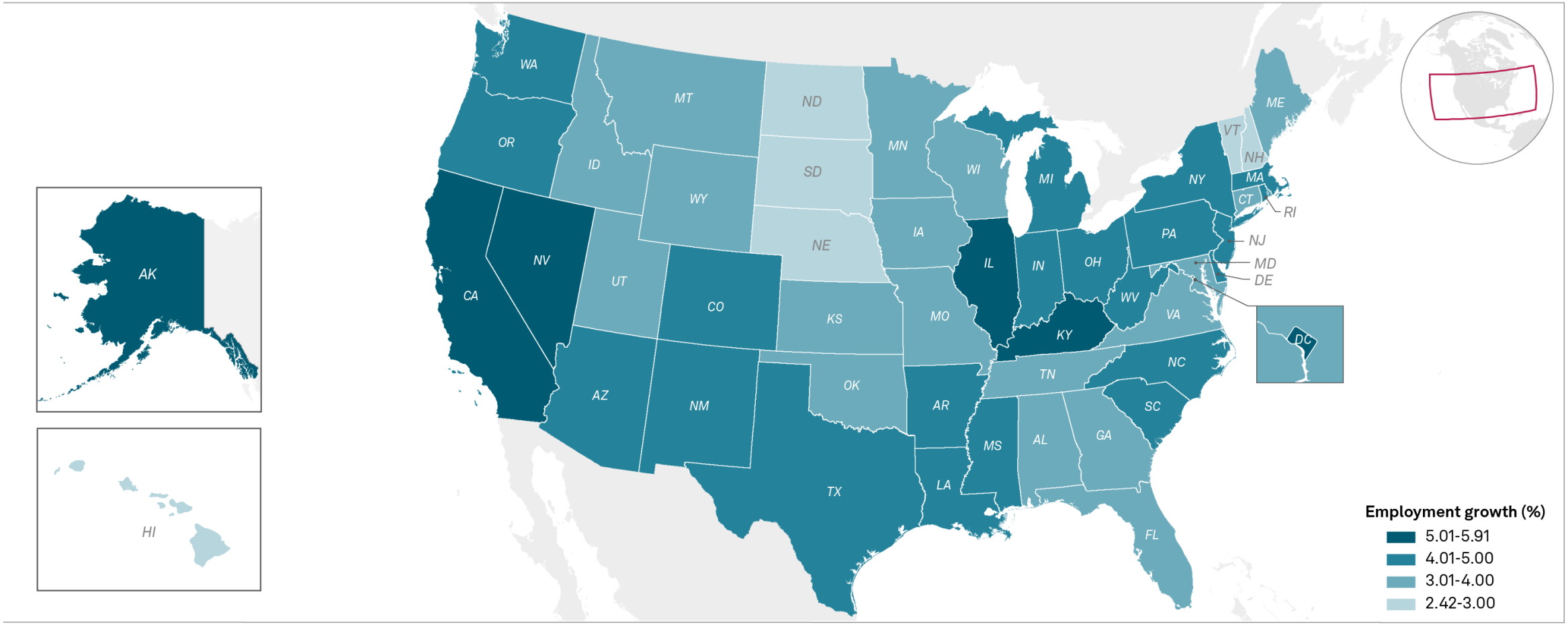
Employment growth, Q1 2025–Q1 2026



Data compiled Feb. 18, 2025.
Source: S&P Global Market Intelligence: 250432-01.

Unemployment rates will rise slightly in 2025 as economic growth moderates

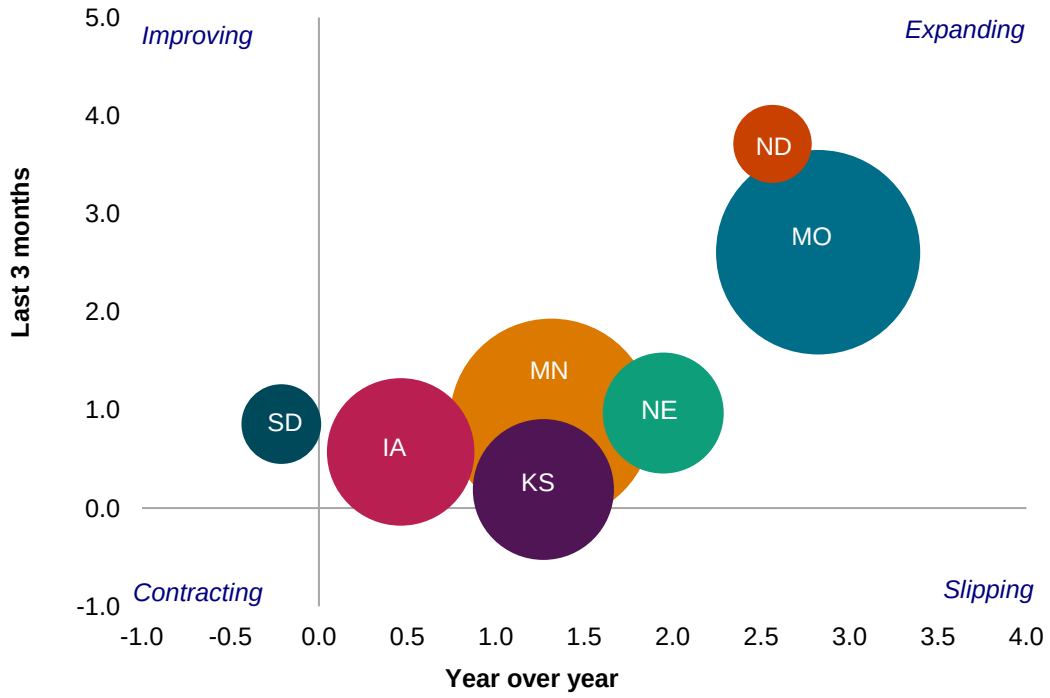
Unemployment rate, Q1 2026



Data compiled Feb. 18, 2025.
Source: S&P Global Market Intelligence: 250433-01.

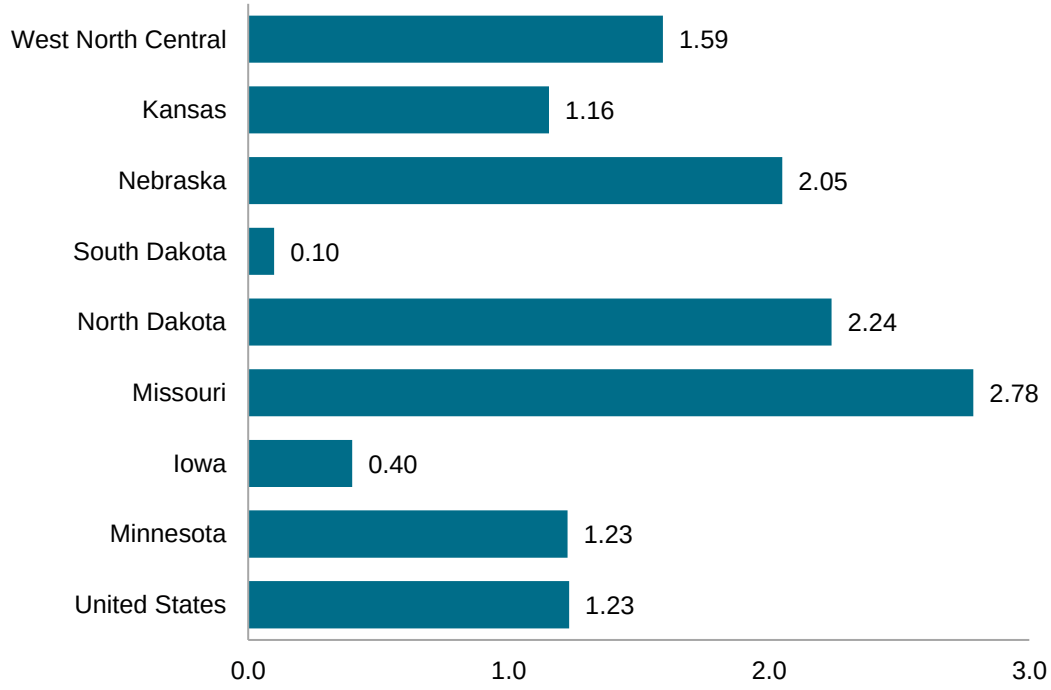
West North Central: Region continues expansion as South Dakota improves

Employment momentum in December 2024, West North Central (% change, annual rate)



Data compiled February 2025.
Size of each data point represents state employment level for the most recent month.
Sources: Bureau of Labor Statistics; S&P Global Market Intelligence.

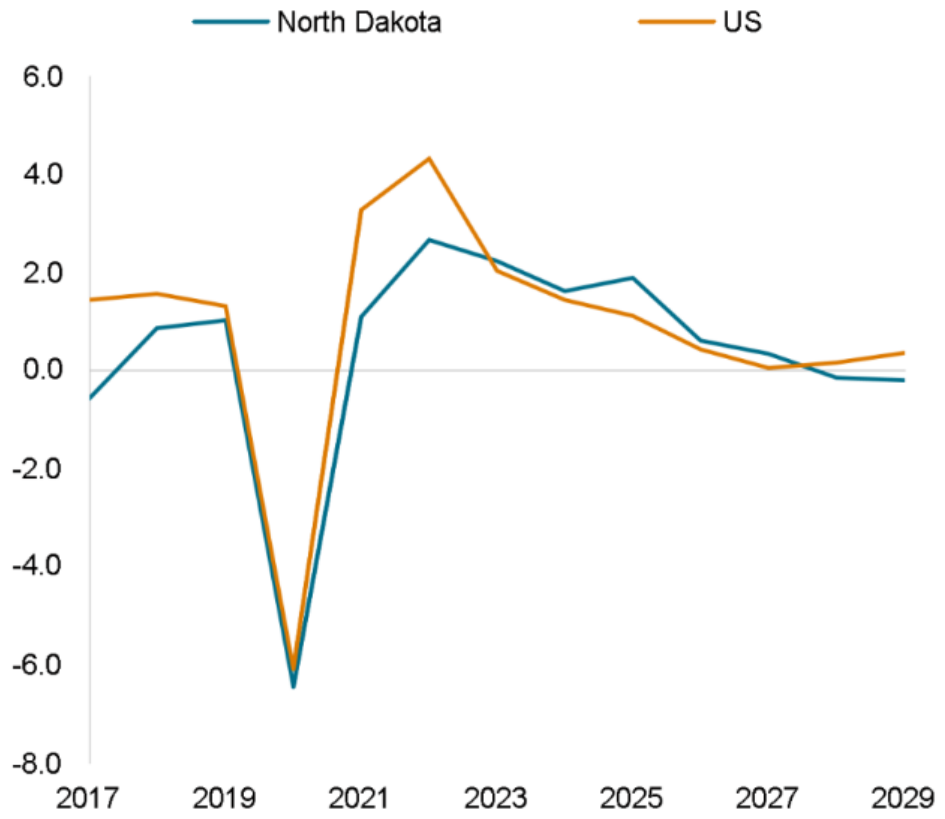
Employment growth in the fourth quarter of 2024, West North Central (% change vs. year earlier)



Data compiled February 2025.
Sources: Bureau of Labor Statistics; S&P Global Market Intelligence.

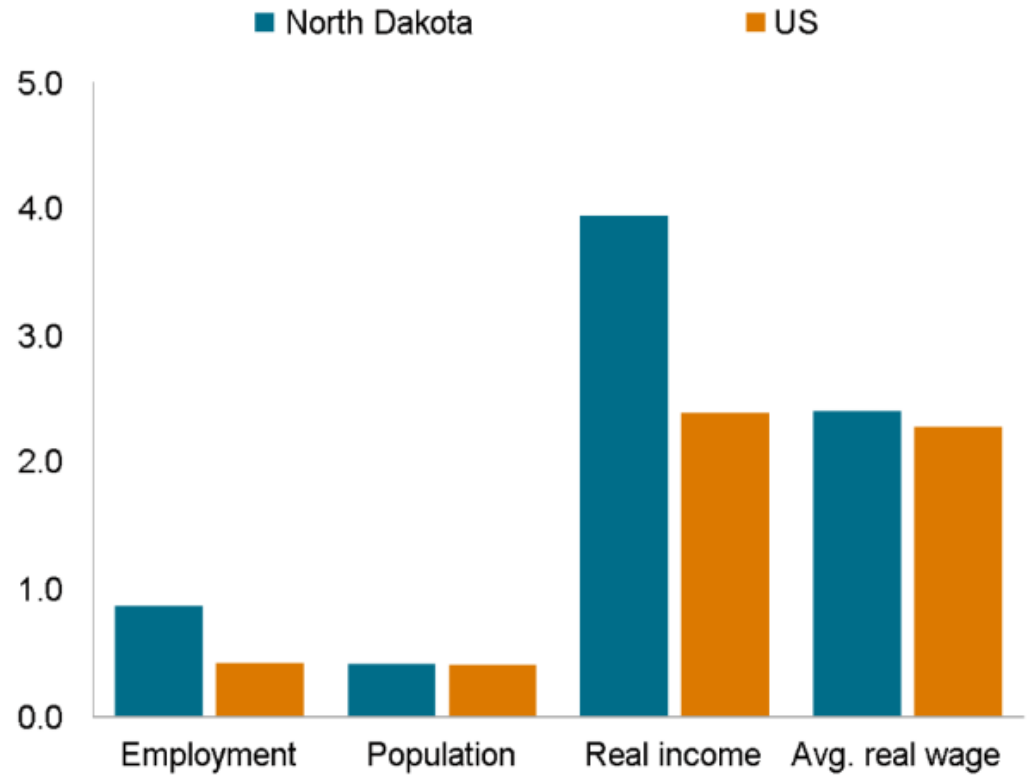
West North Central: Low population growth weakens outlook for service sectors and personal income

Total employment, percent change (annual rate)



Data compiled February 2025.
Sources: S&P Global Market Intelligence; Bureau of Labor Statistics.

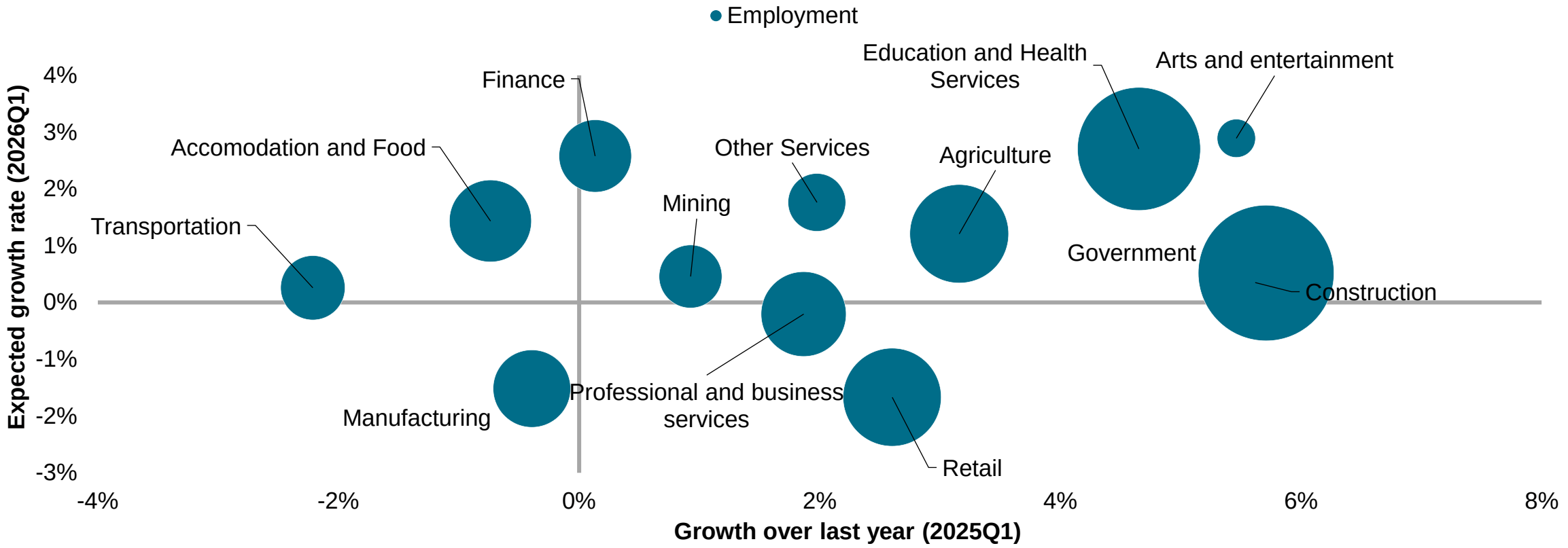
Relative growth in key indicators, 2024 to 2026



Data compiled January 2025.
CAGR = compound annual growth rate.
Source: S&P Global Market Intelligence.

Growth by sector expected to remain widespread through early 2026

Employment activity by sector in North Dakota



Source: S&P Global Market Intelligence

S&P Global
Market Intelligence

Macroeconomic Outlook

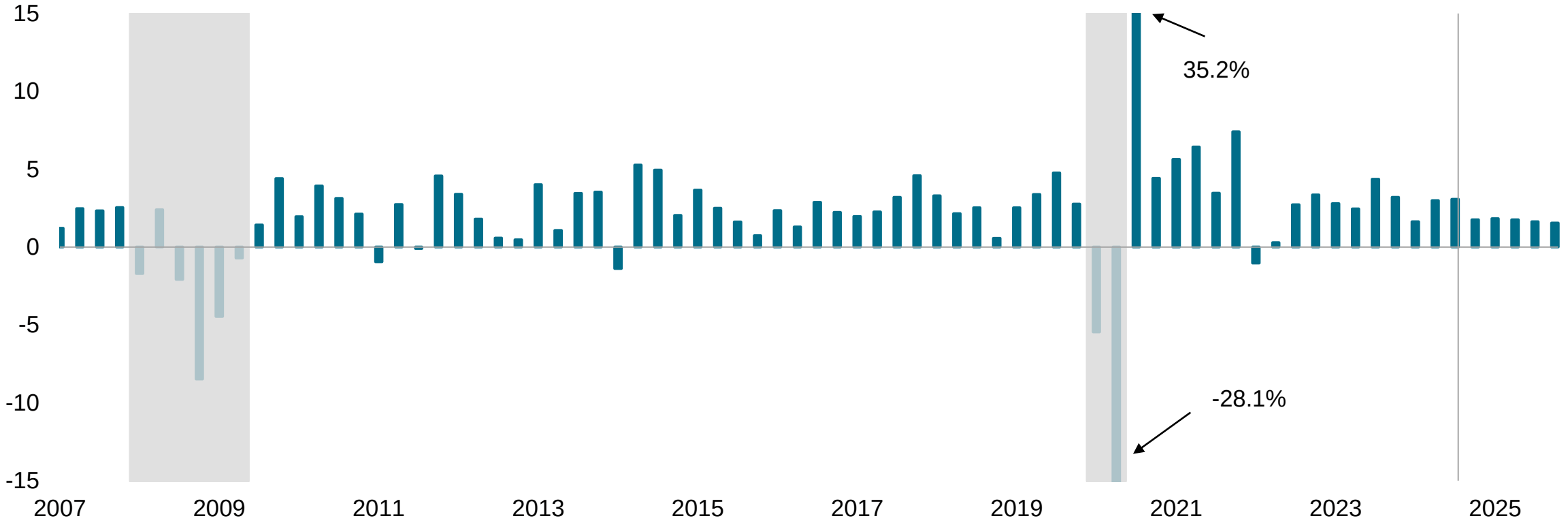
Fallout from tariffs to weigh on US GDP growth

- S&P Global Market Intelligence forecasts 1.9% US GDP growth in 2025 followed by 1.9% growth in 2026 and 1.6% growth in 2027. The projections for 2025 and 2026 are below last month's forecast by 0.4 and 0.1 percentage point, respectively.
- The markdown to growth this year is due to weaker growth over the first half of this year. Several key indicators reported over the last four weeks suggest considerably weaker growth in the first quarter than we previously projected. Unexpected weakness in consumer spending in January, in part due to unseasonably harsh winter weather, lowered our forecast of first-quarter PCE growth by more than a percentage point to 2.0%.2 An unexpectedly sharp widening of the trade deficit in January lowered our forecast first-quarter net exports enough to shave 0.7 percentage point from our forecast of first-quarter growth. These and other factors helped to lower our forecast of first-quarter GDP growth by 1.1 percentage points to 1.4%.
- Also subtracting from growth over the first half of this year are federal layoffs under President Trump's Department of Government Efficiency program. The combination of deferred resignations and layoff of probationary employees is assumed to reduce federal civilian employment by a cumulative 255,000 through August of this year. The profile of job losses reduces US GDP growth in the first and second quarters by 0.1 and 0.3 percentage point, respectively.
- Incorporated into this month's forecast are updated assumptions on tariffs. The effective tariff rate on imports from mainland China currently is about 30%, and implementation of tariffs on imports from Canada and Mexico has been delayed until early April. This forecast assumes that general tariffs on steel and aluminum as well as tariffs on imports from Canada and Mexico go into effect as scheduled and that the tariff rate on imports from mainland China rises to 45% by June.

Growth chugs along in 2024

Real GDP growth

Annual percent change



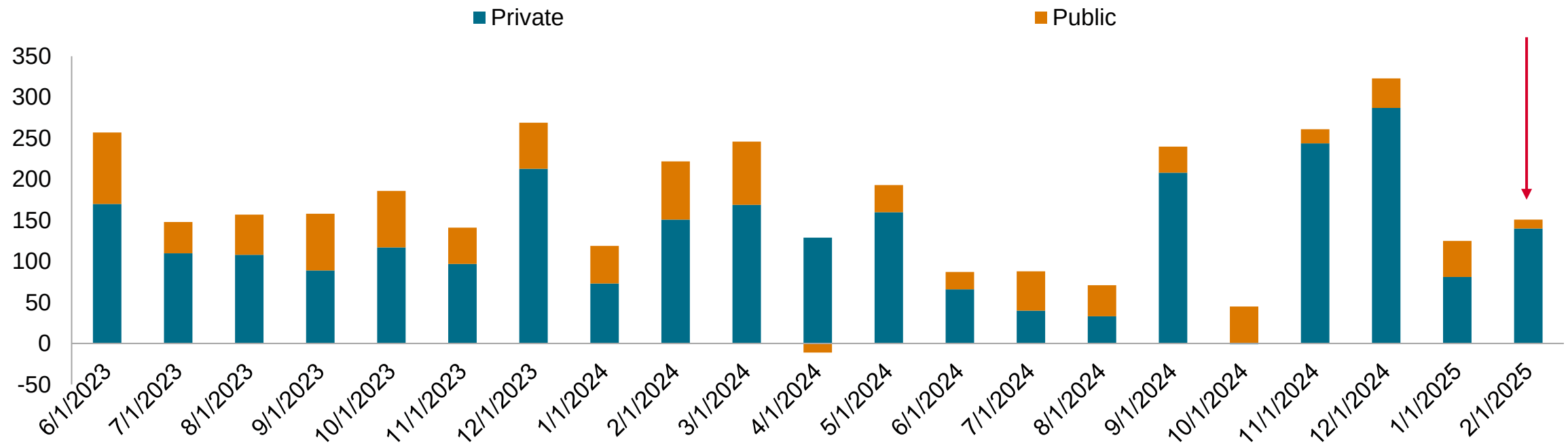
Data compiled Jan. 22, 2025.

Sources: Bureau of Economic Analysis, S&P Global Market Intelligence.

US payrolls increased by 151 thousand in February

Government payroll growth slowed to 10,000 in February

Federal government payrolls declined by 10,000 during the period

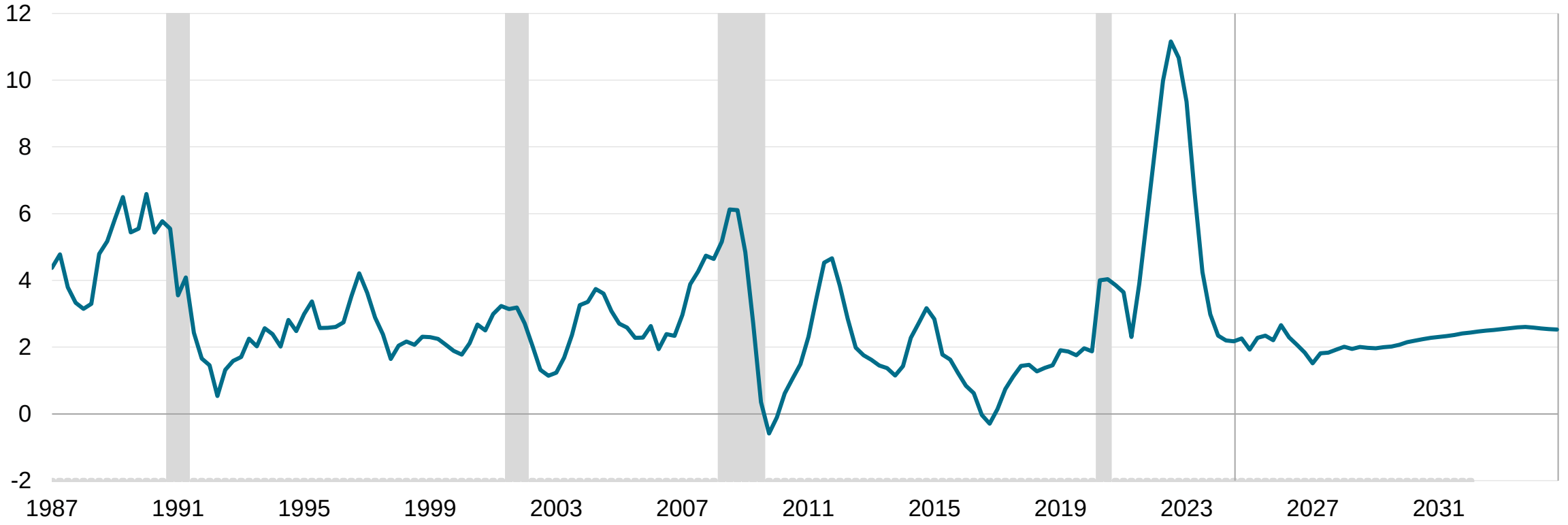


As of Mar. 11, 2025.
Note: seasonally adjusted figures
Source: S&P Global Market Intelligence, BLS.

12-month inflation in food prices has stabilized near 2%

Consumer Price Index for food and beverages, NSA

Percent change from a year earlier



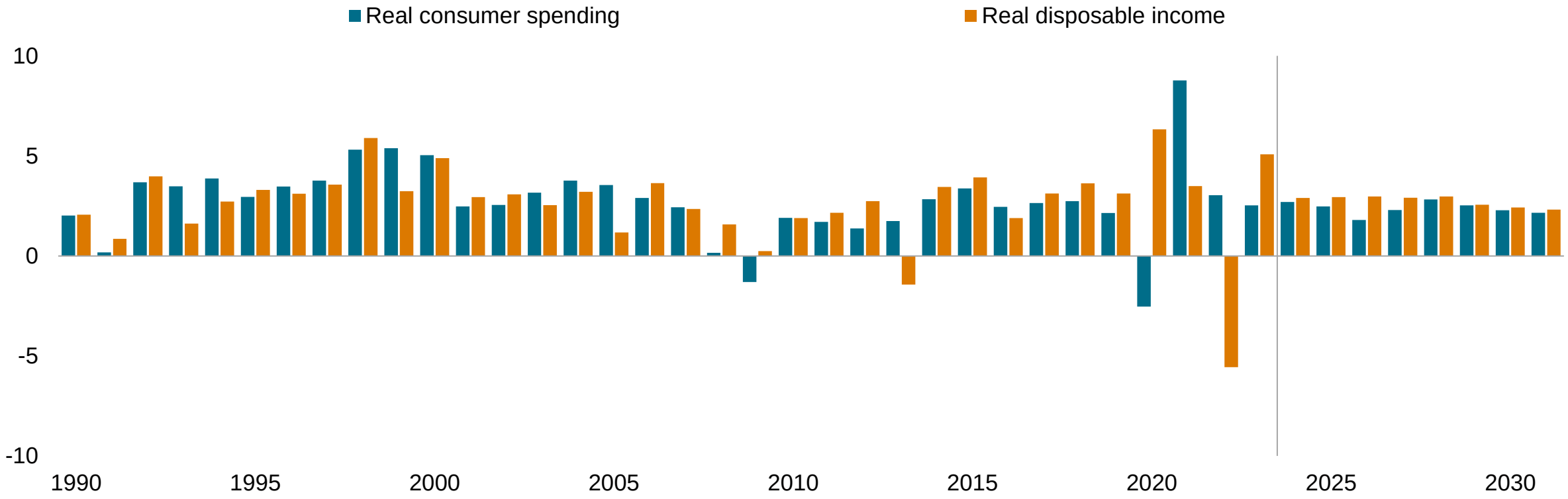
Data compiled Jan. 22, 2025.

Sources: Bureau of Labor Statistics, S&P Global Market Intelligence.

Real disposable income growth moves down slightly in 2024

Real consumer spending and disposable income

Percent change from a year earlier



Data compiled Jan. 22, 2025.

Sources: Bureau of Economic Analysis, S&P Global Market Intelligence.

Risks to the US forecast

Risks to the US forecast

	Baseline (50%)	Pessimistic (25%)	Optimistic (25%)
GDP growth	Real GDP rose 2.8% in 2024. Growth continues at 2.3% in 2025 and 2.0% in 2026.	Real GDP growth comes in at 2.1% in 2025 and slows to 1.4% in 2026.	Real GDP growth ticks down to 2.6% in 2025 and moves to 2.7% in 2026.
Consumer spending	Consumption rose from 2.5% in 2023 to 2.8% in 2024. Growth continues at 3.1% in 2025 and 2.3% in 2026.	Spending growth remains at to 2.8% in 2025 and decelerates to 1.5% in 2026.	Spending accelerates to 3.5% in 2025 and rises 3.3% in 2026.
Housing	Housing starts fell from 1.42 million in 2023 to 1.36 million in 2024 then remain at 1.36 million in 2025 before declining to 33 million in 2025.	Housing starts will drop to 1.33 million in 2025 and 1.25 million in 2026.	Housing starts will jump to 1.40 million in 2025 and increase to 1.41 million in 2026.
Inflation	Core personal consumption (PCE) price inflation was 2.8% in 2024, and remains at 2.8% in 2025 and 2026.	Core PCE price inflation rises to 3.0% in 2025 and ticks up to 3.2% in 2026.	Core PCE price inflation moderates to 2.5% in 2025 and ticks down to 2.4% in 2026.
Business fixed investment	Rose 3.6% in 2024 and rises 1.4% in both 2025 and 2026.	Rises 0.9% in 2025 before slowing to a rate of 0.1% in 2026.	Will rise 1.8% in 2025 and 2.6% in 2026.

Data compiled Feb. 24, 2025.
Source: S&P Global Market Intelligence.

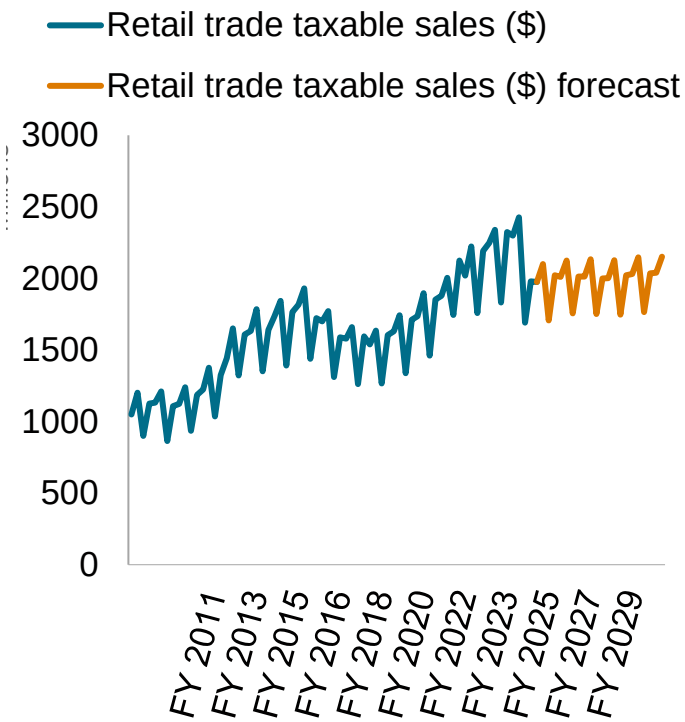
S&P Global
Market Intelligence

Appendix: revenue graphs and methodology

Taxable sales by sector

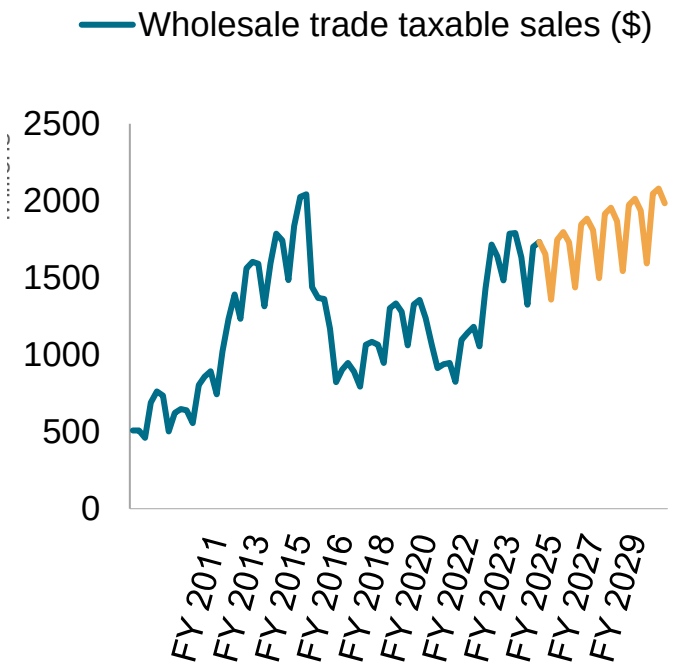
- There are fifteen taxable sales sectors that are modeled. The five largest sectors are retail trade, wholesale trade, mining and oil, accommodation and food services, and manufacturing.

Retail trade taxable sales ($M)



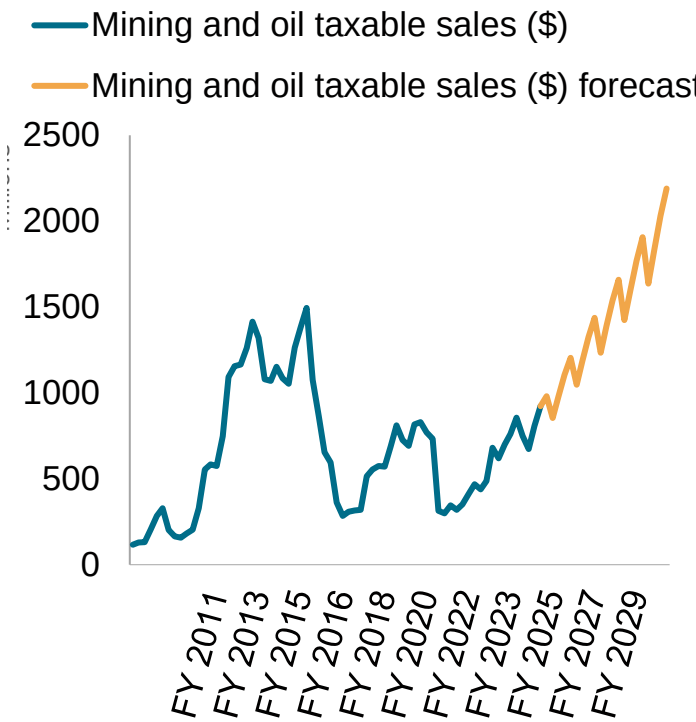
As of Jan. 2025.
Source: S&P Global

Wholesale trade taxable sales ($M)



As of Jan. 2025.
Source: S&P Global

Mining and oil taxable sales ($M)

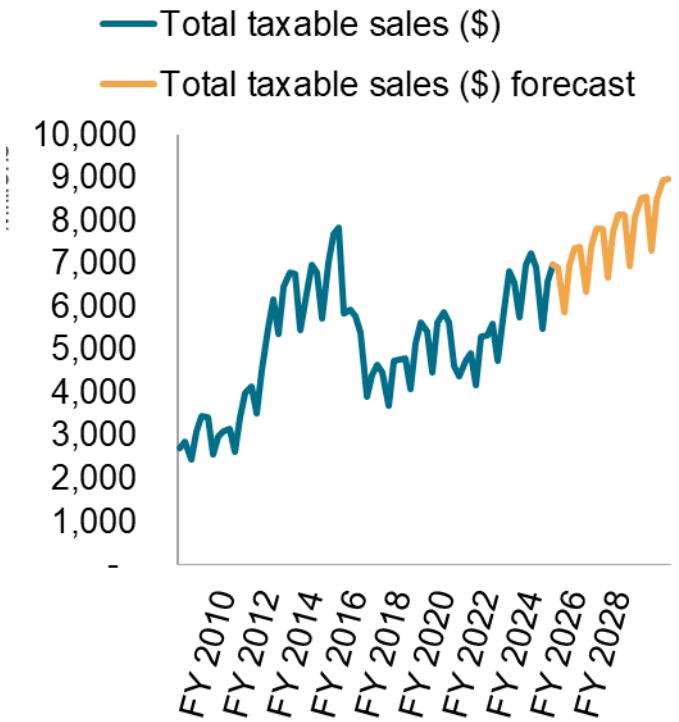


As of Jan. 2025.
Source: S&P Global

Taxable sales by sector

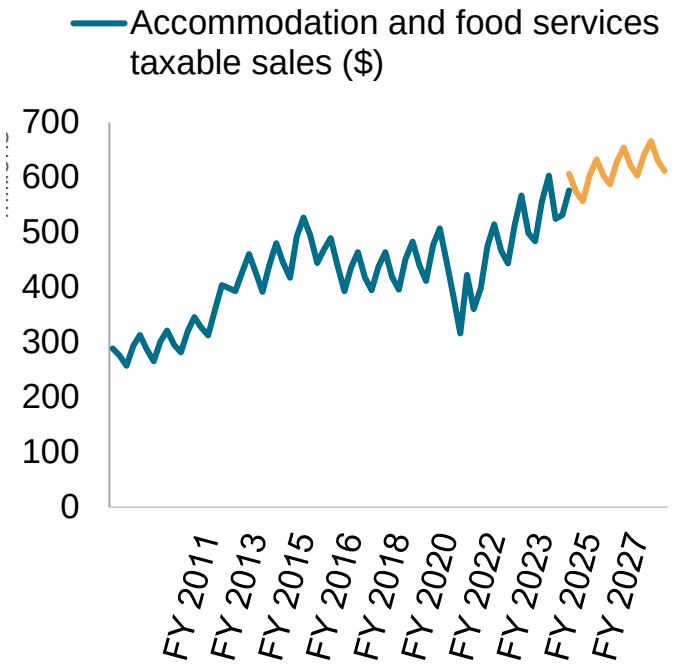
- There are fifteen taxable sales sectors that are modeled. The five largest sectors are retail trade, wholesale trade, mining and oil, accommodation and food services, and manufacturing.

Total taxable sales ($M)



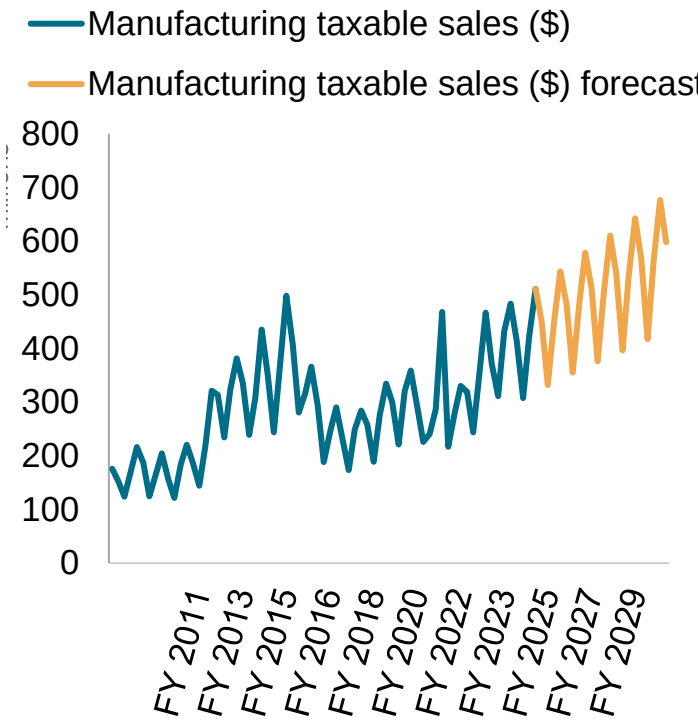
As of Jan. 2025.
Source: S&P Global

Accommodation and food taxable



As of Jan. 2025.
Source: S&P Global

Manufacturing taxable sales ($)



As of Jan. 2025.
Source: S&P Global

Economic indicators used in the tax model

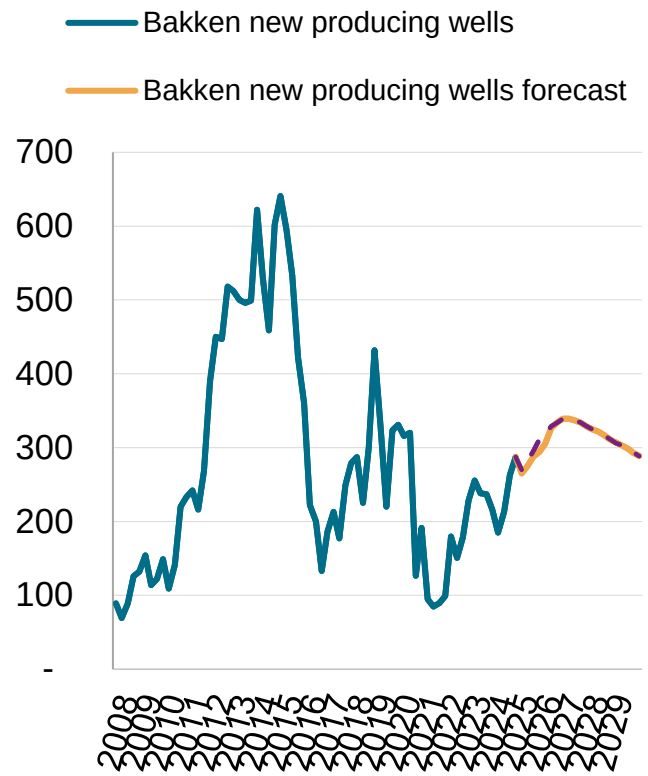
REVENUE SOURCE	ECONOMIC DRIVER	DESCRIPTION
Sales and Use tax	•Bakken new producing wells •CPI inflation •Gross state product by sector	Taxable sales are divided into 15 different sectors and the sectors are individually modeled. The main drivers of these models are the new producing wells in the Bakken play, inflation and gross state product by sector. The forecast of the sectors are summed to total taxable sales then the sales and use tax revenue forecast is calculated.
Motor vehicle excise tax	•Personal Consumption of Motor Vehicles (ND state)	The motor vehicle excise tax base is best captured by the state's personal consumption of motor vehicles (including new passenger car and light truck).
Individual income tax	•Total wage disbursements (ND state) •Personal income, dividends interest and rent (ND state)	The tax base of individual income tax submitted as withholdings is relatively stable and largely driven by total wage income in the state. The tax base of individual income tax submitted as estimated payments, on the other hand, is more volatile due to the nature of capital gains realization. That being said, a reasonable amount of variations in the tax base of individual income estimated payments is captured by the state's property income, i.e., rental income of persons, personal dividend income, and personal interest income.
Corporate income tax	•Bakken new producing wells	The tax base of corporate income tax is mainly driven by the Bakken new producing wells, as it affects oil company's profits.

Drivers of taxable sales sectors

- The number of new producing wells in the Bakken play is the main driver in four of the five largest taxable sales sectors; these sectors are wholesale trade, mining and oil, accommodation and food services, and manufacturing
- Of the fifteen taxable sales models, nine include Bakken new producing wells as a driver.
- Sector-specific gross state product numbers for North Dakota are also used as drivers for some sector models like wholesale trade, and accommodation and food services.
- In the equation for retail trade taxable sales, inflation and population are included as drivers.

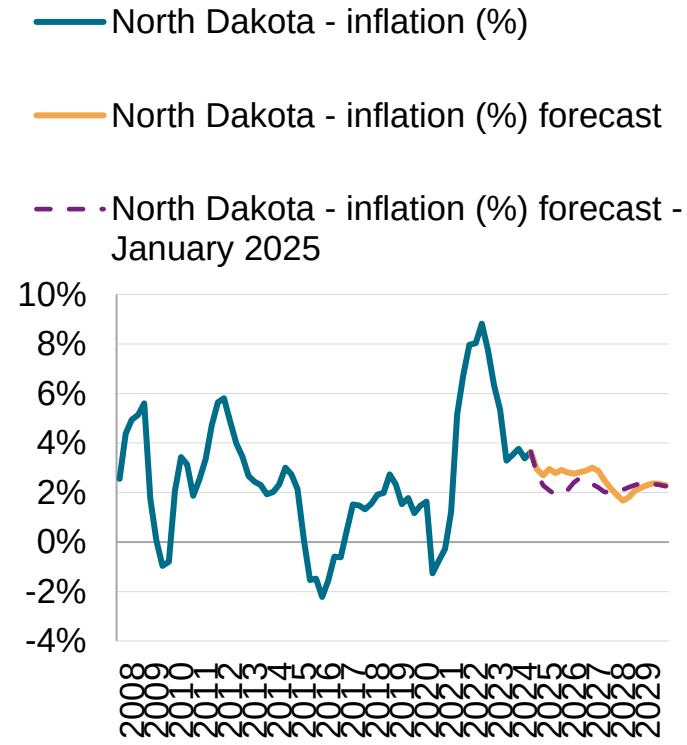
Drivers of taxable sales sectors

Bakken new producing wells



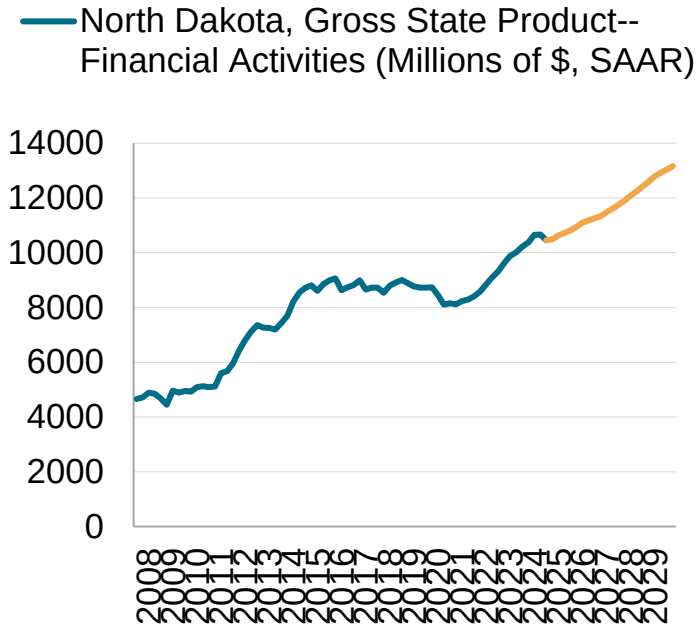
As of Mar. 2025
Source: S&P Global Market Intelligence.

North Dakota - inflation



As of Mar. 2025.
Source: S&P Global Market Intelligence.

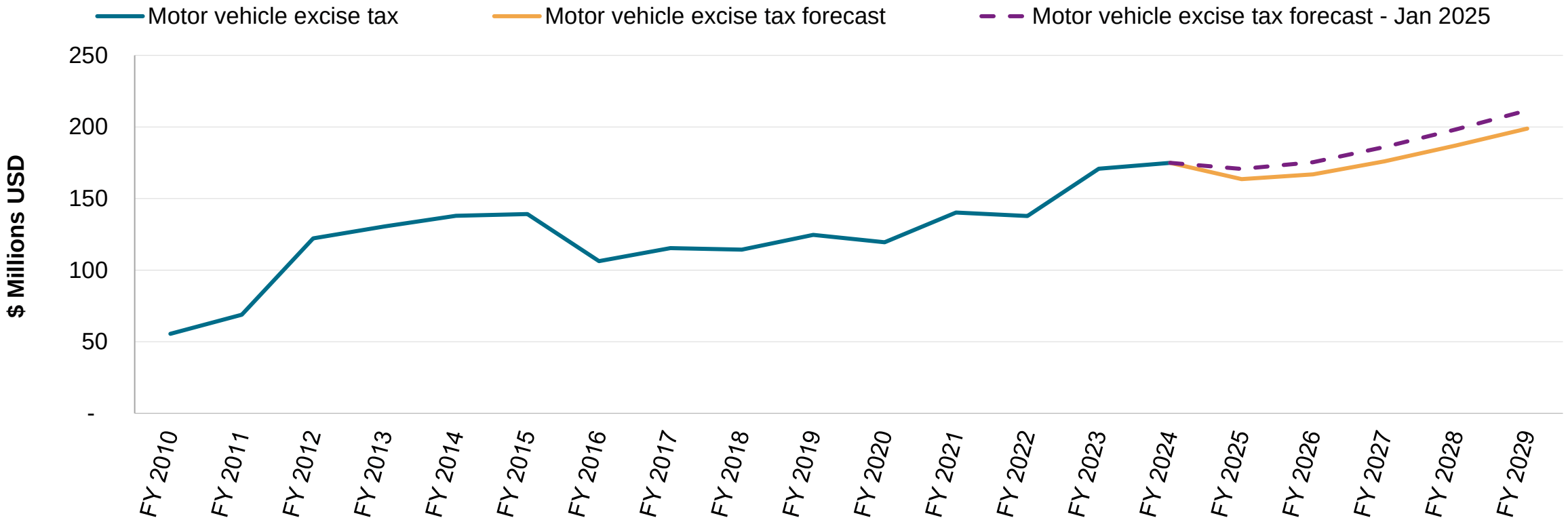
North Dakota, Gross State Product--Accommodation and Food Services (Millions of $, SAAR)



As of Mar. 2025.
Source: S&P Global Market Intelligence.

Motor Vehicle excise taxes

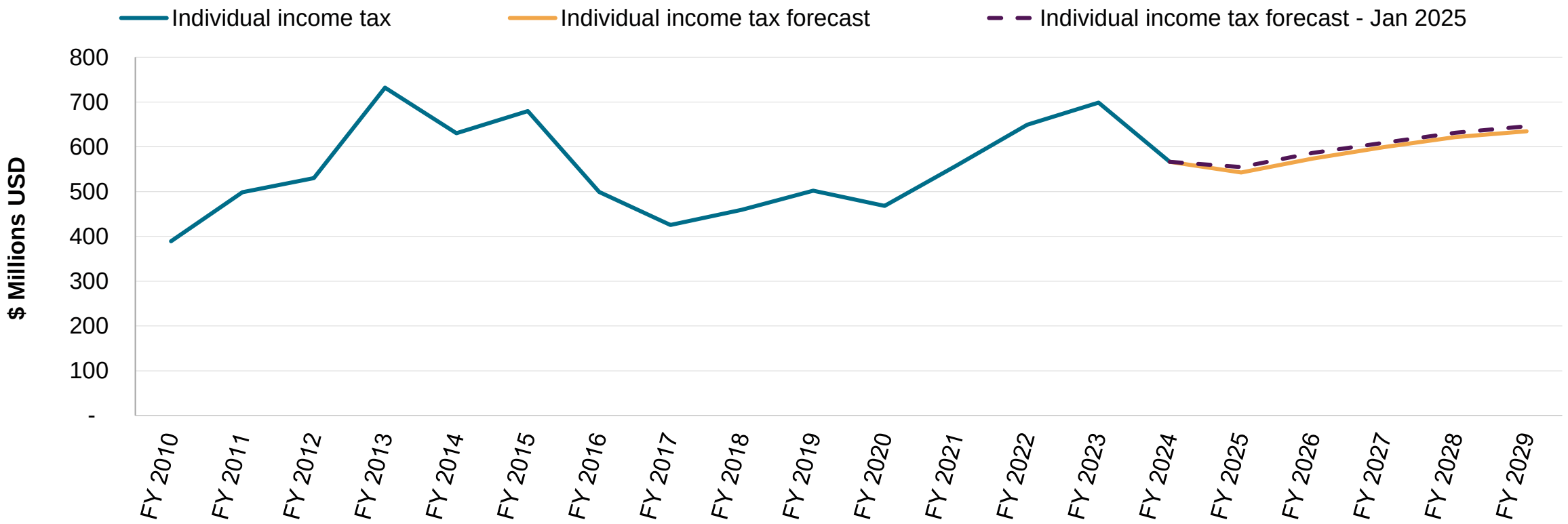
Motor vehicle excise tax forecast



Note: Beginning in FY2024, approximately 50% of MV excise taxes were redirected from the general fund
Source: S&P Global Market Intelligence.

Individual Income tax outlook

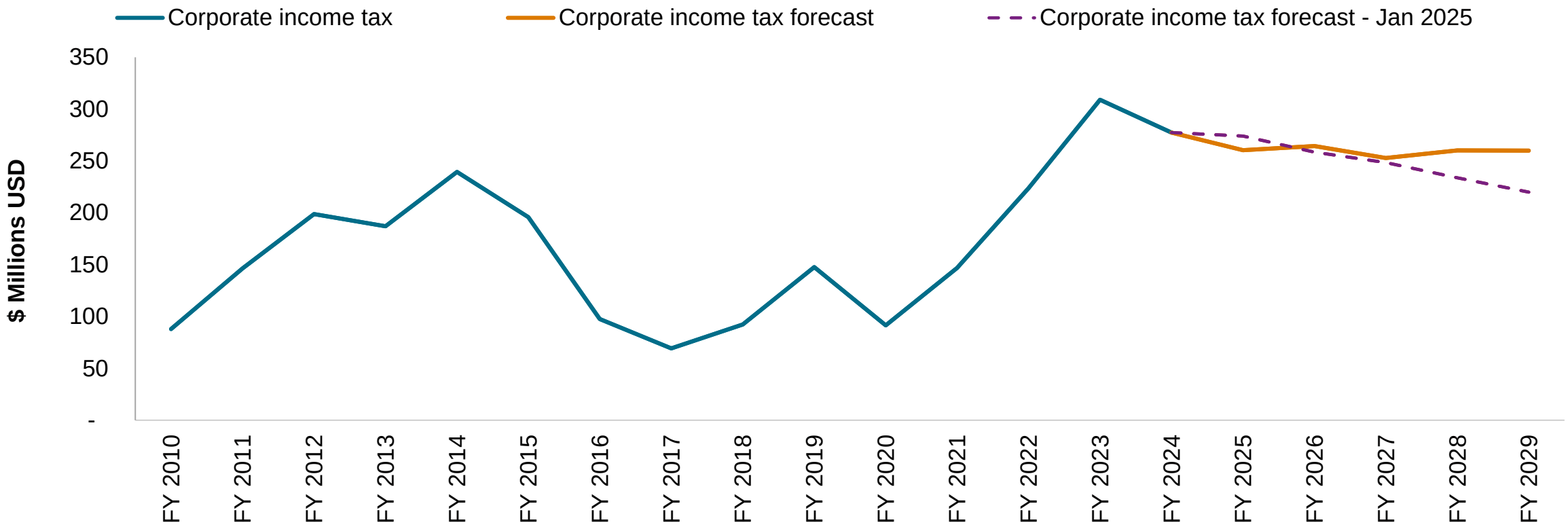
Individual income tax forecast



As of Mar. 2025
Source: S&P Global Market Intelligence.

Corporate Income tax outlook

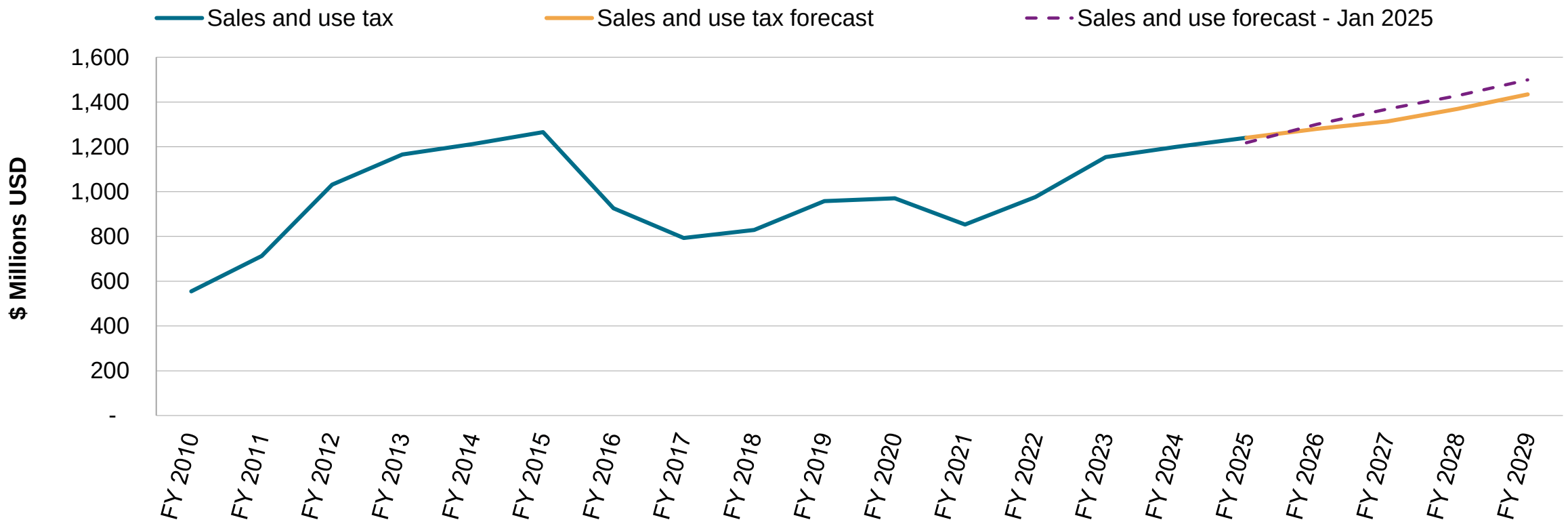
Net Corporate Income Tax forecast



As of Mar. 2025
Source: S&P Global Market Intelligence.

Sales and use tax outlook

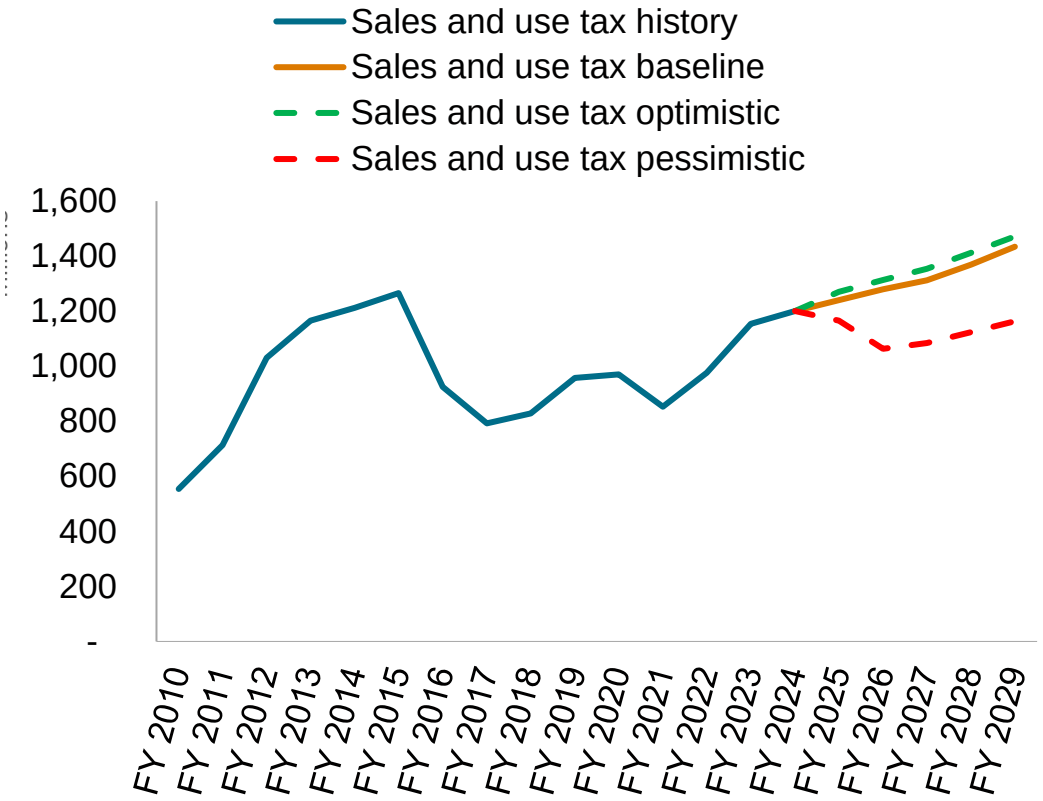
Sales and tax use forecast



As of Mar. 2025
Source: S&P Global Market Intelligence.

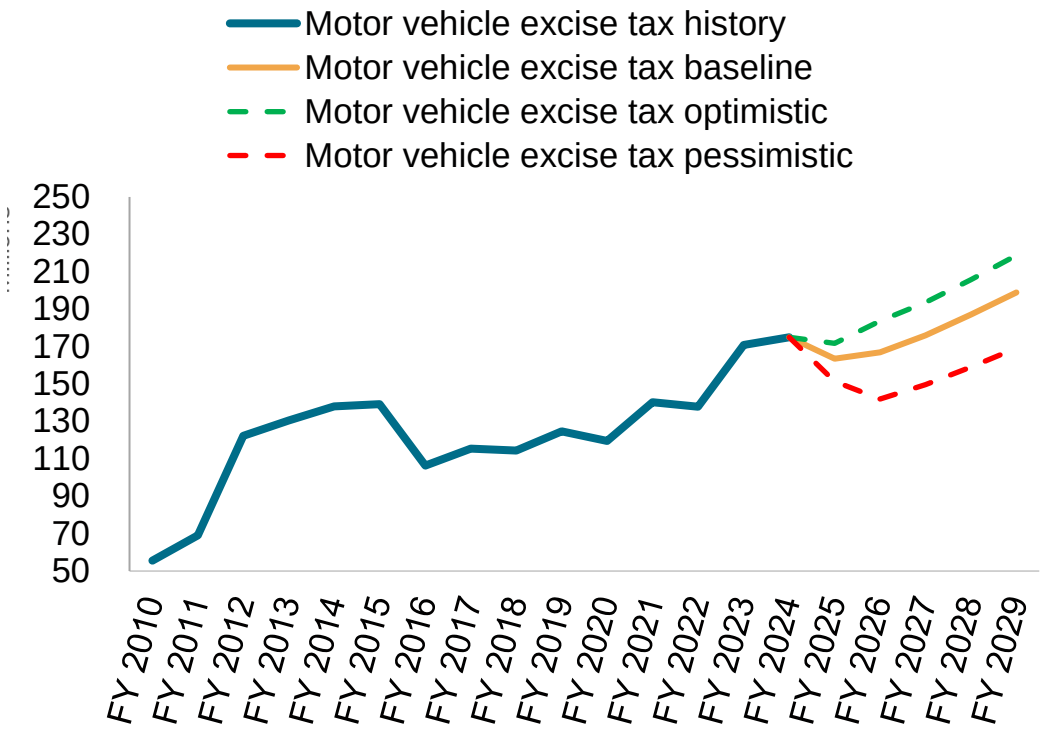
Optimistic and pessimistic scenarios

Sales and use tax forecast scenarios, $ millions



Source: S&P Global

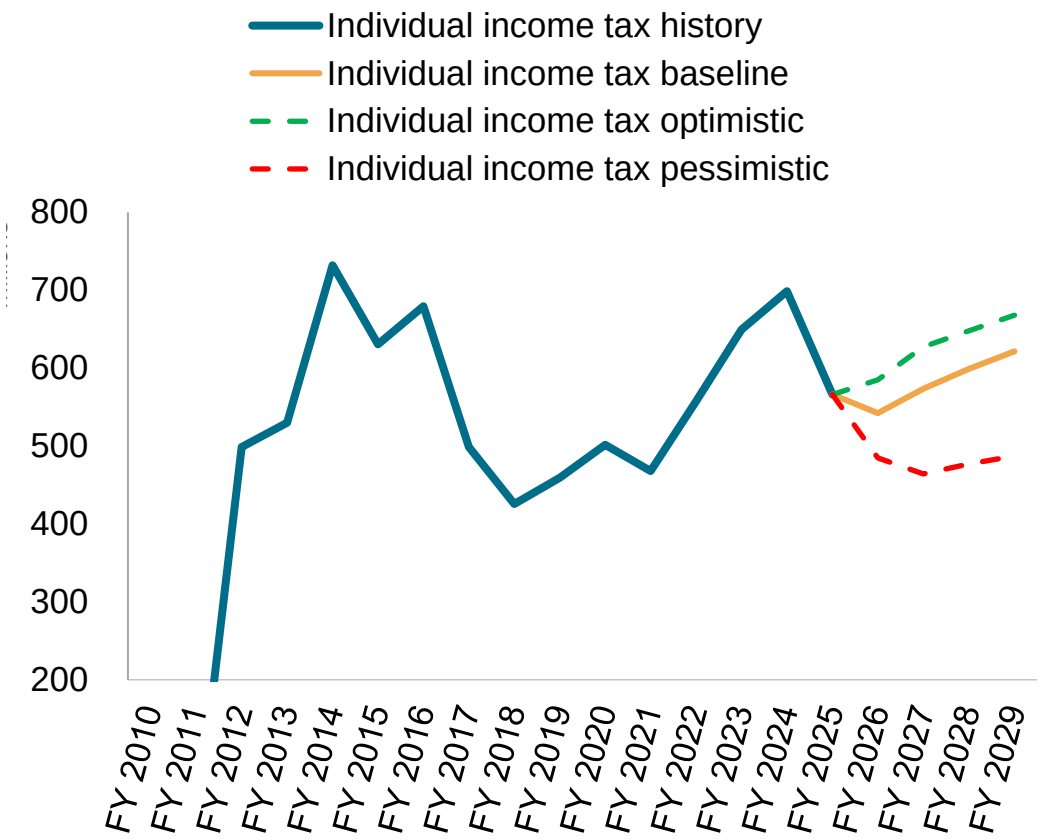
Motor vehicle excise tax forecast scenarios, $



Source: S&P Global

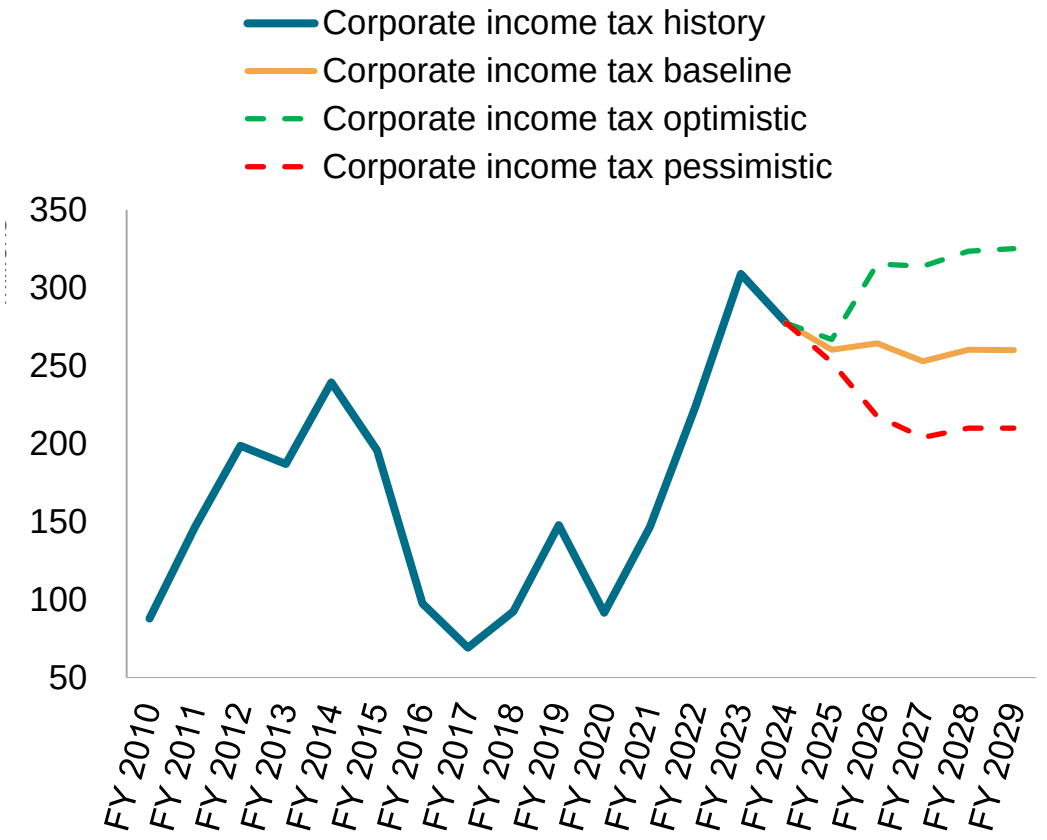
Optimistic and pessimistic scenarios

Individual income tax forecast scenarios, $ millions



Source: S&P Global

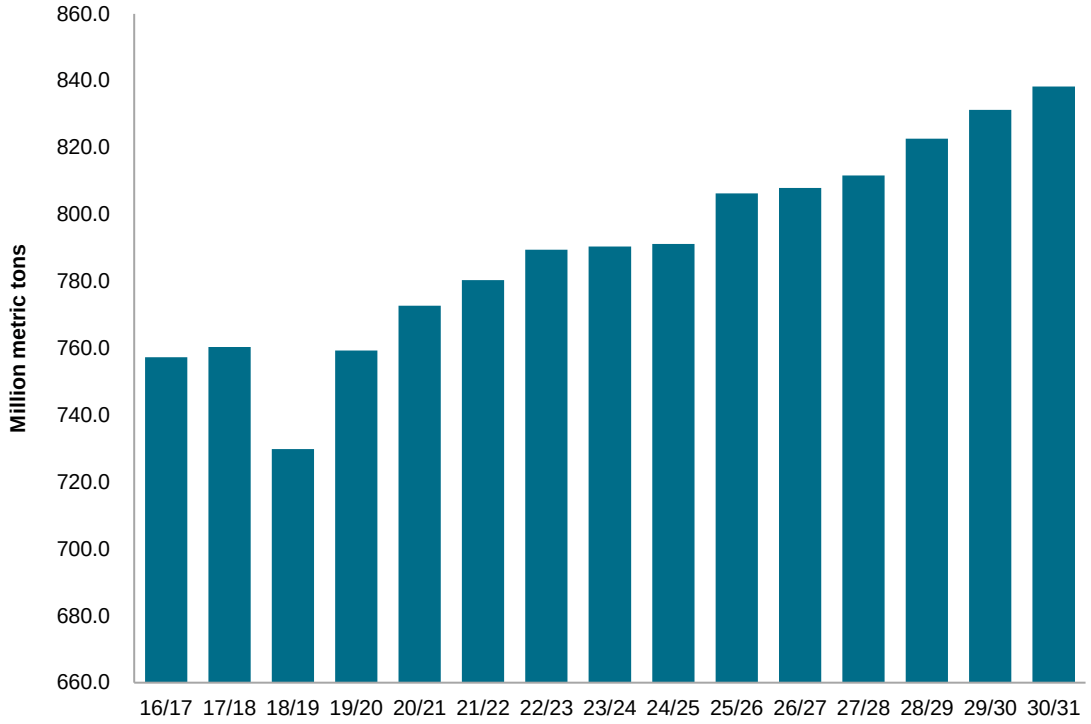
Corporate income tax forecast scenarios, $ millions



Source: S&P Global

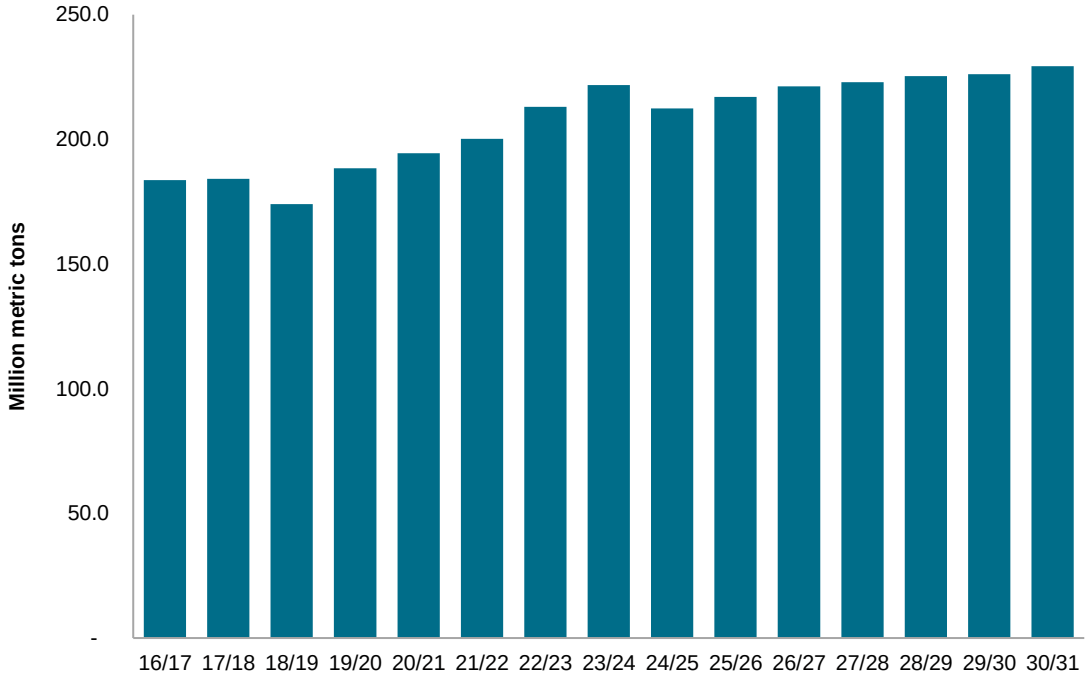
While global wheat production will grow steadily through 2030, global wheat imports are projected to grow at a much slower pace

Global wheat production



Source: S&P Global Commodity Insights.

Global wheat imports

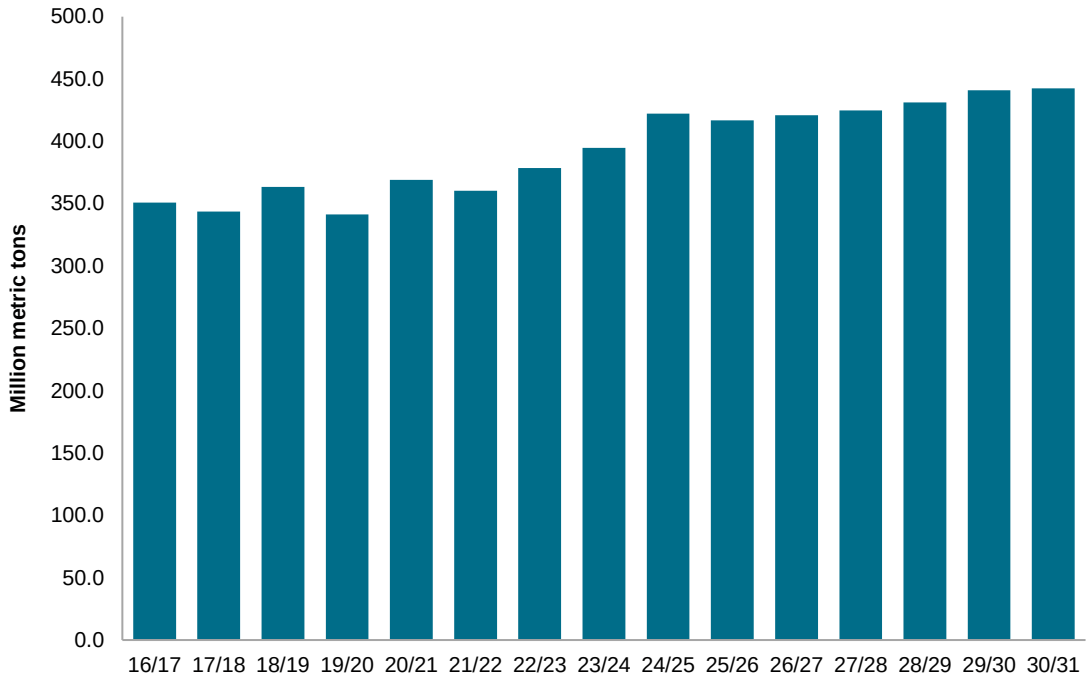


Source: S&P Global Commodity Insights.

- Global wheat production remained steady in 2024/25, only increasing 0.8 MMT to a total of 791.2 MMT. While Canada, the US, and Argentina experienced strong harvests, this was offset by poor yields in Russia. Global supplies of wheat is expected to grow by 47.1 MMT by 2030/31 to a total of 838.3 MMT with the main increases originating from the EU and Ukraine.
- Global wheat imports declined by 9.6 MMT for a total of 212.4 MMT with the decline being driven by lower imports from China, Turkey, and Indonesia. While global imports are expected to increase to 229.3 MMT by 2030/31, it will be 2027/28 before global wheat imports surpass levels experienced in 2023/24.

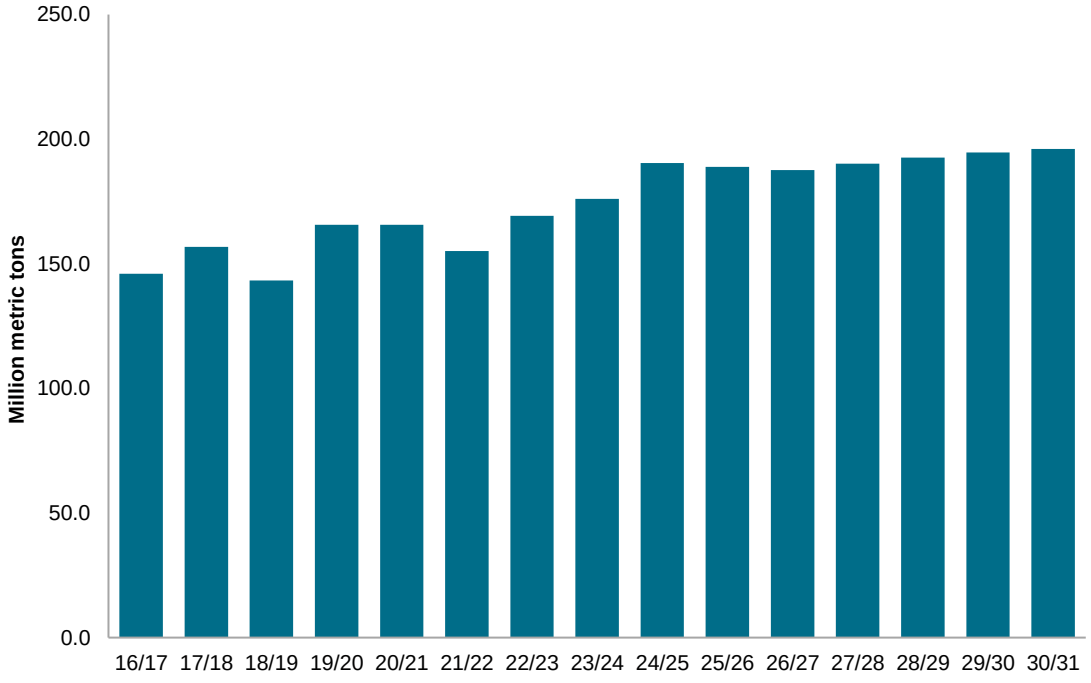
Global soybean production and imports are expected to steadily grow through the forecasted period

Global soybean production



Source: S&P Global Commodity Insights.

Global soybean imports

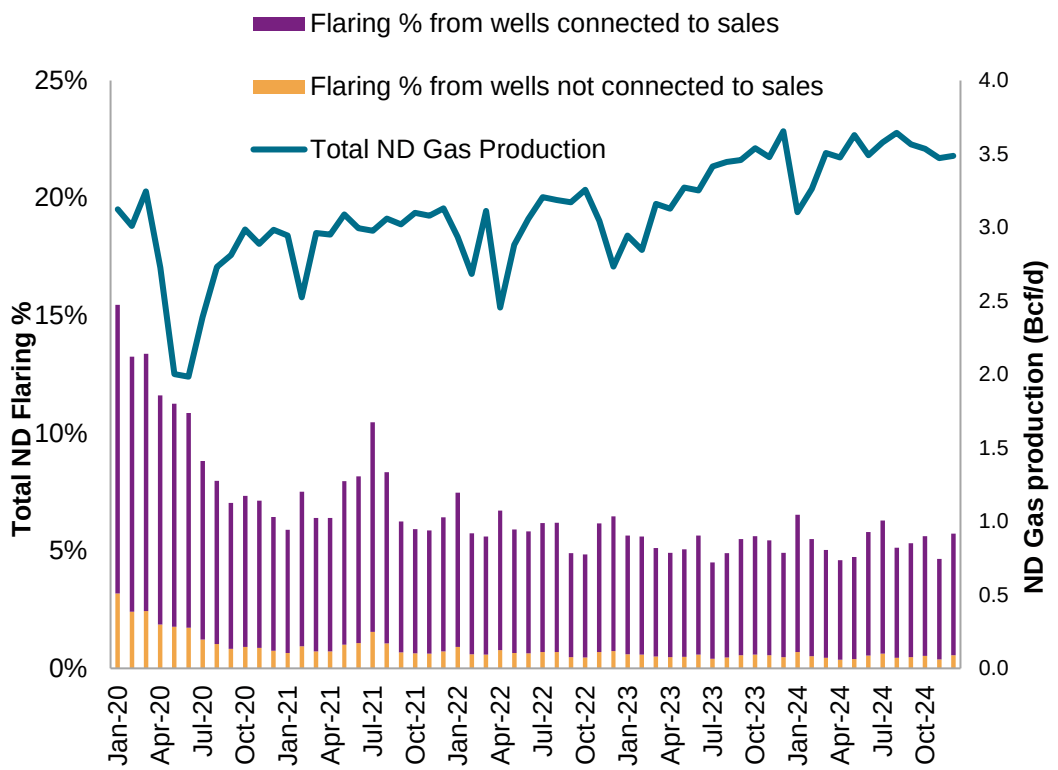


Source: S&P Global Commodity Insights.

- Global soybean production product increased to 422.2 MMT in 2024/25, a 27.5 MMT increase from 2023/24. This increase in global production is being driven by increased supplies from Brazil, the US, and Argentina. Sustained acreage growth in LATAM, driven by Brazil, and increasing global yields will result in a forecasted global soybean harvest of 442.5 MMT in 2030/31.
- World soybean imports increased by 14.5 MMT in 2024/25 for a total of 190.4 MMT with the increases being concentrated in Europe, Eurasia, and Asia, although Chinese imports decreased. Imports are projects to remain relatively steady and grow slowly through to decade to a total of 196 MMT by 2030/2031.

Gas capture has improved significantly in recent years with a high capture rate of 94~95%, contributing to a more sustainable and environmentally responsible oil and gas industry in ND

North Dakota gas flaring trend vs gas production

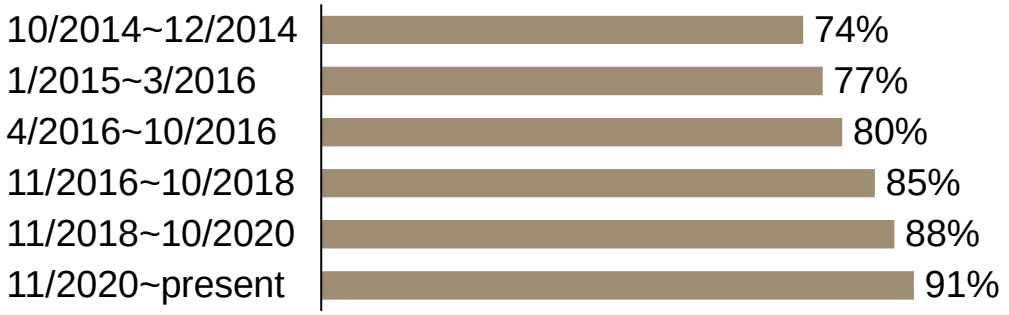


Data compiled in March 2025.

Source: S&P Global Commodity Insights.

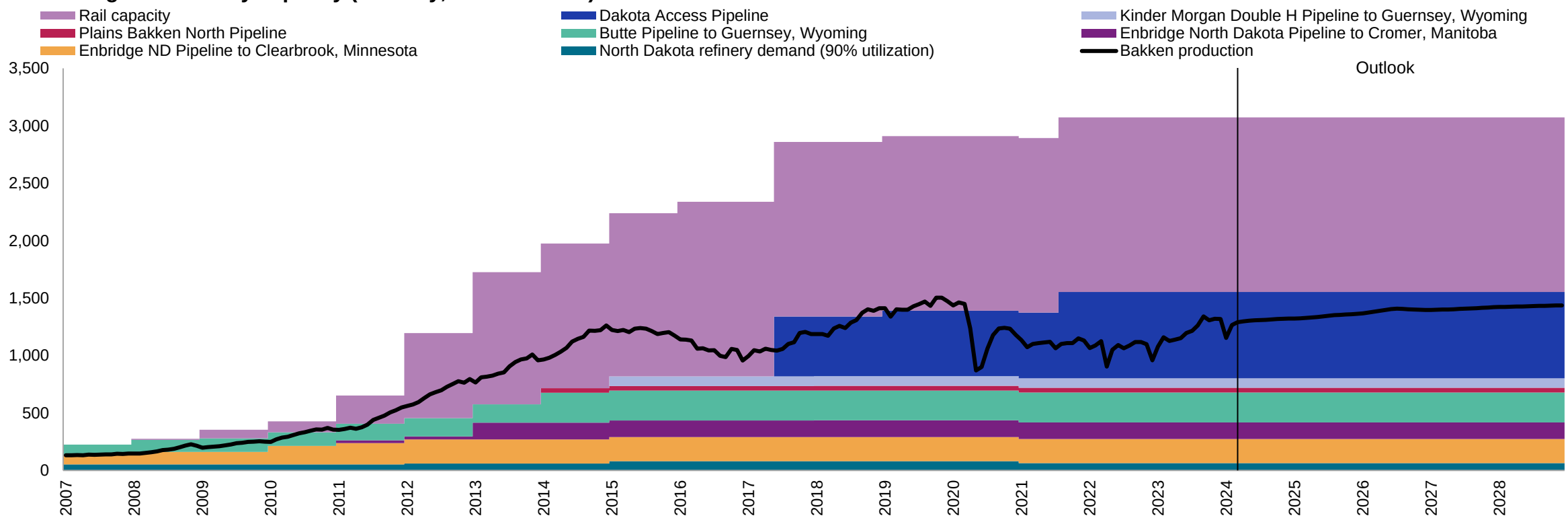
- Introduced in 2014, North Dakota Industrial Commission (NDIC) Order 24665 mandates that oil and gas companies limit the flaring of natural gas during production.
- This order aims to increase the capture of natural gas, reduce percentage of flared gas, and incentivize investment in gas capture infrastructure.
- Significant progress has been made, with 94% to 95% of natural gas being captured.
- In terms of flaring gas, 1% is from wells not connected to sales, which is likely due to a lack of pipelines, while the remaining 4% of flared gas indicates that the currently existing infrastructure is insufficient to handle the gas.

Gas capture goal by year



DAPL is key to the Bakken remaining competitive

Bakken region takeaway capacity (monthly, thousand b/d)

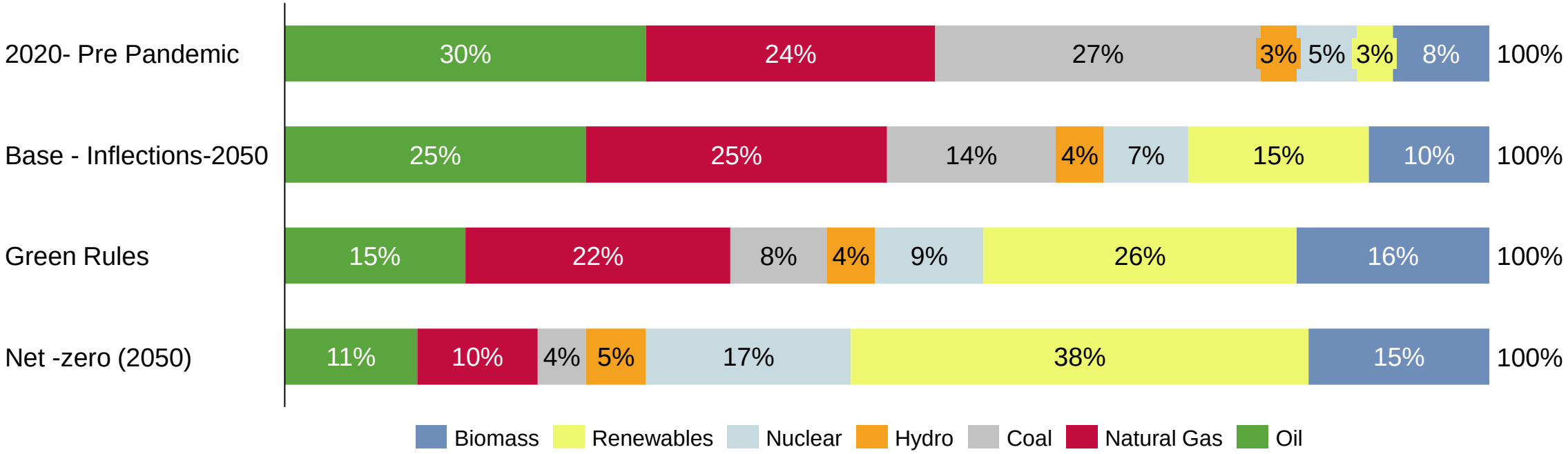


Data compiled December 2024.
Source: S&P Global Commodity Insights.

- The Dakota Access Pipeline (DAPL) is vital for Bakken crude oil, transporting approximately 750,000 b/d in 2023, which represents about half of the region's total supply to the market. Despite ongoing legal challenges and an environmental assessment pending by the Army Corps of Engineers, DAPL is expected to remain operational and may expand capacity to over 1 million b/d.

- If the DAPL were permanently shut down, transporting 750,000 b/d by rail could increase costs by $8 to $9 per barrel, negatively impacting Bakken's competitiveness against other U.S. oil sources.

Energy transition - Ambitious climate policies and net-zero emissions targets are driving a change in energy mix for all scenarios – Green Rules scenario will not meet the goals of Paris compliance



- As a result of the oil-price crash due to the pandemic new emphasis by industry and government on clean energy has shifted. The current projected mix of energy sources has reduced reliance on oil and coal (which are more carbon intensive than natural gas) and increased reliance on renewables, mainly wind and solar

- Projected increases in average global temperature by 2100 for each scenario

  - Pre-pandemic 3.1 ℃
  - Base – inflections 2.6 ℃
  - Green Rules 1.9 ℃
  - Net – zero 1.5 ℃

S&P Global

March 13, 2025

Economic Forecasting and Industry Report

The State of North Dakota

Table of Contents

I. Project Overview

North Dakota Legislative Assembly goals:

- The North Dakota Legislative Assembly sought the support of a professional services firm with the capabilities to support the state's revenue estimating and economic forecasting efforts.
- The Legislative Assembly required that a consultant either have or develop the economic modeling framework that can address how the economy impacts its revenue streams.
- The end-product required of the Legislative Assembly's consultant will be used for updating the 2023-25 biennium revenue forecast and developing the 2025-27 biennium revenue forecast.
- The information must be provided in context of both short- and long-term economic behavior with forecast expectations of the national economy as well as detailed economic forecasts specific to North Dakota's economy.
- All forecasted values will be provided in terms of a baseline, optimistic, and pessimistic scenarios with probability assignments to each outcome. And finally, in addition to their quantitative requests, the North Dakota Legislative Assembly requires the qualitative assessment of both national and local economic conditions and demographic trends that are driving these projections.

About S&P Global:

- On February 28, 2022, S&P Global and IHS Markit completed their merger, creating a leading information services provider with a unique portfolio of highly complementary assets.
- S&P Global offers an enhanced value proposition for our global customer base across data & analytics, ratings, benchmarks, indices, commodities & energy, transportation, and engineering. These products allow us to better serve our customers with a broader and deeper portfolio of unique solutions and increased scale.
- By providing in-depth analysis and forecasts down to the local level, S&P Global's team of over 300 economists and analysts serve as valuable extensions to our client organizations' staff and provide the data and analysis they need to make high impact business and policy decisions.
- As much as possible, S&P Global has utilized our existing US Macroeconomic and Regional modeling infrastructure to meet the Legislative Management's economic forecasting requirements. This allowed S&P Global to immediately begin the more detailed work on behalf of the State tax revenue models and minimized the development cost associated with building new models.

II. Major Economic and Demographic Drivers

US Macroeconomy

Slower growth, higher unemployment, earlier peak in inflation

- S&P Global Market Intelligence forecasts 1.9% US GDP growth in 2025 followed by 1.9% growth in 2026 and 1.6% growth in 2027. The projections for 2025 and 2026 are below last month's forecast by 0.4 and 0.1 percentage point, respectively.
- The markdown to growth this year is due to weaker growth over the first half of this year. Several key indicators reported over the last four weeks suggest considerably weaker growth in the first quarter than we previously projected. Unexpected weakness in consumer spending in January, in part due to unseasonably harsh winter weather, lowered our forecast of first-quarter PCE growth by more than a percentage point to 2.0%.2 An unexpectedly sharp widening of the trade deficit in January lowered our forecast first-quarter net exports enough to shave 0.7 percentage point from our forecast of first-quarter growth. These and other factors helped to lower our forecast of first-quarter GDP growth by 1.1 percentage points to 1.4%.
- Also subtracting from growth over the first half of this year are federal layoffs under President Trump's Department of Government Efficiency program. The combination of deferred resignations and layoff of probationary employees is assumed to reduce federal civilian employment by a cumulative 255,000 through August of this year. The profile of job losses reduces US GDP growth in the first and second quarters by 0.1 and 0.3 percentage point, respectively.
- Incorporated into this month's forecast are updated assumptions on tariffs. The effective tariff rate on imports from mainland China currently is about 30%, and implementation of tariffs on imports from Canada and Mexico has been delayed until early April. This forecast assumes that general tariffs on steel and aluminum as well as tariffs on imports from Canada and Mexico go into effect as scheduled and that the tariff rate on imports from mainland China rises to 45% by June.
- With growth slowing below potential, the unemployment rate rises to a peak of 4.7% in early 2027. Core PCE inflation, on a 4-quarter basis, peaks at 3.3% in the third quarter of this year, which is 0.2 percentage point higher and two quarters earlier than the peak in last month's forecast. With inflation turning up sooner, the Federal Reserve is assumed to hold the funds-rate target range at the current level until December 2025, when it resumes the easing process started last fall.

Trade policy taking shape

President Trump has begun implementing his trade policy plans, and we have begun the process of replacing our assumptions about trade policy with actual policy action. Our January forecast assumed a 10% universal tariff and a 30% tariff on imports from mainland China, with all tariffs phased in over a one-year period beginning in the second quarter. Since President Trump took office, he has announced and then postponed a 25% tariff on imports from Canada and Mexico, he has implemented a 10% incremental tariff (on top of existing tariffs) on imports from mainland China, and he has announced a 25% tariff on imports of steel and aluminum products that is set to go into effect on March 12. Our February forecast assumes that the steel and aluminum tariffs go into effect as scheduled, includes the 10% incremental tariff on imports from mainland China, and assumes that the 25% tariffs on imports from Canada and Mexico are eschewed in favor of the 10% universal tariff that we continue to assume ramps up over the course of one year. The effective tariff rate on imports from Mainland China are closer to 20% than the 30% we previously assumed but are implemented immediately (rather than phased in). This had the effect of moving into early 2025 some of the tariff-induced inflation that we had previously expected later in the year.

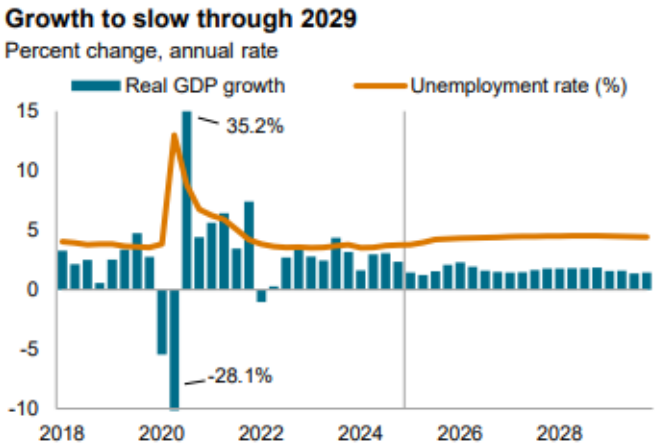
Trade policy uncertainty a risk

Both trade policy and uncertainty about trade policy can impact the real economy. In our forecast, tariffs — trade policy — affect the real economy through the resulting financial fallout: a pause in the Federal Reserve's easing cycle, higher borrowing costs, a stronger US dollar, and weaker equity values, all relative to a no-tariff counterfactual. Uncertainty about trade policy can affect the real economy as well, as businesses may delay large investment projects that require imported inputs of uncertain cost. In prior research, we have found that the effects of trade policy uncertainty are concentrated in the manufacturing sector and are directly related to exposure to trade; the more inputs an industry imports and the more output

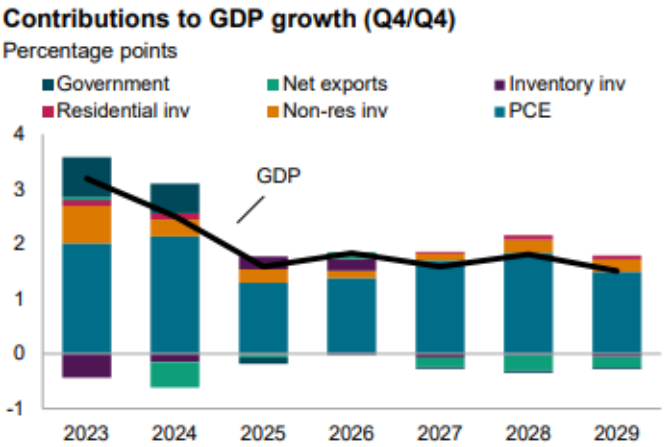
an industry exports, the more sensitive it is to trade policy uncertainty. We make no allowance for this effect in our forecast, so it remains a downside risk to the outlook.

Updated Fed call

The combination of added near-term strength and a sooner rise in inflation has led us to change our Fed call. In the January baseline forecast, we assumed the Federal Reserve would ease twice in the first half of this year (in March and June) before pausing rate cuts until mid-2026. We now expect the Fed to ease only once this year (in May) before pausing. This contributes to higher Treasury yields and a stronger US dollar over the next couple of years than in last month's forecast.



As of March 11, 2025.
Sources: S&P Global Market Intelligence; BEA; BLS.



As of March 11, 2025.
Sources: S&P Global Market Intelligence; BEA.

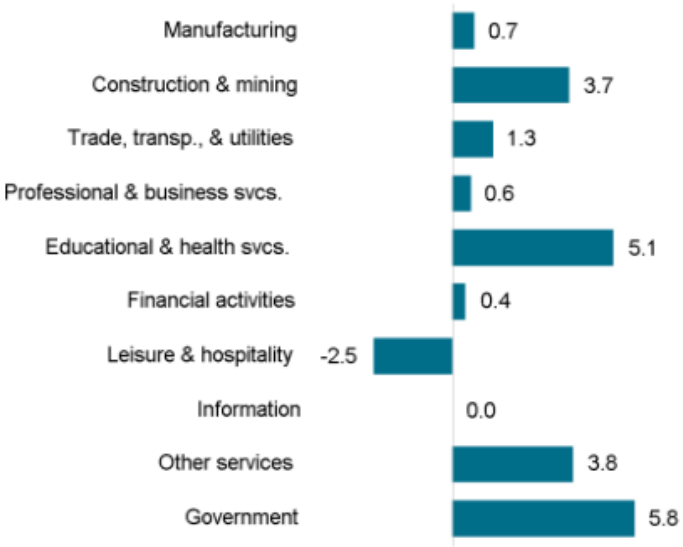
North Dakota Economy

Economic fallout from the early 2020 oil correction lingers

Employment in North Dakota advanced by a robust 2.3% year over year during November 2024, well above the US average (1.4%). The education/health and government sectors were the dominant job creators in November, accounting for 80% of the overall job gains and more than offsetting declines in information, business services and leisure/hospitality. The unemployment rate remains among the lowest in the nation at just 2.4% in November, but it has been inching up over the latter half of 2024.

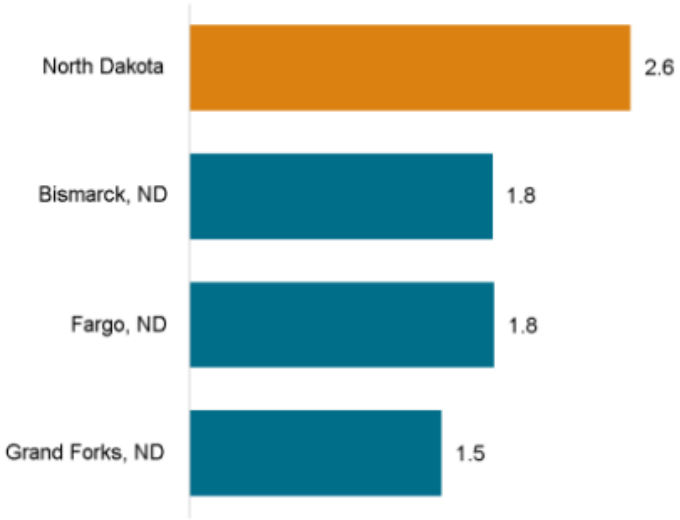
The US oil mining sector is in much better shape following the sharp COVID-19 pandemic correction. US field production surpassed pre-pandemic levels in 2023 and has since climbed higher. However, the recovery has been uneven across states. North Dakota field production of crude oil grew strongly over 2023 but has mostly been moving sideways over 2024. In fact, November 2024 production (35,988 barrels) remained well below the November 2019 level (46,421 barrels) according to the US Energy Information Association. This sluggish recovery in the Bakken Formation, a key driver of the state's economy, contrasts with the robust growth seen in the Permian Basin, particularly in Texas and New Mexico, which have attracted a significant share of post-pandemic investment.

Employment growth by sector, December 2024



Data compiled January 2025.
Source: S&P Global Market Intelligence.

Employment growth by MSA, December 2024



Data compiled January 2025.
MSA = metropolitan statistical area.
Source: S&P Global Market Intelligence.

Issues to watch

- North Dakota is positioning itself to get a piece of the emerging hydrogen power economy as the US transitions to low-carbon energy sources. North Dakota is part of the Heartland Hydrogen Hub with Minnesota, Montana and Wisconsin. The US Department of Energy selected the hub to be awarded close to $1 billion in its efforts to advance low-carbon hydrogen production. North Dakota is also home to the National Center for Hydrogen Technology (NCHT) in Grand Forks. The NCHT was established by the Energy & Environmental Research Center at the University of North Dakota and focuses on research on a variety of hydrogen technologies as well as provides assistance to businesses developing hydrogen applications. Hydrogen would serve to diversify its energy industry away from oil and natural gas and attract high-paying jobs to the state.
- The state of the US oil industry will be a prominent force behind the performance of North Dakota's economy over the next several years. Just when the oil industry started to see sustained growth following the 2015–16 correction, the pandemic threw oil markets into a tailspin. The impact was sudden, with North Dakota rig counts plunging to nine to 11 rigs over the latter part of 2020. This is half the amount as the worst week during the 2015–16 correction. Fortunately, rig counts trended higher over 2021–23, peaking at 41 early last year. Rigs have stabilized in the low 30s so far in 2024.

Near-term developments

Employment growth in North Dakota will decelerate over 2025, weighed down by a maturing business cycle and further easing in oil prices. All told, job growth in North Dakota will register gains of 1.2% in 2025 (down from 1.5% in 2024). The

education/health and government sectors will be the top job creators, but weakness in the trade/transportation and mining sectors will constrain overall growth.

North Dakota outlook over the next four quarters

		Baseline scenario (50% probability)			Pessimistic (25% probability)			Optimistic (25% probability)		
		Level	Percent	Rank	Level	Percent	Rank	Level	Percent	Rank
Year-over-year change (Q1 2026)										
	Employment	+2,954	+0.7	21	+1,957	+0.4	18	+3,713	+0.8	27
	Personal income (mil.$)	+4,319	+7.3	1	+4,125	+7.0	1	+4,521	+7.7	1
	Real gross state product (mil. 2017$)	+1,376	+2.3	16	+1,093	+1.8	8	+1,663	+2.7	21
Level (Q1 2026)										
	Unemployment rate (%)	2.8		49	2.9		49	2.7		48
	Housing starts	2,961		46	2,790		46	3,171		46

Data compiled February 2025.
Source: S&P Global Market Intelligence.

Employment growth in North Dakota will average 0.2% annually through 2029, a tick below the US average (0.3%). Topline gains will be hampered by job losses in manufacturing and retail trade and slow growth in many services industries. Mining employment will also contract during this period due, in part, to weakening oil prices over the near term. The education and health and government sectors will be the top job creators over the next five years.

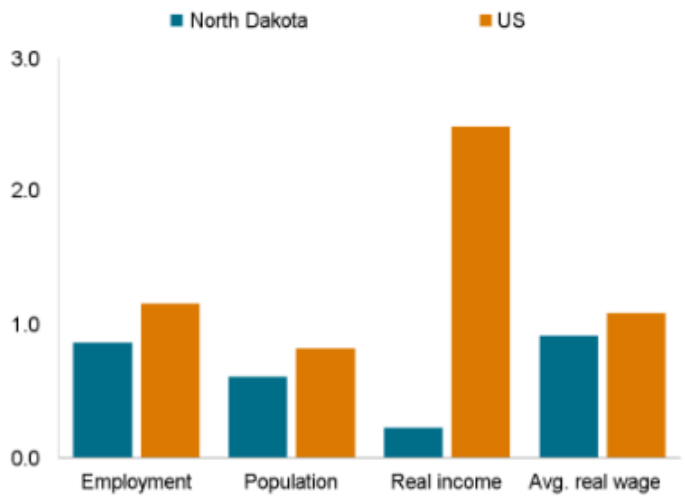
Strengths

- Despite the ups and downs, the Bakken region remains a viable play. Oil production is a key support for tax revenues and high-paying jobs.
- The eastern part of the state, especially Fargo, is the main driver of the state's knowledge economy and is helping it diversify from traditional industries such as agriculture.

Weaknesses

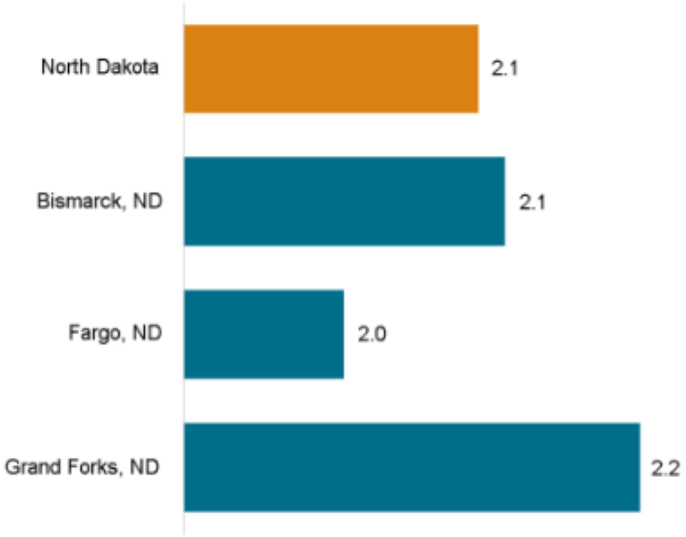
- Agriculture in North Dakota is susceptible to weather events such as droughts, floods, and extreme temperatures, which can significantly impact crop yields and farm incomes.
- The North Dakota economy is heavily reliant on the oil and gas industry, making it vulnerable to fluctuations in global energy prices and demand.
- The state faces challenges in attracting and retaining skilled workers, particularly in sectors including technology and healthcare.

Relative growth in key indicators, 2023 to 2025



Data compiled August 2024.
CAGR = compound annual growth rate.
Source: S&P Global Market Intelligence.

Unemployment rate by MSA, June 2024 (%)



Data compiled August 2024.
MSA = metropolitan statistical area.
Source: S&P Global Market Intelligence.

Labor force and demographics

In 2024, North Dakota was the 48th-largest state by population, with 796,000 residents. That was up slightly from 784,000 in 2023 and 779,000 in 2020. The state saw enormous growth of 15.8% in the decade between 2010 and 2020, when North Dakota was one of the fastest-growing states in the country thanks to the oil boom migration. Energy development has since cooled in the Bakken and population gains have fallen dramatically as a result.

North Dakota boasts a well-educated workforce: Its educational system has one of the country's highest percentages (94.5%) of ninth graders who go on to graduate from high school; the national average is 89.8%. In addition, the state has a higher proportion of population possessing at least an associate degree, which stood at 45% in comparison with the national average of 44%. Still, low population density, its unfavorable climate, and lack of proximity to other major population centers limits its appeal for corporate expansion activity.

III. Special Industries

Oil

A. Global and North American Fundamentals

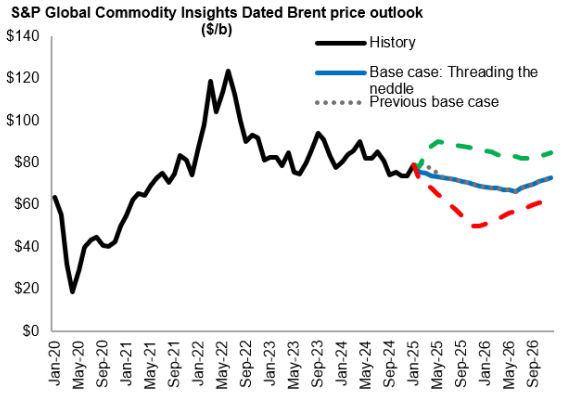
Global Markets:

OPEC+: The group is expected to experience fluctuations in production until 2030, with a projected rise to 34.9 million b/d by 2027, followed by a decline to 33.1 million b/d by 2032. This adjustment is in response to declining non-OPEC+ output and shifting global demand dynamics. As OPEC+ aligns its production with market needs, the balance of global supply and demand will stabilize.

Middle East: The geopolitical landscape remains complex, with sanctions against Iran impacting its oil exports, which are projected to hold steady at 2.5 million b/d through 2030 before rising to 3.2 million b/d by 2035. The ongoing situation in the region continues to pose risks to oil supply, particularly if infrastructure is compromised or if tensions escalate further.

Russia: The conflict with Ukraine continues to strain Russia's relations with the West, with no immediate resolution in sight. Russian oil production is anticipated to decline from 10.2 million b/d in 2025 to 8.5 million b/d by 2035, primarily due to limited investment and ongoing sanctions. However, any easing of sanctions could stabilize or even increase production levels.

China: Onshore crude stocks are expected to build outside of China through May 2025, shifting to draws driven by seasonal refinery runs. In China, stocks are projected to decline in the first quarter of 2025 as logistics rebalance for sanctioned supplies, but are anticipated to build back later in the year. By the end of 2025, China is expected to increase its crude stocks by a net 95 million barrels, averaging 250,000 b/d.



	2024	2025	2026
Historical	$81		
Market Management (Base case)		$73	$69
Falling oil supply (Tighter Supply)		$86	$83
Demand weakness (Supply unleashed)		$62	$57

Data compiled February 2025

Source: S&P Global Commodity Insights

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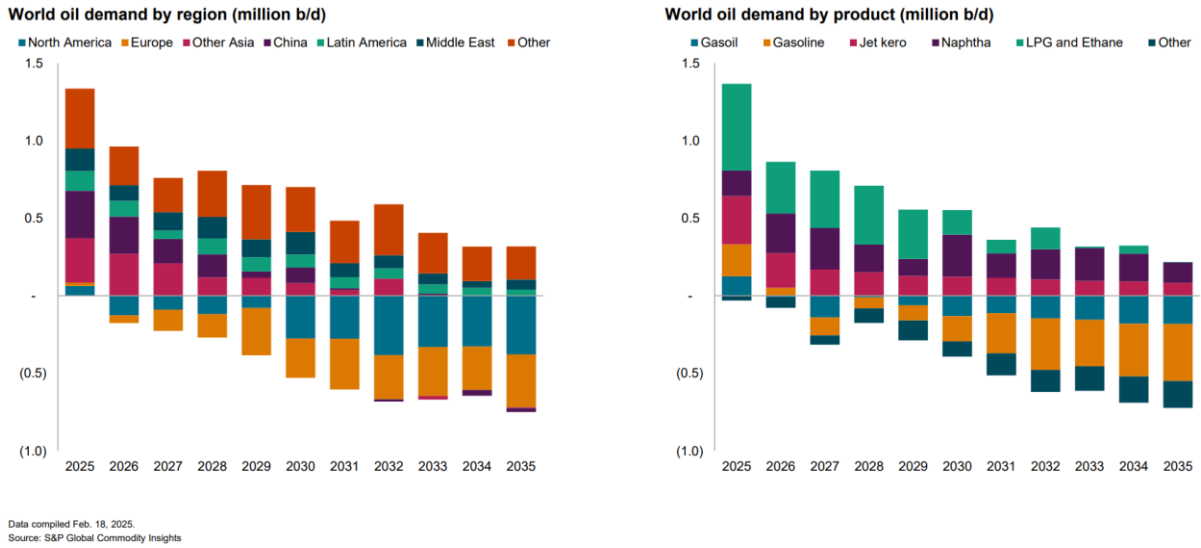
Figure 3-1a: Low-base-high Brent oil price forecasts

Demand: Overall, global oil demand is forecasted to increase by 0.7 million b/d in 2026, with India becoming the largest contributor to this growth. In contrast, oil demand is expected to contract in the U.S., Europe, and Japan.



Data compiled Feb. 18, 2025.
Source: S&P Global Commodity Insights

Figure 3-1b: World oil demand growth.

Short-term oil price: The short-term price forecast is characterized by significant uncertainty, driven by several competing factors:

> The base case outlook suggests a Brent crude oil price range of $69 to $74 per barrel, with an annual average for 2025 projected at $73/b and $69/b for WTI. Prices are expected to average $74/b from March to June 2025, but with a falling price trend as inventories rise, particularly in the high-visibility U.S. market. This situation reflects typical seasonal patterns but may blunt bullish sentiment from potential geopolitical pressures, including U.S.-Russian relations and tariffs impacting crude differentials.

> The low price scenario, termed "Supply Unleashed," anticipates a potential collapse in oil prices if OPEC+ adheres to its planned 2.5 million b/d production expansion beginning in the second quarter of 2025. This scenario predicts Dated Brent prices at $62/b in 2025 and $57/b in 2026, as a massive wave of crude supply hits the market, leading to rapidly increasing inventories and falling U.S. production.

- The high price case, referred to as "Tighter Supply," incorporates the possibility of strong demand coupled with reduced supply, which could occur if OPEC+ decides to cut production further. In this scenario, Dated Brent prices could rise to $86/b in 2025 and $83/b in 2026, driven by modest non-OPEC+ supply growth and falling Iranian exports.
- It is expected that WTI prices will be about $2 per barrel lower than Brent prices across all scenarios.
- Global oil demand is expected to grow by 2 million b/d in the first quarter of 2025 compared to the same period in 2024, making it the strongest performer of the year. Overall, global oil demand growth for 2025 is projected at 1.3 million b/d, unchanged from last month's outlook. Emerging economies, including South Asia, Southeast Asia, the Middle East, Africa, and Latin America, are expected to contribute significantly, accounting for 69% of global oil demand growth.

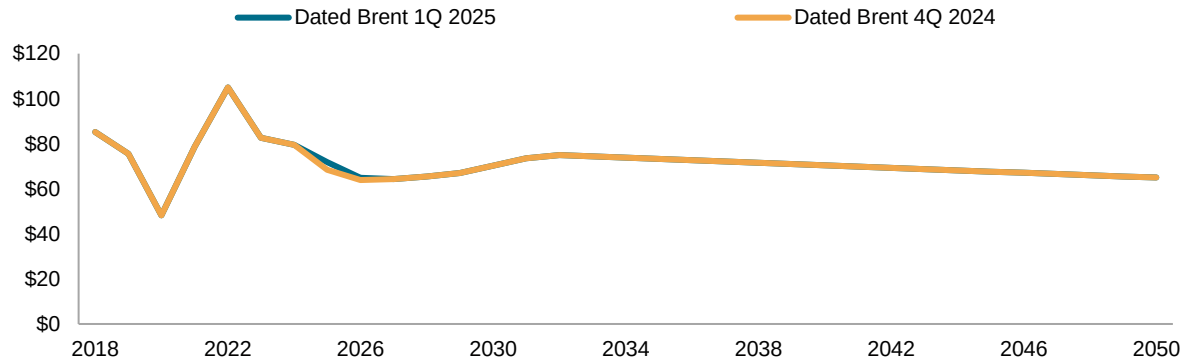
Risks associated with OPEC+ production increases remain high, particularly regarding the potential for OPEC+ to raise production in 2025, albeit at a reduced rate compared to their original plan. The average Dated Brent outlook for December through January 2025 is projected at $72 per barrel. Should OPEC+ fully implement its planned production increases, global crude oil inventories could rise rapidly, potentially driving prices down significantly, possibly into the $40 to $50 per barrel range.

Opportunities for tightening the market exist, as onshore crude inventories outside of China are expected to build through May 2025, providing some capacity for modest production increases. Conversely, a production cut or supply contraction, especially from Iran, could tighten the market and drive oil prices back toward $90 per barrel.

Long-term oil price

- Global prices are expected to decline slowly in real terms as demand wanes due to ample supply both within and outside of OPEC+. The Brent crude price outlook has been revised downwards, with projections indicating a price of approximately $73/b in 2025 and $69/b in 2026, reflecting a well-supplied market and weaker-than-anticipated demand, particularly influenced by the rapid penetration of electric vehicles in China.

Brent oil price long term forecast in real terms



Data compiled March 2025.
Source: S&P Global Commodity Insigts.

Figure 3-3: Dated Brent forecast.

- Global prices are expected to face downward pressure as liquids demand peaks at 108.45 million b/d in 2030 and gradually declines to 107.2 million b/d by 2035, influenced by the rise of electric vehicles (EVs), BioJet fuels, and broader green initiatives. This shift highlights a transition in energy consumption patterns as the world moves toward sustainability.
- Global oil demand growth for 2025 is projected at 1.3 million b/d, with emerging economies in South Asia, Southeast Asia, the Middle East, Africa, and Latin America contributing significantly, accounting for 69% of this growth. This reflects a shift in demand dynamics as traditional markets experience declines.
- OPEC+ production is projected to rise to 34.9 million b/d by 2027 before declining to 33.1 million b/d by 2032, as the group adjusts to balance global supply and demand amid falling non-OPEC+ output. This fluctuation underscores the need for OPEC+ to navigate changing market dynamics effectively.

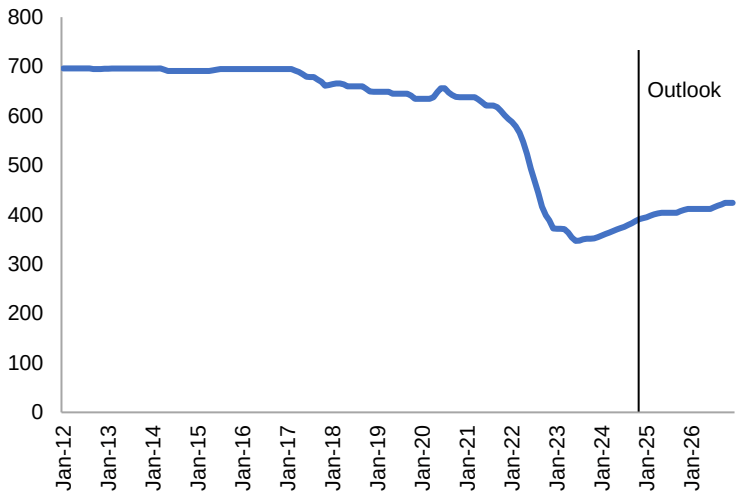
- Non-OPEC+ crude production is expected to peak at 39.2 million b/d in 2030, followed by a gradual decline to 37.6 million b/d by 2035, exerting additional downward pressure on crude oil prices as overall global demand diminishes.
- U.S. crude oil production is forecasted to peak at 14.7 million b/d in 2032, followed by a steady decline of approximately 200,000 b/d each year through 2035, driven by maturing resources and shifting market conditions. This trend indicates a slowdown in growth despite policy support.
- Current countries that are facing challenges include:
    - Russia is anticipated to see production decline from 10.2 million b/d in 2025 to 8.5 million b/d by 2035 due to limited investment and continued sanctions. Any easing of sanctions could stabilize or even increase production levels.
    - Iran is expected to maintain production at 2.5 million b/d through 2030, with a potential rise to 3.2 million b/d by 2035 as sanctions ease, contingent on political developments.
    - Venezuela is projected to hold steady at 800,000 b/d through 2035, subject to monitoring under the evolving political landscape.

US Markets:

U.S. crude and condensate output averaged 13.314 million b/d in November, reflecting a decline of 122,000 b/d from October, primarily due to hurricane-related production shut-ins in the Gulf of Mexico. The actual Lower 48 onshore output was 11.22 million b/d, about 90,000 b/d below last month's forecast. With adjustments to historical production and the latest rig data, our U.S. production outlook is revised downward, projecting total annual average growth of 434,000 b/d in 2025, resulting in an average output of 13.64 million b/d.

- The U.S. Lower 48 rig count fell to 545 in January, about 15 fewer rigs than previously projected due to the impact of freeze-offs. Assuming lower commodity prices in 2025-26, the oil-directed rig count is expected to decline further. The average rig count is projected at 566 in 2025 (down from 591 in 2024), with a rebound expected above 600 in 2026, primarily driven by increased gas-directed drilling.
- Tariffs on crude oil and refined products from Canada and Mexico were implemented on March 4, with the rate reduced from 25% to 10%. While our base case assumes that the U.S. will ultimately avoid long-term tariffs due to potential retaliation and economic disruption, the current 10% tariff indicates concern over rising consumer fuel costs.

US SPR inventories, MMbbl



Data compiled March 2025.

Source: S&P Global Commodity Insigts.

Figure 3-4: US SPR inventory history

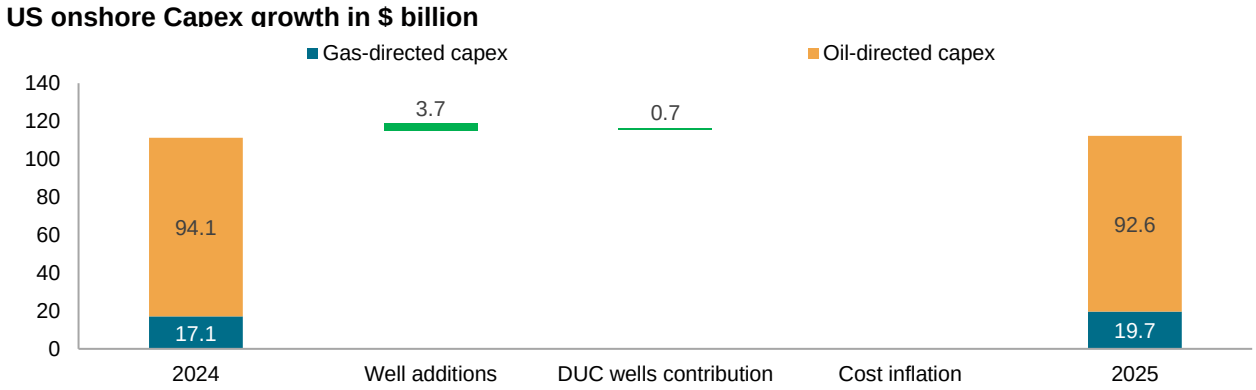
- The impact of the tariff will likely affect Canadian producers and U.S. refiners differently. Canadian producers are expected to maintain production levels and exports, as even a full discount to offset the tariff would only widen the WTI-Western Canadian Select (WCS) differential to around $19/b, which is within historical norms. U.S. refiners, however, may face higher costs for heavy crude, as alternative sources are limited, particularly with declining Mexican heavy crude exports.
- The final Strategic Petroleum Reserve (SPR) scheduled purchases made by the Biden Administration, along with returns from past exchanges, are expected to gradually increase overall SPR inventory levels in the coming months. As of February 21, 2025, the SPR inventory stood at 395 million barrels, slightly over half of its design capacity of 714 million barrels. (Figure 3-4).

> President Trump has vowed to fill the SPR "right to the top," although no solicitations or official guidance have been issued thus far. Since the beginning of its restocking efforts in mid-2023, the Department of Energy (DOE) has purchased or received exchange barrels totaling 48 million barrels.

Investment in the US oil markets could be impacted by the following dynamics:

> Stable, lower 2025 oil prices will bring lower production growth as spending increases are not enough to offset deteriorating acreage quality.

> Capital expenditure (Capex) budgets are expected to increase in 2025 compared to 2024, totaling $4.4 billion, primarily due to well additions. DUCs are expected to play a crucial role in keeping production levels up in 2025 (see Figure 3-5).



Data compiled March 2025.
Source: S&P Global Commodity Insights.

Figure 3-5: 2023 – 2024 US onshore Capex growth

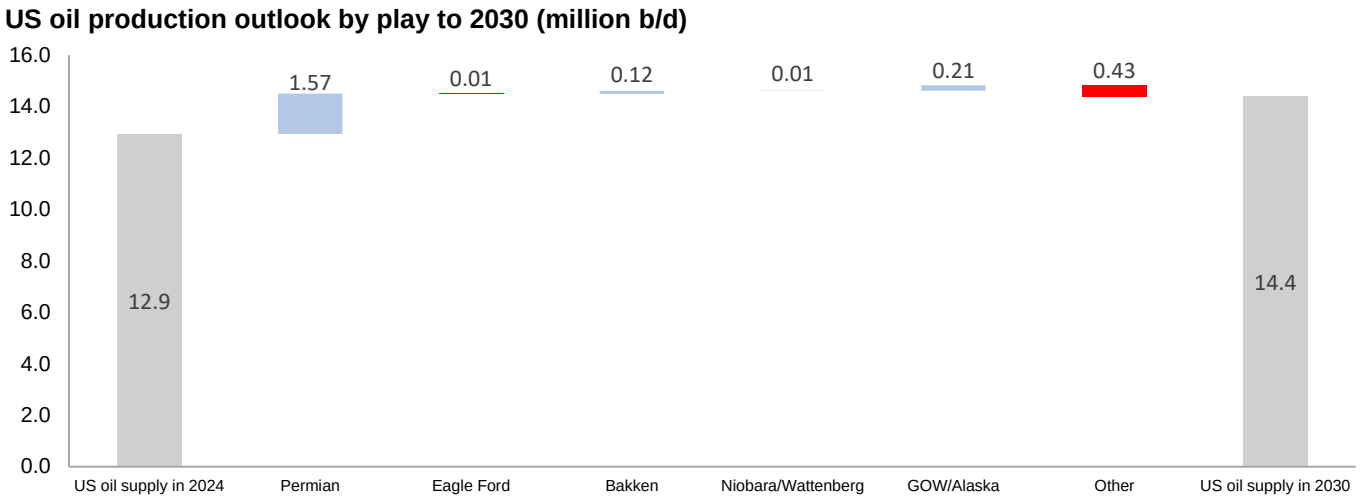
> Environmental, Social and Governance (ESG) compliance and regulations will become increasingly important.

- Most international oil companies are committed to some form of net zero emissions targets diverting investments and resources away from traditional oil and gas projects. The pressure from ESG is likely to increase over time having a great impact in the long run.

B. Outlook for North Dakota and the Bakken/Three Fork

A steady oil price environment with West Texas Intermediate (WTI) averaging near $80/b, rising rig efficiency and bigger well completions allowed US supply to grow about 1 million b/d in 2023, and reach 12.9 million b/d, the fastest pace since 2019. The price environment is expected to remain stable to generate further US supply growth through 2030, although growth becomes more difficult as maturing plays offer worsening acreage quality with less productive wells.

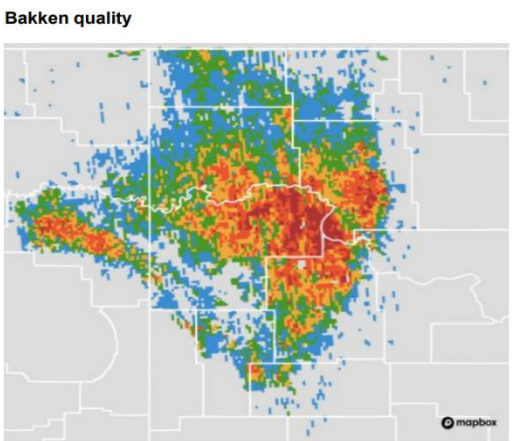
S&P Global projects that US oil supply will be 14.4 million b/d by 2030, driven primarily by growth in Permian Basin. The Bakken is expected to contribute 1.3 million b/d, approximately 9%, of the total U.S. oil supply (Figure 3.6).



Data compiled February 2025.
Source: S&P Global Commodity Insights.

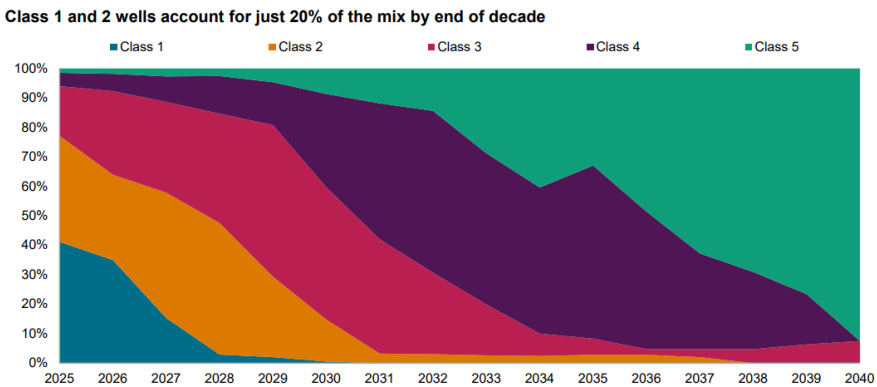
Figure 3-6: Basins contributing to future US oil supply

Remaining resource base and acreage quality: The Bakken/Three Forks play is already experiencing sweet spot exhaustion. Average well productivity peaked in 2020 and has declined since then despite operators improving lower quality acreage by increasing lateral lengths and completion intensity. S&P Global has designated five acreage classes for the play, with class 1 being the best (see Figure 3-7a). While the economics of class 1 acreage typically encourage activity, the scarcity of drilling opportunities has compelled operators to concentrate on class 2 and class 3 acreage. Nevertheless, the economic conditions in these areas have generally been favorable for activity. With a lower price forecast for 2025 and 2026, a modest shift towards high-grading is anticipated as producers prioritize cash flow over volume.



Screenshot as of Sept. 6, 2023.
Source: S&P Global Commodity Insights upstream E&P content (Energy Studio: Impact).
Underlying base map provided by © Mapbox and © OpenStreetMap.org contributors.

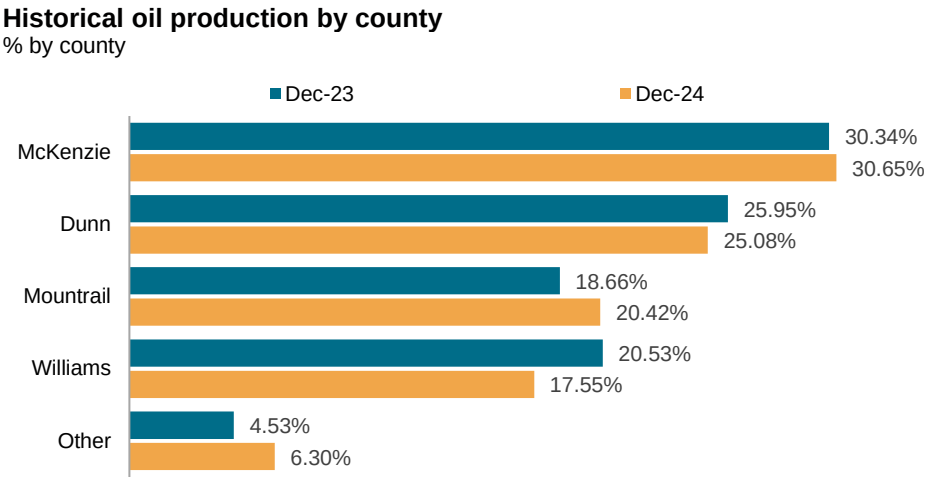
Figure 3-7a: Bakken play and acreage



Data compiled Jan. 27, 2025.
Source: S&P Global Commodity Insights.

Figure 3-7b: Acreage class depletion

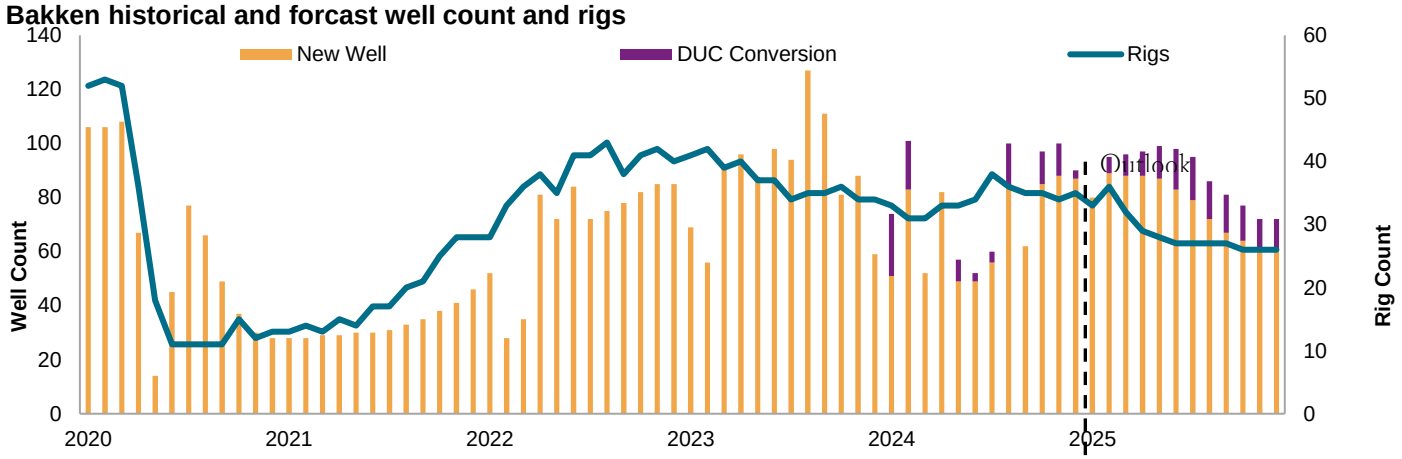
Production by county: Historically, McKenzie, Dunn, Mountrail, and Williams contributed up to 94% of total Bakken/Three Forks production (see Figure 3- 8). As class 1 acreage wanes, production increases have shifted to Dunn and Williams, but McKenzie continues to play a significant role while Mountrail area production continues its decline.



Data compiled in January 2025
Source: North Dakota Oil & Gas Division - Monthl Oil and Gas.

Figure 3-8: North Dakota % production by county

Short-term Drilling Forecast: Recent acquisitions have consolidated acreage positions across a few global public companies that now operate a large portion of the play's production. These companies have a wide global portfolio which is expected to compete with investment in the Bakken. Producers were actively drilling in the play, with 2024 rig counts exceeding 30. While this is lower than the pre-pandemic counts in the 50's, it is still a significant expansion over 2020 and 2021 (see Figure 3.9). A small uptick in rig activity is expected early in the year, but this will wane through 2025 as new well additions drop in favor of DUC conversions. S&P Global projects that more than 82 wells (with some variability) will come on stream each month on average as new well drop significantly throughout the year. However, the relatively stable DUC (drilled, but uncompleted) well inventory will support 129 DUC conversions in 2025. The DUC contribution is significant because few rigs are needed to maintain production levels. Completing a DUC well costs about 65% of what a new drilled and completed well would cost.

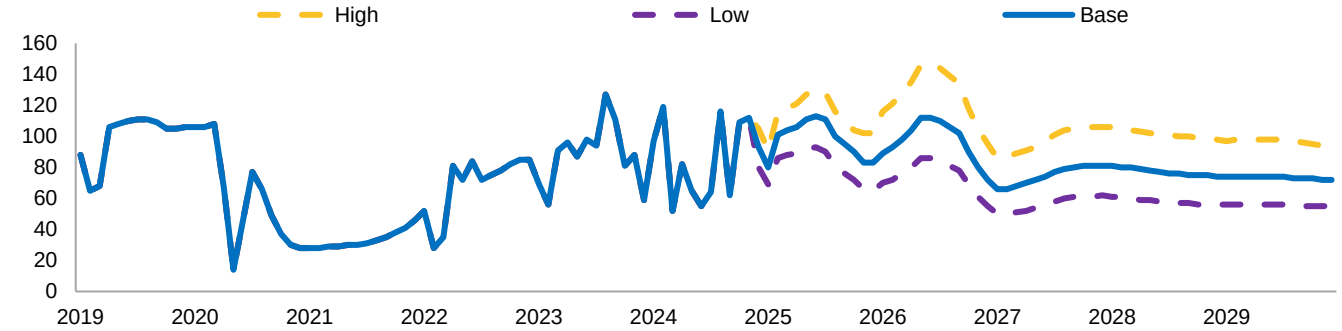


Data compiled February 2025.
Source: S&P Global Commodity Insights.

Figure 3-9: New wells including DUCs – Bakken play

Long-term low, base, and high cases: Three different Bakken scenarios were developed offering a range of drilling and oil production outlooks through 2030 (Figures 3-10 and 3-11). The base case new well count and the oil production considers that companies will continue to actively drill in the play reaching a maximum of about 112 wells per month in the middle of 2026 and an oil production of about 1.2 million b/d, before declining afterwards. The base case incorporates oil prices in the $70/b-$80/b range. The high case applies a 20% higher oil price outlook than the base case driving the new well spuds to the 100-150 wells per month range, and an oil production rate of about 1.35 million b/d. The low case assumes a 17% weaker oil price than the one for the base case that would lead to lower reinvestment rates. In the low case new wells range from 70-80 per month, and oil production would be around 1.0 million b/d. The low case also assumes the potential shut down of the Dakota Access Pipeline (DAPL), which is currently being litigated.

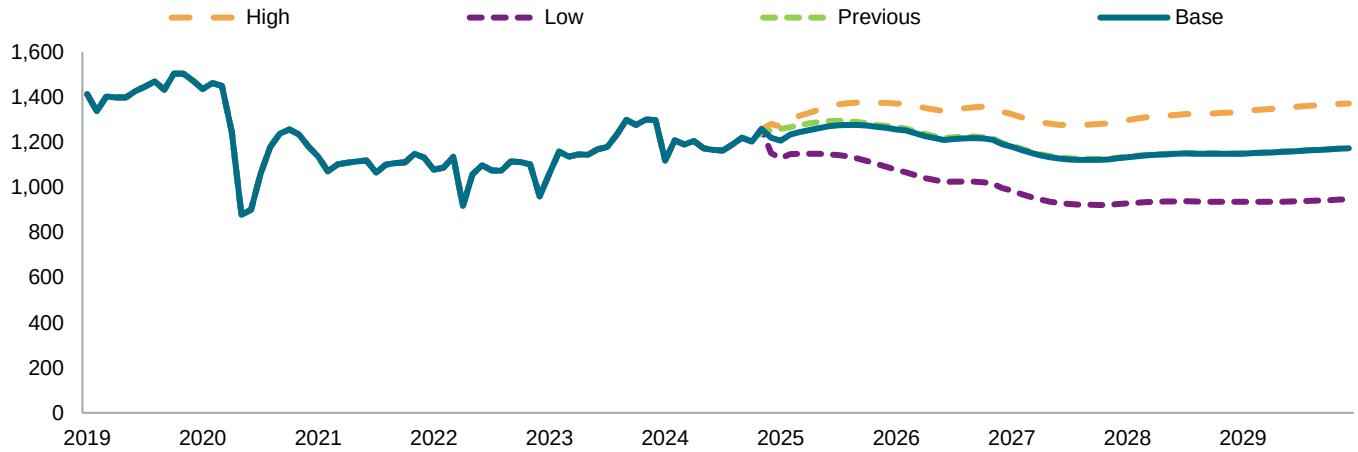
Bakken Historical Wll Count and Forecast By Case (Total New Wells)



Data Compiled February 2025.
Source: S&P Global Commodity Insights.

Figure 3-10: Low-Base-High drilling forecasts. Bakken play

Bakken Historical Oil Production And Forecast By Case (thousand b/d)



Data Compiled December 2024.
Source: S&P Global Commodity Insights.

Figure 3-11: Low-Base-High oil production forecasts – Bakken play

Associated gas production relative to oil production is projected to increase from the current level of 3.5 Bcf/day to 4.2 Bcf/day by the end of the forecast period. Over the life of a typical well, the gas-oil ratio rises. This means that as the average age of the wells in a play increases the amount of gas produced will increase relative to oil. The differences in the new well additions between the outlooks are not enough to present a material impact on the resulting outlook of the GORs, respectively (Figure 3-12).

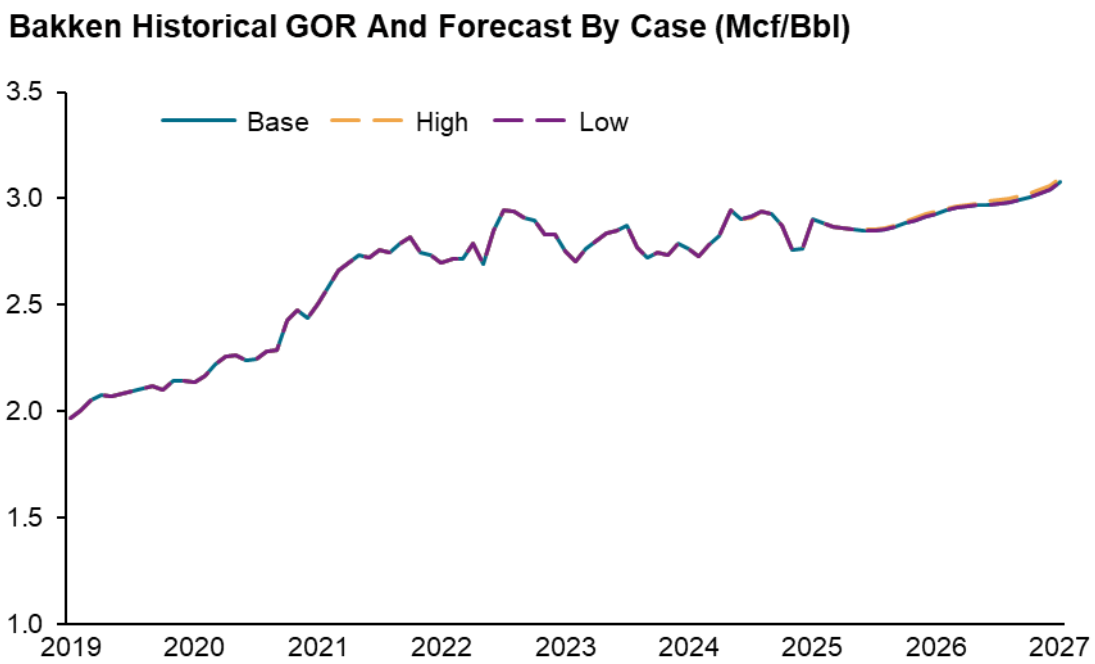
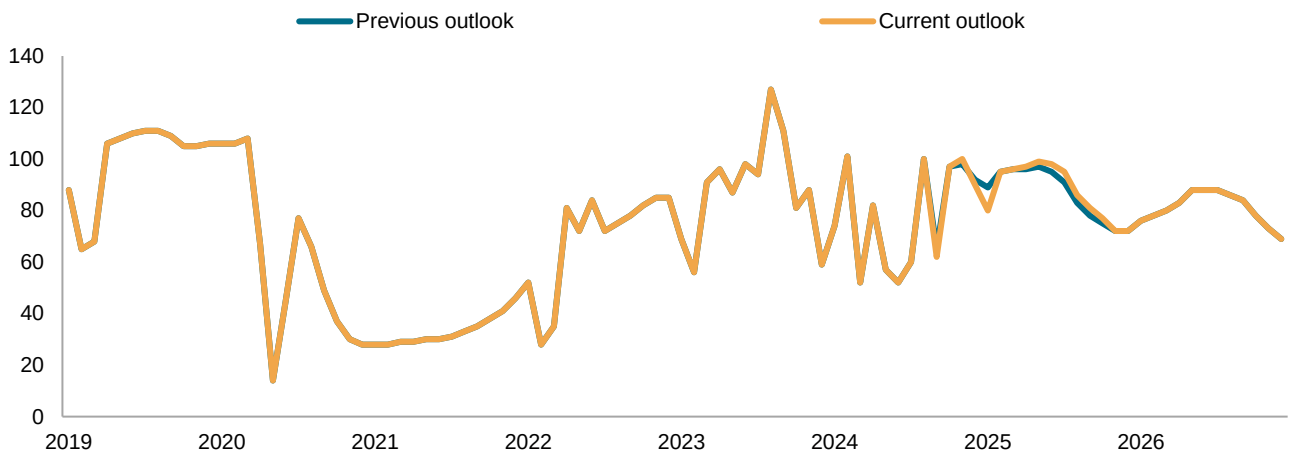


Figure 3-12: Gas oil ratio (GOR) forecast – Bakken play

Gas takeaway capacity is an on-going concern in the Bakken. In the past high amounts of excess gas was flared, but these volumes have been reduced with 95% of the produced gas being handled by current infrastructure. As gas production is forecasted to increase, some additional infrastructure will be needed to transport and process associated gas to market.

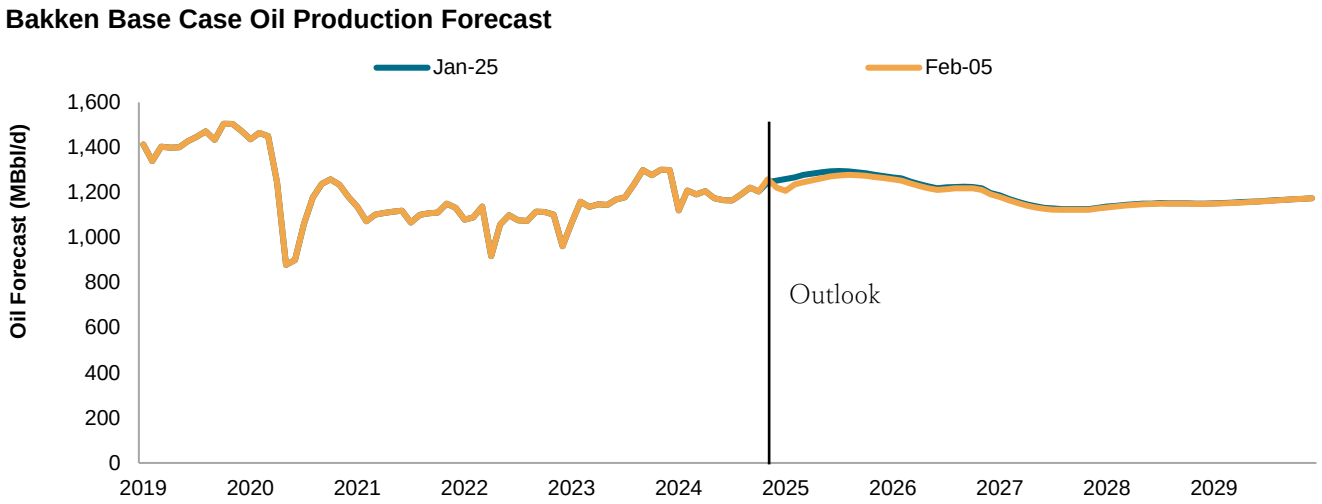
Change in forecast since January 2024: The February 2025 new well and oil production forecast is consistent relative to the January 2025 forecast (Figures 3.13 and 3.14) over the next six months. On February 2025, Brent oil price was $73.47/bbl and WTI was $69.76/bbl. In contrast, Brent oil price was about $73.86 /bbl in September 2024. A peak in new wells and oil production is expected around late December 2026 followed by a decline due to exhaustion of the core acreage in the play.

Bakken Base Case New Well Forecast



Data compiled February 2025.
Source: S&P Global Commodity Insights.

Figure 3-13: New wells including DUCs – Bakken play

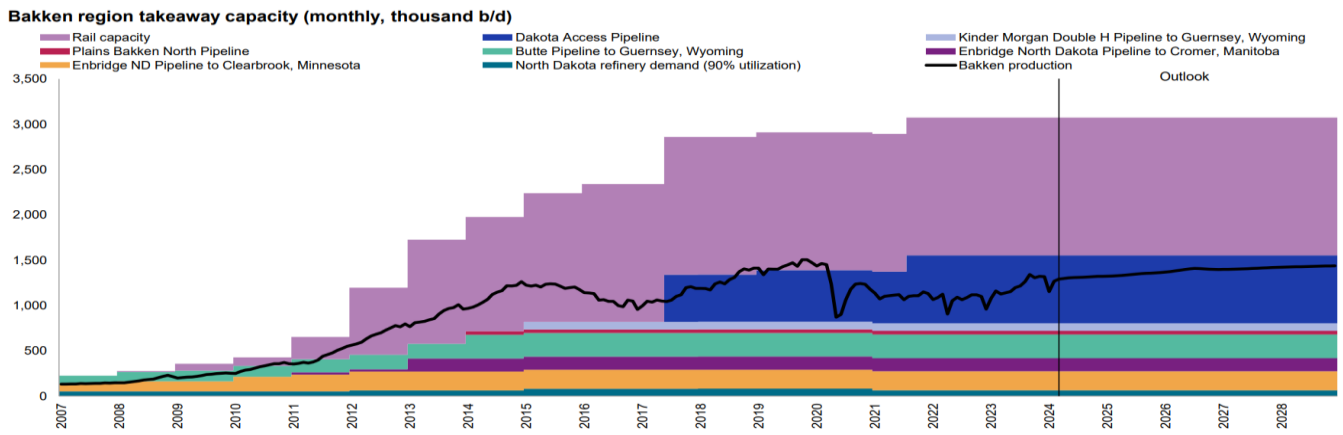


Date compiled February 2025.
Source: S&P Global Commodity Insights.

Figure 3-14: Oil production forecast – Bakken play

DAPL Shut-down Risk to the forecast: The Dakota Access Pipeline (DAPL) is crucial for maintaining the competitiveness of Bakken crude oil. In 2023, the DAPL transported approximately 750,000 b/d, accounting for about half of all Bakken supply to the market. The pipeline delivers crude to the midwestern hub at Patoka, Illinois, and connects to ETCOP, which transports barrels to Nederland on the Gulf Coast. Although the DAPL has faced legal challenges and is awaiting an environmental assessment by the Army Corps of Engineers, it is likely to remain operational, with the potential for expansion to over 1 million b/d depending on shipper interest. Bakken output currently lags about 300,000 b/d below its pre-pandemic peak of 1.5 million b/d. The recent reset in output and the expansion of DAPL have decreased reliance on rail transport, with only about 133,000 b/d of Bakken crude being transported by rail in 2023, primarily to the East and West Coasts.

As output recovers, Bakken pipeline takeaway capacity appears adequate, and further expansion of existing pipeline systems is likely if Bakken production surpasses its previous highs. If the DAPL were to be permanently shut down, the need to transport the full 750,000 b/d by rail could significantly increase costs, adding $8 to $9 per barrel compared to pipeline transport, which would diminish the Bakken's competitiveness against other U.S. oil sources. Additionally, the perception that rail transport is less safe and more environmentally concerning than pipeline transport could further deter investment in the Bakken play.



Data compiled May 24, 2024.
Source: S&P Commodity Insights

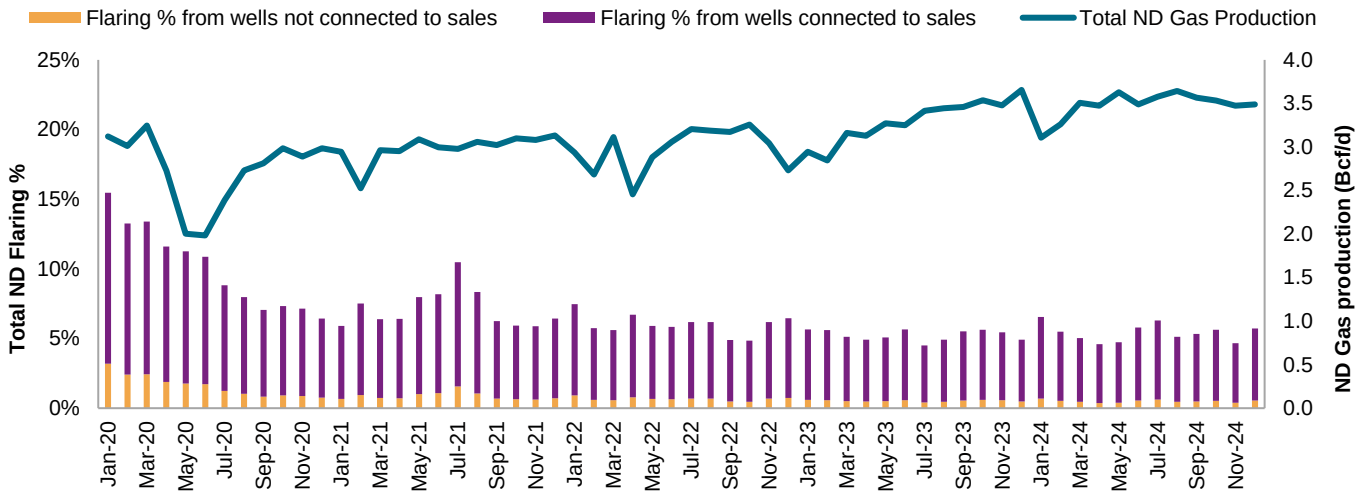
Figure 3-15: North Dakota take-away and production forecast

Regulations – Venting and Flaring: The following regulations focusing on associated gas flaring may affect oil and gas drilling and production:

- Beginning in 2014, the NDIC (North Dakota Industrial Commission) established a requirement for 91% of all gas to be captured or oil production will be curtailed, and fines levied. Exceptions are allowed for one year, if wells are outside the core development areas or if certain conditions are met such as being within limited rights of way, having potential reservoir damage, having safety issues, etc. This order aims to increase the capture of natural gas, reduce percentage of flared gas, and incentivize investment in gas capture infrastructure.
- Each drilling permit is required to submit a gas capture plan.
- The Biden administration established in 2022 the Inflation Reduction Act (IRA) which adds a methane emissions fee that applies to oil and gas facilities that emit methane.
- The Environmental Protection Agency (EPA) has taken a variety of actions to reduce methane emissions from the oil and gas sector:
  - In December 2023, it released a final New Source Performance Standards and Emissions Guidelines (NSPS/EG) to reduce methane and pollutants. States have two years to develop plans for existing sources, and industry has three years to comply.
  - In May 2024, it updated methane emissions reporting requirements under subpart W of EPA's Greenhouse Gas Reporting Program.
  - It proposed a Waste Emissions Charge on methane emissions exceeding specified thresholds from applicable oil and gas facilities, with the final rule expected by the end of 2024. Facilities compliant with the NSPS/EG may be exempt from this charge after meeting certain criteria.
- On April 10, 2024, the Bureau of Land Management (BLM) issued a final rule updating venting and flaring requirements for federal and Indian leases. However, a U.S. District Court Judge has blocked the BLM from enforcing this rule in North Dakota, Montana, Texas, Wyoming, and Utah while the case is ongoing.

Flaring reductions improved significantly in recent years with a high gas capture rate of ~94-95%. This contributes to a more sustainable and environmentally responsible oil and gas industry in North Dakota. In terms of the 5% of gas flared, 1% is from wells not connected to sales which is likely due to a lack of pipelines. The existing infrastructure is insufficient to handle the remaining 4% of flared gas (see Figure 3-16).

North Dakota gas flaring trend vs gas production



Data compiled in February 2025.
Source: S&P Global Commodity Insights.

Figure 3-16: North Dakota gas flaring trend vs. gas production

NEPA Review for Federal Actions:

- Projects subject to National Environmental Policy Act (NEPA) review can face legal actions if stakeholders believe that the environmental review was inadequate. This can further delay or alter project timelines.
    - Several Non-Government Organizations (NGOs) have sued to halt the development of BLM leases in western states.
    - District Courts have upheld BLM approvals in some cases, finding no NEPA or Federal Land Policy and Management Act violations. In other cases, courts have mandated supplemental environmental assessments.
    - Only 9% of the Bakken is on federal acreage. 5% of the Bakken is on BLM acreage and 4% is on tribal land. This means that much of the acreage in the play may not experience the same level of federal regulatory impact as other plays within the U.S. that are dominated by federal land.

Energy Transition: In response to the carbon reduction target, an accelerated energy transition presents another possible risk to the forecast as renewable energy sources such as wind and solar would displace fossil fuels. S&P Global projects that oil will account for 25% of the global energy mix by 2050, assuming a global temperature increase of 2.6 ℃ by 2100. The global temperature increase of 1.5 ℃ by 2100 proposed by the Paris Agreement would lower the global oil contribution to the energy mix to just 11%. If this were to occur, this would reduce the oil-price outlook to below $30/bbl which in effect would shut down future drilling in the Bakken as only about 26% of the play breaks even for under $40/bbl (Figure 3-17).

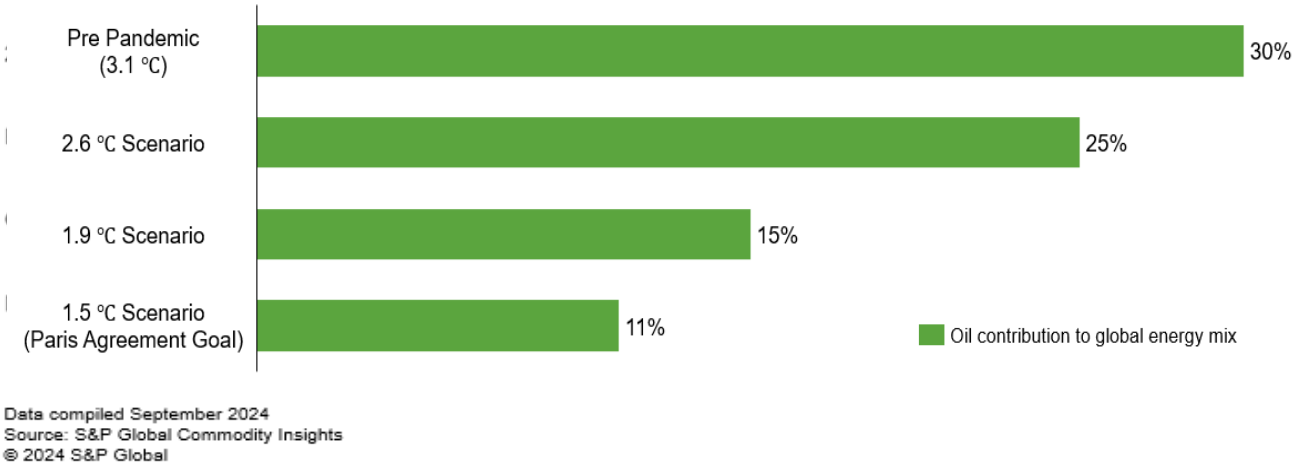


Figure 3-17: Projected oil contribution to global energy mix by scenario of global temperature increase by 2100

Agriculture

Total US principal crop acres this year will remain steady year over year at 311.3 million acres. Plantings will increase to 311.9 million acres in 2026, remain mostly stable through 2029, and then begin to trend lower for the remainder of the forecast period. US corn acreage for 2025 is projected to total 93.5 million, soybean acreage for 2025 is projected to total 83.3 million, 3.8 million below 2024. US all wheat acreage for 2025 is projected to total 47.1 million, and 1.0 million above 2024. US all cotton acreage for 2025 is projected to total 10.4 million, 733,000 below 2024. Current prices and survey results continue to favor additional corn plantings at the expense of soybeans. The survey results, along with economic indicators, pointed to a decrease in cotton and spring wheat plantings this month, while expectations for rice planting increased.

Corn and soybean acreage are expected to total 176.8 million acres, of which corn acres are expected to account for slightly more than half (53%). Confidence in area projections should increase with the next set of survey results, as crop insurance prices have yet to be determined by the end of February, and any price changes in the meantime will likely affect planted area decisions. The grand total (excluding hay but including prevent plant and CRP acreage) is projected at 284.6 million acres, 845,000 above last year.

Reported total CRP acreage is up about 1.4 million acres from last year, which adds to our grand total acreage. The significant CRP increases are in South Dakota, Nebraska, Colorado and several of the western states, likely due to increases in grassland CRP acreage that does not directly affect cropland.

Livestock and meat prices in 2025 are expected to see gains across the board, although at different magnitudes depending on the market, with beef prices jumping even higher as production falls considerably lower amid continued consumption strength, while pork and chicken values see more modest gains under more balanced supply and demand gains, with turkey and egg prices expanding as avian flu losses impact availability.

As a result of the 2024 end-of-year federal aid package, 2025 net farm income has been revised significantly higher. Total government payments have been increased to $44.1 billion, leading to a net farm income projection just under $170 billion. This will bring net cash income in 2025 to $183.2 billion, however, this forecast has not incorporated any negative trade effects from retaliatory tariffs.

Crop receipts in 2024 were $247.3 billion and farm cash expenses were $423 billion. Net farm income will continue to decline through the forecast period after 2025. However, when adjusted for inflation, net farm incomes are aligned with levels experienced in the latter part of the 2010s.

US Farm Income

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
(Billion Dollars)															
Cash income statement:															
Cash receipts from farm marketings															
Crops	195.8	194.9	196.0	193.8	202.5	246.0	282.8	267.4	247.3	235.2	232.7	237.4	243.8	248.1	252.9
Livestock	162.7	175.6	176.1	175.6	165.0	196.4	259.8	249.6	272.4	278.4	253.7	253.3	257.7	261.7	267.1
Total farm marketings	358.5	370.4	372.1	369.3	367.5	442.4	542.6	516.9	519.7	513.6	486.4	490.7	501.5	509.8	519.9
Direct government payments	13.0	11.5	13.7	22.4	45.6	26.0	15.6	12.3	9.3	44.1	13.0	15.0	15.0	12.5	12.5
Farm-related income	27.9	31.2	29.1	34.7	34.3	32.2	51.8	53.7	52.0	45.6	42.5	41.2	40.1	40.4	40.7
Gross cash income	399.4	413.2	414.8	426.5	447.4	500.6	610.0	582.9	581.1	603.2	541.8	546.9	556.6	562.7	573.2
Cash expenses	303.8	311.9	311.4	317.3	326.5	345.4	399.9	426.1	423.0	420.1	413.9	413.2	418.8	424.3	435.8
Net cash income	95.6	101.3	103.5	109.2	120.9	155.2	210.1	156.8	158.1	183.2	128.0	133.7	137.8	138.5	137.4
Farm income statement:															
Gross cash income	399.4	413.2	414.8	426.5	447.4	500.6	610.0	610.0	582.9	581.1	603.2	541.8	546.9	556.6	562.7
Nonmoney Income	17.1	18.3	19.1	18.4	18.5	20.8	22.6	22.5	23.5	25.1	25.2	24.0	23.2	22.9	23.1
Inventory adjustment	-4.2	-6.1	-8.5	-15.0	-9.8	-3.2	-14.8	3.8	-9.7	-3.3	-0.2	-2.0	-2.9	-4.4	-4.3
Gross farm income	412.3	425.4	425.5	429.8	456.1	518.2	617.7	608.4	589.9	568.9	561.0	558.5	558.9	566.7	575.0
Total Expenses	349.9	349.7	343.1	347.8	357.3	372.0	435.7	609.2	594.9	625.0	566.8	568.9	576.9	581.2	591.9
Realized Net Farm Income	66.6	81.8	90.9	97.0	108.6	149.4	196.9	143.5	147.3	173.4	117.9	122.2	125.5	125.4	124.0
Net Farm Income	62.3	75.7	82.4	82.0	98.8	146.3	182.0	147.3	137.6	170.1	117.7	120.2	122.6	121.1	119.7
Deflated Net Farm Income \1	46.0	54.8	58.3	57.1	67.9	96.1	111.7	87.2	79.6	95.5	63.9	64.0	63.9	61.8	59.9

\1 Deflated by the GDP Implicit Price Deflator, 2000=100
Note: Shaded years are forecasts
Source: S&P Global Commodity Insights.

US farm balance sheet

The US farm balance sheet is expected to remain largely stable through the forecast period. Farm assets (largely driven by changes in farm real estate, but also livestock and poultry, machinery, crops stores, and other purchased inputs) increased slightly in 2024. Farm liabilities (largely from real estate) also increased moderately in 2024 and are the highest on record. Total farm equity and debt/equity ratios remained stable in 2024 and remain within historical trends. However, farm asset values are expected to decline over the next several years due to decline in farmland values as well as livestock and poultry values.

Balance Sheet of the US Farming Sector

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
(Billion Dollars)															
Farm assets															
Real estate	2,401.4	2,472.8	2,502.6	2,519.9	2,596.8	2,822.5	3,156.4	3,338.8	3,523.6	3,540.4	3,478.9	3,483.0	3,487.1	3,513.2	3,536.6
Livestock and poultry	109.0	107.1	97.1	99.2	98.3	104.1	108.7	127.5	141.2	136.8	130.0	130.0	128.8	129.1	130.5
Machinery and motor vehicles	255.4	272.3	271.0	279.0	278.8	308.3	312.1	339.3	354.5	362.0	367.7	369.3	371.3	377.8	383.0
Crops stored	55.7	56.8	59.7	49.6	50.6	58.1	72.2	66.5	56.3	54.5	60.5	66.6	69.4	72.4	74.8
Purchased inputs	14.9	15.8	16.1	13.9	14.0	18.3	21.2	20.2	20.8	20.0	18.7	18.3	18.7	18.8	19.9
Financial assets	78.1	81.1	72.6	87.5	92.0	112.7	117.9	121.9	123.8	132.7	114.6	116.6	119.9	121.7	124.9
Total farm assets	2,914.4	3,005.9	3,019.1	3,049.1	3,130.5	3,424.1	3,788.4	4,014.3	4,220.2	4,246.5	4,170.3	4,183.7	4,195.2	4,233.1	4,269.6
Farm Liabilities															
Real estate	226.0	236.2	245.8	267.9	288.6	324.4	334.4	344.6	360.2	371.3	365.1	365.7	366.1	368.6	371.0
Nonreal estate	148.2	154.2	156.8	152.6	152.6	149.9	161.8	174.4	181.8	186.3	182.5	185.6	187.7	190.9	194.7
Total farm liabilities	374.2	390.4	402.6	420.5	441.3	474.3	496.2	519.0	542.0	557.6	547.6	551.3	553.7	559.5	565.7
Farm Equity	2,540.3	2,615.5	2,616.5	2,628.6	2,689.3	2,949.8	3,292.3	3,495.4	3,678.2	3,688.9	3,622.8	3,632.4	3,641.5	3,673.5	3,704.0
Debt/Equity Ratio	0.15	0.15	0.15	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Debt/Asset Ratio	0.13	0.13	0.13	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13

\1 Deflated by the GDP Implicit Price Deflator, 2000=100
Note: Shaded years are forecasts
Source: S&P Global Commodity Insights.

US Crop Outlooks

Soybeans

Supply: Soybean plans for 25/26 are expected to decline by 3.8 million acres to a total of 83.3 million acres. However, total projection is anticipated to be 4 million bushels higher in 25/26 compared to 24/25 due to a projected a yield increase of 2.3 bushels per acre.

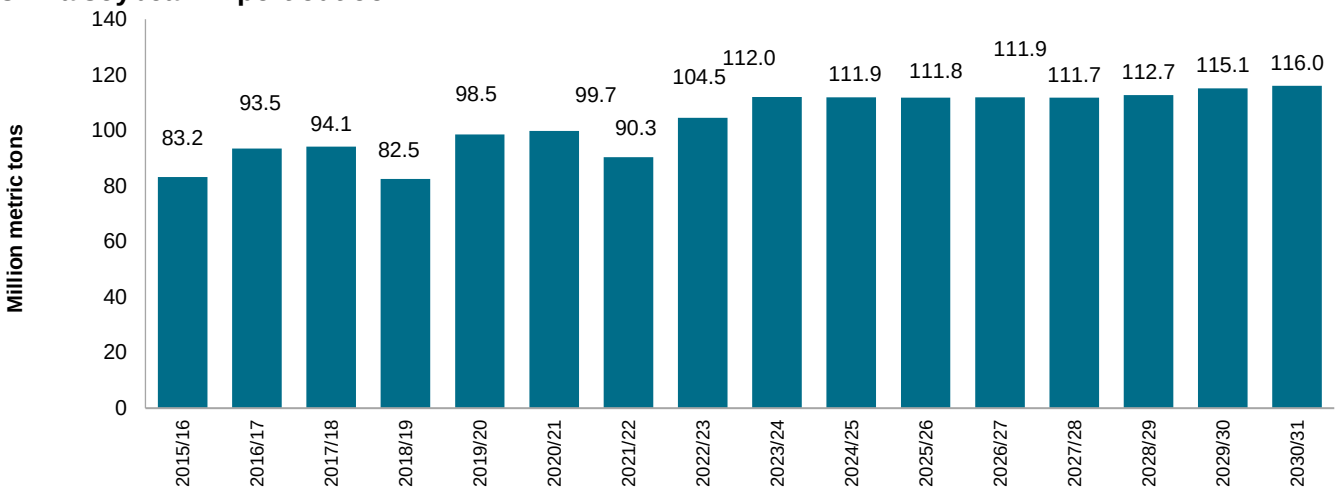
Demand: Due to the US-China trade war, the old crop export forecast declined by 150 million bushels as we expect some additional business from alternative destinations amid falling soybean prices. For the new crop, exports are expected to decline 400 million bushels from the previous forecast to reflect no Chinese buying of US soybeans. This reflects the view that the US-China trade war will continue through the new crop. While China's tariffs will only lead to a 100 million bushel increase in old crop carryout, the market will price in the full effect of the trade war during the 2025/26 marketing year.

U.S. SOYBEAN COMPLEX FUNDAMENTALS									
	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
Prices (Dollars Per Bushel)	$14.20	$12.40	$9.89	$9.49	$9.71	$9.81	$9.36	$9.39	$9.98
Soybean to Corn Price Ratio	2.2	2.7	2.3	2.5	2.5	2.3	2.2	2.2	2.3
Acreage (Million Acres)									
Planted Area	87.5	83.6	87.1	83.3	86.1	84.0	85.8	85.4	82.5
Harvested Area	86.2	82.3	86.1	82.4	85.2	83.1	84.9	84.5	81.7
Harvested Area % of Planted	99%	98%	99%	99%	99%	99%	99%	99%	99%
Yield (Bushels Per Acre)	49.6	50.6	50.7	53.0	53.3	53.8	54.3	54.9	55.4
Supply (Million Bushels)									
Beginning Stocks	274	264	342	514	962	1,191	1,269	1,287	1,302
Production	4,270	4,162	4,366	4,370	4,539	4,472	4,611	4,637	4,530
Imports	25	21	15	15	15	15	15	15	15
Total Supply	4,569	4,447	4,724	4,898	5,516	5,678	5,895	5,939	5,847
Domestic Disappearance (Million Bushels)									
Crush	2,212	2,287	2,435	2,650	2,659	2,665	2,742	2,771	2,808
Seed & Residual	114	123	75	86	116	119	125	123	122
Total Domestic Disappearance	2,326	2,410	2,510	2,736	2,775	2,785	2,867	2,895	2,929
Exports	1,980	1,695	1,700	1,200	1,550	1,624	1,741	1,743	1,639
Total Disappearance	4,305	4,105	4,210	3,936	4,325	4,409	4,608	4,637	4,569
Ending Stocks	264	342	514	962	1,191	1,269	1,287	1,302	1,278

Price risk: US and Chinese tariffs are expected to remain in place for the foreseeable future and to have a significant impact on soybean futures. The price for 24/25 declined by $0.62 a bushel whereas the 25/26 market price declined by $0.80 per bushel.

China's soybean crush numbers are expected to increase slightly in 2025/26 and continue rising through 2029/30. However, crush demand growth is expected to be slower than in the 2010s due to slowing economic growth. Chinese import demand for soybeans to remain steady through the forecasted period. This is due to China's push for increasing domestic production of agricultural commodities.

China soybean import outlook



Source: S&P Global Commodity Insights

Corn

Supply: Corn acreage is expected to increase by 2.9 million acres to a total of 93.5 million acres in 25/26. This results in a projected harvest of 15,603 million bushels, an increase of 736 million bushels.

Demand: Total domestic demand for corn is expected to increase by 300 million bushels due to increased demand for food and industrial uses with total domestic use settling at 12,900 for 25/26. However, Canada is a significant share of US ethanol exports, composing an average 36% from Sep-Dec this marketing year—an average 4.3% of total US ethanol production. Canada's tariffs on US goods have yet to include ethanol, but if this changes, we could see a downside risk as large as 100 million bushels to our corn used for ethanol forecast.

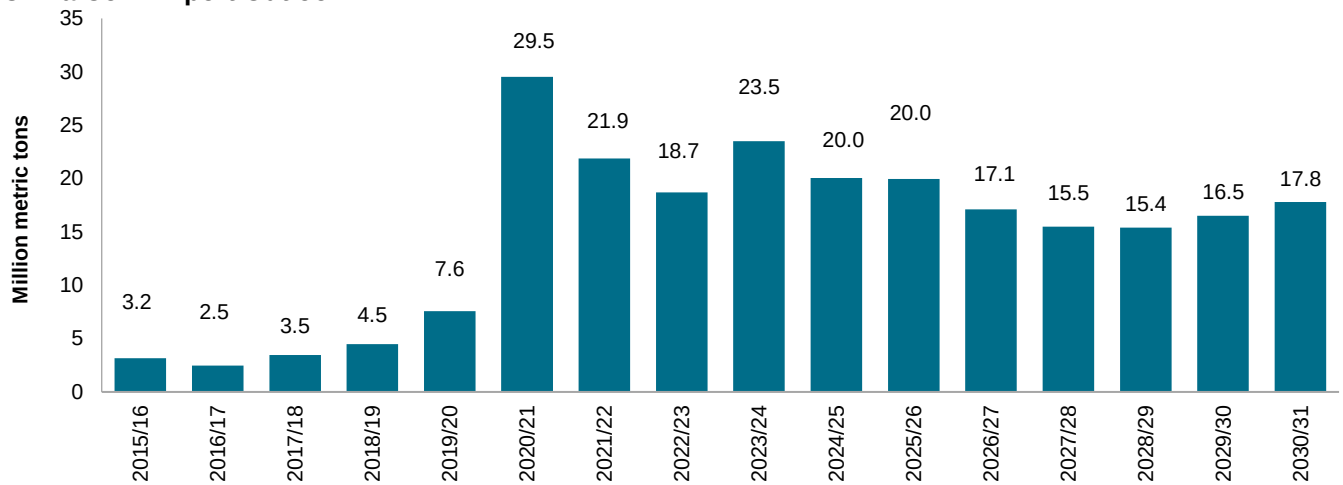
U.S. CORN FUNDAMENTALS

	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
Prices (Dollars Per Bushel)	$6.54	$4.55	$4.30	$3.80	$3.85	$4.20	$4.21	$4.33	$4.37
Acreage (Million Acres)									
Planted Acres	88.2	94.6	90.6	93.5	90.8	91.4	91.0	89.8	89.7
Harvested Acres	78.7	86.5	82.9	85.3	82.8	83.4	83.0	81.9	81.9
Harvested Area % of Planted	89%	91%	92%	91%	91%	91%	91%	91%	91%
Yield (Bushels Per Acre)	173	177	179	183	185	187	189	191	193
Supply (Million Bushels)									
Beginning Stocks	1,377	1,360	1,763	1,505	1,833	1,987	2,240	2,425	2,483
Production	13,651	15,341	14,867	15,603	15,309	15,615	15,698	15,662	15,839
Imports	39	28	25	25	39	39	39	39	39
Total Supply	15,066	16,729	16,655	17,133	17,181	17,641	17,977	18,126	18,360
Domestic Disappearance (Million Bushels)									
Total Domestic Disappearance	12,044	12,673	12,600	12,900	12,919	12,945	13,089	13,144	13,299
Exports (Million Bushels)	1,662	2,292	2,550	2,400	2,275	2,455	2,463	2,499	2,539
Total Disappearance (Million Bushels)	13,706	14,966	15,150	15,300	15,194	15,400	15,552	15,643	15,838
Ending Stocks (Million Bushels)	1,360	1,763	1,505	1,833	1,987	2,240	2,425	2,483	2,522

Price risk: The price forecast for corn declined due to Chinese tariffs weighing on the soybean market. Corn prices are forecasted to be $4.30 per bushel for 2024/25 and $3.80 per bushel for 2025/26. Although China has levied an additional 15% tariff on US corn, this likely will not impact US exports as China has been largely absent from US corn exports this marketing year Although Mexico has signaled it will not levy tariffs on corn at this time, a change in this stance represents a significant downside risk to our export forecast as Mexican demand has composed nearly 50% of total US corn exports so far in 2024/25; however, US corn will likely remain competitive as about 65% of US exports to Mexico are transported via rail which poses a significant advantage to ocean freight.

For 2025/26, China's corn imports expected to remain steady at 20.0 MMt. However, corn imports for 2024/25 fell short of the original forecasts. Chinese corn imports will continue to be historically large, but imports are expected to decline throughout the decade due to a renewed emphasis on agricultural self-sufficiency by Beijing.

China Corn Import Outlook



Source: S&P Global Commodity Insights

Wheat

Supply: US all wheat area for 24/25 totaled 46.1 million acres and is forecasted to increase to 47.1 million acres in 25/26. US all wheat production is 1,971 million bushels in 24/25 and will decline to 1,936 million bushels as weather conditions in the 24/25 season resulted in a bumper crop.

Demand: Wheat food/milling and seed use will increase slightly in 2024/25 to 1,032 million bushels. However, feed demand is expected to increase by 35 million bushels to 120 million bushels. Exports declined by 10 million bushels to 845 million bushels to ongoing issues surrounding a strong US Dollar.

Price risk: US wheat futures tumbled again this week amid vanishing weather risks in the US Plains, but, more importantly, US tariffs put on China and retaliatory measures hitting US grains and oilseeds. This is due to concerns that retaliatory measures against corn and soybean exports may impact future plantings of wheat. The 25/26 all wheat price is projected to be $5.90 a bushel, down from $6.10 a bushel in February.

U.S. WHEAT FUNDAMENTALS									
	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
Prices (Dollars Per Bushel)	$8.83	$6.96	$5.60	$5.90	$5.55	$5.21	$5.52	$5.64	$5.49
Wheat to Corn Price Ratio	1.35	1.53	1.30	1.55	1.44	1.24	1.31	1.30	1.26
Acreage (Million Acres)									
Planted Acres	45.8	49.6	46.1	47.1	46.9	47.3	46.3	47.4	47.6
Harvested Acres	35.5	37.1	38.5	38.4	38.2	38.4	37.6	38.5	38.7
Harvested Area % of Planted	78%	75%	83%	81%	81%	81%	81%	81%	81%
Yield (Bushels Per Acre)	46.5	48.7	51.2	50.5	51.3	51.7	52.3	52.7	53.1
Supply (Million Bushels)									
Beginning Stocks	674	570	696	806	835	890	972	1,052	1,161
Production	1,650	1,804	1,971	1,936	1,958	1,989	1,964	2,029	2,055
Imports	122	138	135	125	111	108	110	111	110
Total Supply	2,446	2,512	2,803	2,867	2,903	2,986	3,047	3,192	3,325
Domestic Disappearance									
Food Use	972	961	968	974	971	975	973	974	979
Seed	68	62	64	63	64	62	64	65	62
Feed & Residual	74	85	120	110	95	90	88	104	84
Total Domestic Disappearance	1,114	1,108	1,152	1,147	1,130	1,128	1,125	1,143	1,125
Exports	762	707	845	885	883	887	870	889	897
Total Disappearance	1,876	1,815	1,997	2,032	2,013	2,014	1,995	2,032	2,022
Ending Stocks	570	696	806	835	890	972	1,052	1,161	1,303

Cattle and Beef Sector

Supply

Overall cattle and calf inventories in the US were flat year over year at 86.9 million head at the start of 2025. Given the persistently strong consumption rates even in the face of record prices, the industry continues to see incentives to expand supply. In 2026, total cattle inventories are set to remain flat year over year at 87.2 million head, although gains in the overarching cattle herd are expected in 2027 and the following years. In 2025, beef production is expected to ultimately retreat by 2.9% year over year to 26.19 billion pounds. For 2026, beef output is set to drop by a lighter 0.7% year over year to 26.02 billion pounds, before increasing in 2027 and beyond.

Demand

US beef consumption during 2025 is forecast to retreat by 1.6% year over year to 28.19 billion pounds, driven more by a lack of supply. Domestic use rates are expected to pick back up in 2027 and for several years afterward, as improved supply allows suppressed demand to recover.

US beef exports are set to fall by a notable 9.6% year over year to 2.70 billion pounds during 2025. While beef exports will continue growing through the decade, exports will not reach 2022 levels by 2030.

US Cattle Sector Fundamentals

Item	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Cattle															
Beef Cow Inventories (Jan 1, million head)	30.2	31.2	31.5	31.8	31.3	30.8	30.0	28.9	28.2	28.3	28.4	29.7	30.7	30.8	30.9
Boxed beef cutout (dollars per cow)	206.8	209.9	214.0	222.6	238.9	279.3	263.9	298.0	307.2	353.6	281.6	273.3	269.5	268.4	272.0
Beef															
Beef retial price (Dollars per pound)	$5.96	$5.91	$5.92	$6.04	$6.38	$7.25	$7.59	$7.98	$8.23	$8.42	$7.53	$7.27	$7.15	$7.10	$7.19
Production (mil lbs)	25,221	26,228	26,867	27,148	27,153	27,938	28,291	26,964	26,987	26,193	26,022	27,152	27,932	28,603	28,691
Imports (mil lbs)	3,015	2,993	2,999	3,057	3,342	3,311	3,391	3,727	4,636	4,733	4,784	4,788	4,778	4,742	4,666
Exports (mil lbs)	2,556	2,860	3,155	3,022	2,956	3,446	3,536	3,038	2,987	2,700	2,659	2,777	2,908	3,060	2,987
Domestic use (mil lbs)	25,673	26,371	26,665	27,167	27,484	27,828	28,109	27,717	28,659	28,194	28,117	29,128	29,780	30,264	30,367

\1 Deflated by the GDP Implicit Price Deflator, 2000=100
Note: Shaded years are forecasts
Source: S&P Global Commodity Insights

Prices

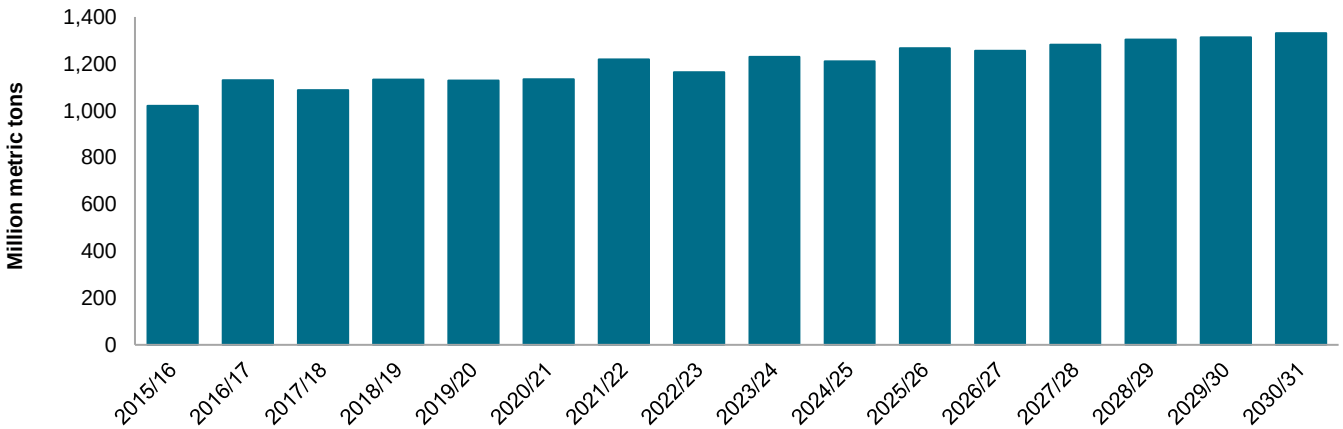
Beef prices in 2025 are projected to increase to new record highs, after previously doing so in 2024 and 2023. The 2025 boxed beef cutout is set to jump up to an average price of $353.6 per hundredweight (cwt), marking a 15.1% year-over year increase over 2024. In 2026, beef prices are set to fall by a notable 20.4% year over year to $281.6 per cwt, however, support from high demand rates will limit the full capacity of the decrease, meaning that beef values in the long run are to remain in a historically high range.

Global Outlook and Assumptions

Corn

Supply: Global corn production declined slightly in 2024/25 by 19.7 MMt for a total of 1,210 MMt with the declines coming from the US, Argentina, Russia, and Ukraine. Production is expected to rebound in 2025/26 by 55.9 MMt for a total of 1,266 MMt with sizeable increases occurring in Brazil, Europe, Ukraine, and Russia,. Globally supplies are projected to increase steadily through the decade to a total of 1,331 MMt by 2030/31 with the majority of increases coming from China, Brazil, and the US.

Global corn production

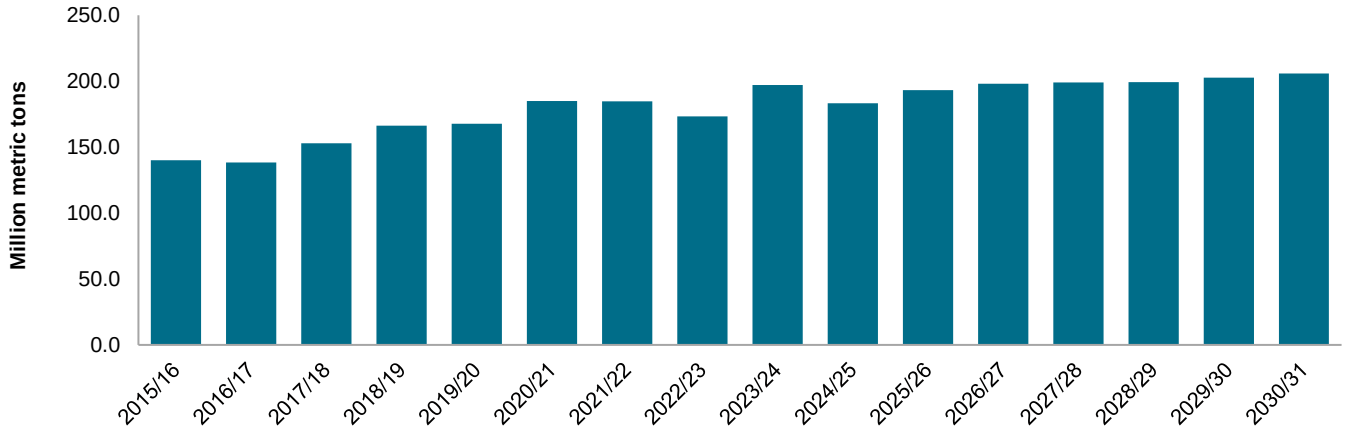


Source: S&P Global Commodity Insights.

Demand: Global corn imports decreased by 13.9 MMt in 2024/25 for a total of 183.2 MMt. China was the primary driver of this trend as it imported 10.3 MMt less in 2024/25 compared to 2023/24. Imports will rebound by 9.9 MMt to 193.2 MMt as imports from China and Africa increase. Global corn imports are projected to grow steadily through

2030/31 by 22.6 MMt for a total of 205.9 MMt with growing African demand more than offsetting declines in demand from China.

Global corn imports

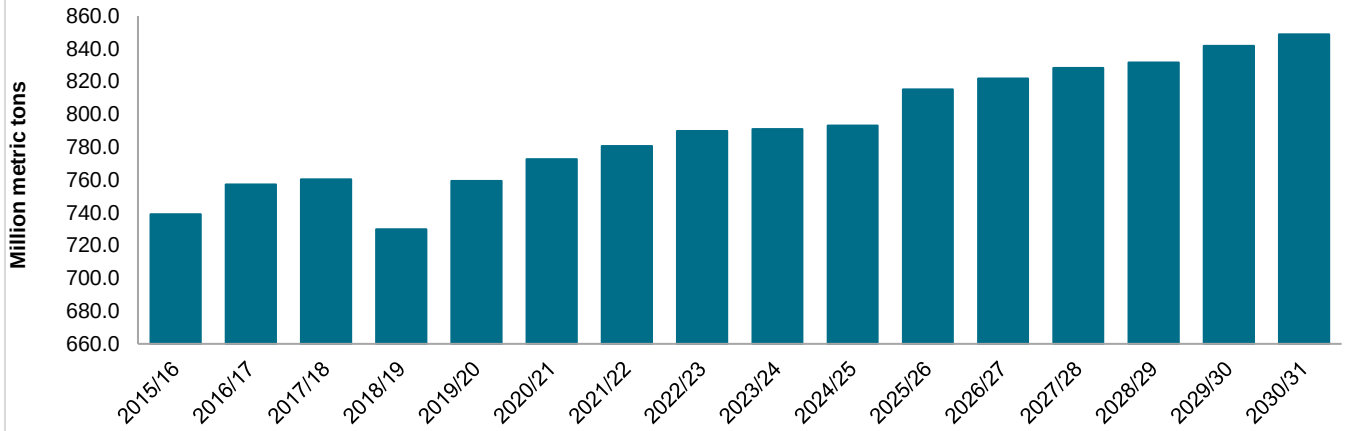


Source: S&P Global Commodity Insights.

World Wheat

Supply: Global wheat production grew slightly in 2024/25, increasing 2.2 MMt to a total of 793.2 MMt. While Canada, the US, Argentina, and Australia experienced strong harvests, this was partially offset by poor yields in Russia and Europe. Production is projected to grow by 22.0 MMt in 2025/26 with the increases originating in Russia and Europe. Global supplies of wheat is expected to grow by 55.6 MMt by 2030/31 to a total of 838.9 MMt with the main increases coming from the EU and Ukraine.

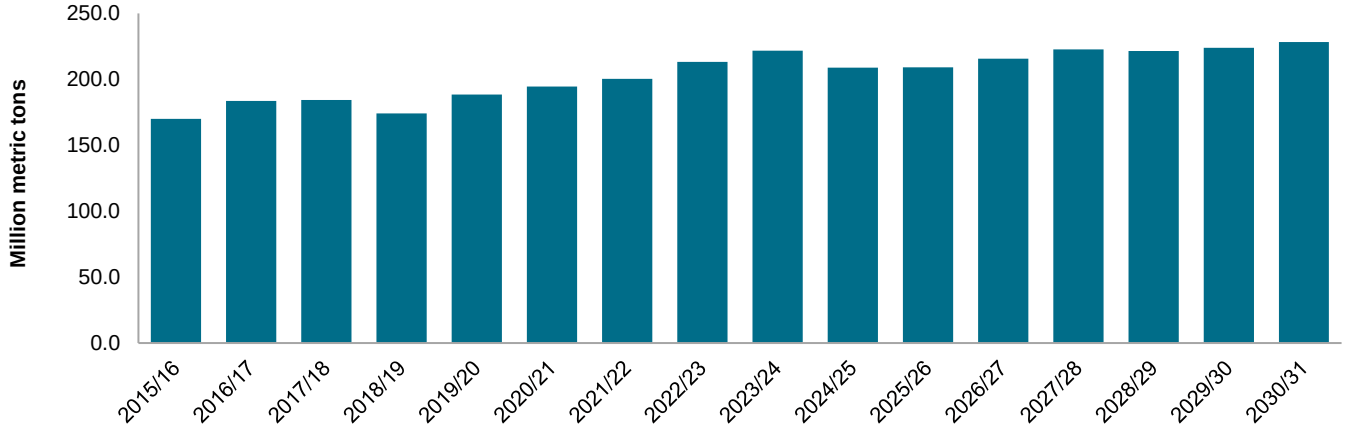
Global wheat production



Source: S&P Global Commodity Insights.

Demand: Global wheat imports declined by 13.0 MMt for a total of 208.8 MMt with the decline being driven by lower imports from China, Turkey, and Indonesia. Imports are expected to remain steady in 2025/26. While global imports are expected to increase to 228.3 MMt by 2030/31, it will be 2027/28 before global wheat imports surpass levels experienced in 2023/24.

Global wheat imports

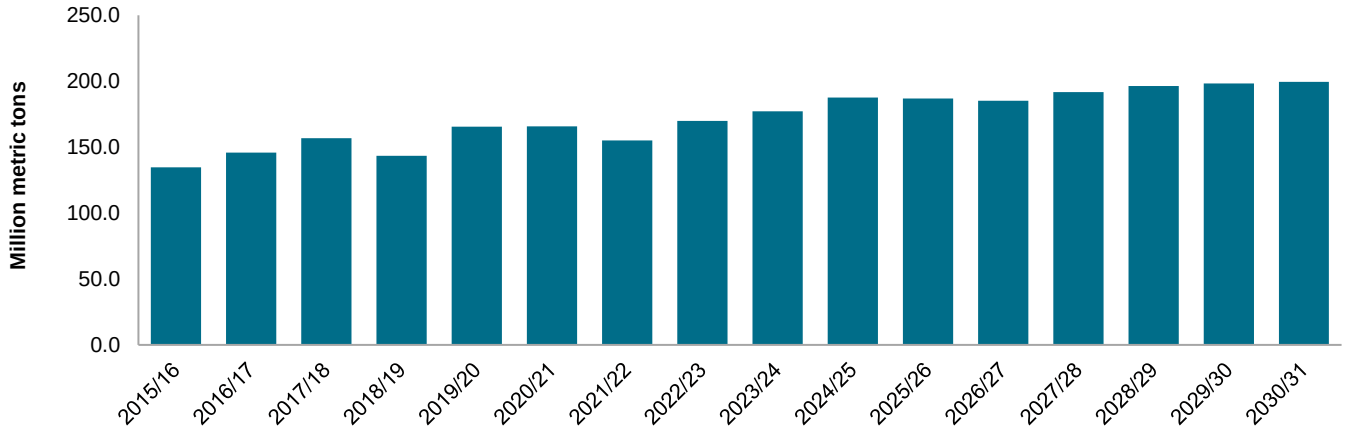


Source: S&P Global Commodity Insights.

Soybeans

Supply: Global soybean production product increased to 427.5 MMt in 2024/25, a 32.5 MMt increase from 2023/24. This increase in global production is being driven by increased supplies from Brazil, the US, and Argentina. Production in 2025/26 will remain steady. Sustained acreage growth in LATAM, driven by Brazil, and increasing global yields will result in a forecasted global soybean harvest of 444.0 MMt in 2030/31.

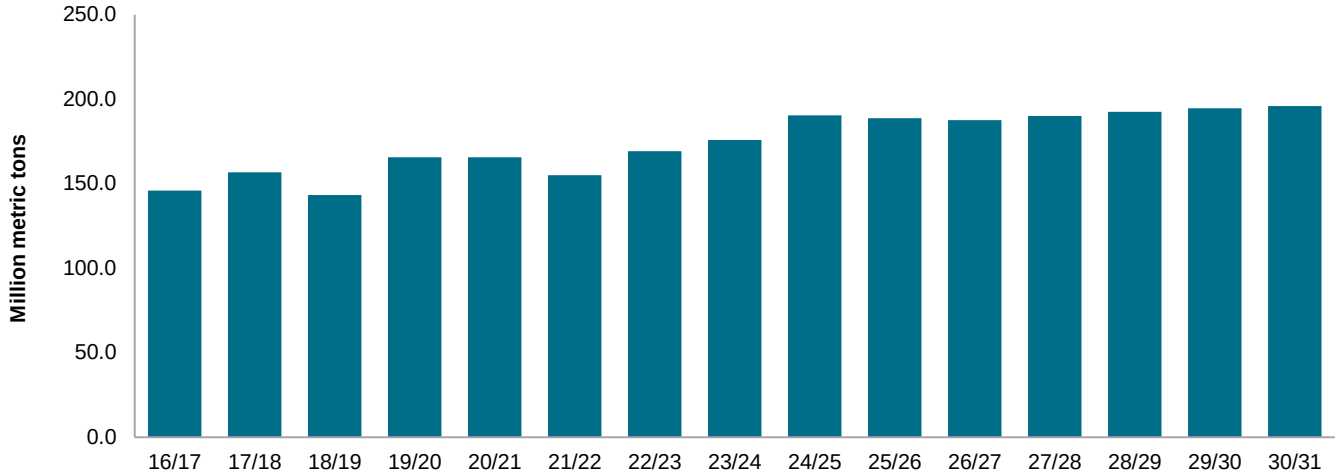
Global soybean imports



Source: S&P Global Commodity Insights.

Demand: World soybean imports increased by 10.5 MMt in 2024/25 for a total of 187.6 MMt with the increases being concentrated in Europe, Eurasia, and Asia. Imports will decline slightly in 2025/26. Through the forecasted period, imports are projects to remain relatively steady and grow slowly through the decade to a total of 199.5 MMt by 2030/2031.

Global soybean imports



Source: S&P Global Commodity Insights.

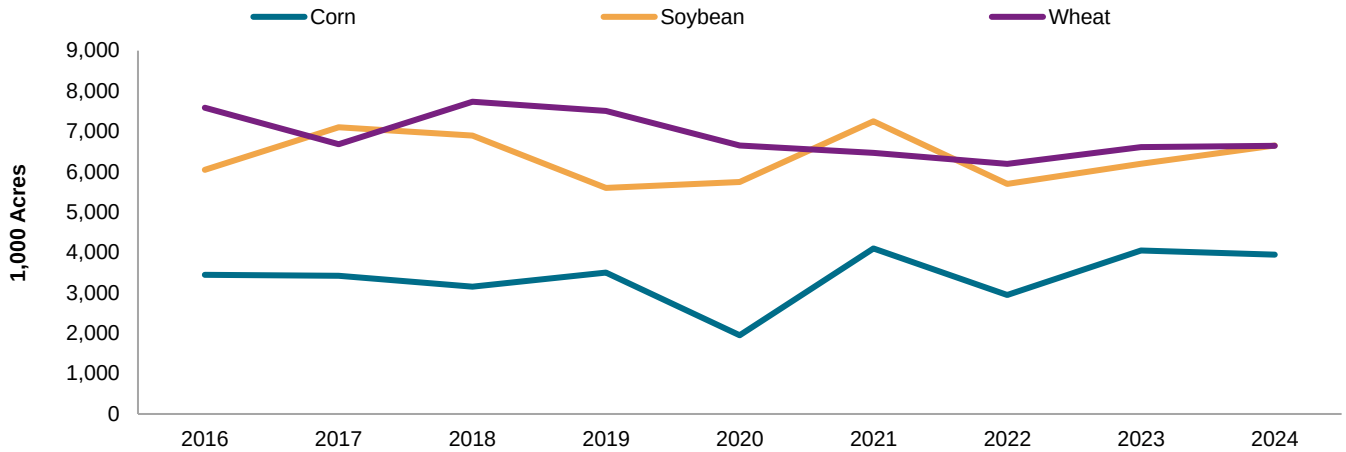
Farm Policy Considerations

Other US policy concerns

- **US tariffs have been or will be imposed on Canada, Mexico, China and the EU.** On March 4 US tariffs were increased to 20% on imports from China, on top of existing tariffs already in effect for many Chinese goods. The US has postponed imposing 25% tariffs on most goods imported from Canada and Mexico until at least April 2.
- **President Trump is also taking steps to impose reciprocal tariffs on all major trading partners staring on April 2**. The reciprocal tariff plan will not only consider tariffs on trading partners, but also value-added taxes, and non-tariff barriers to trade and be evaluated by HS tariff lines
- **Mexico states it will not levy tariffs against US corn exports.** USDA Secretary Brooke Rollins held trade discussions virtually on March 10 with her counterparts in Mexico and Canada where Mexican Agriculture Secretary Julio Berdegué offered reassurances Mexico will not hit US corn with import restrictions.
- **Record agricultural imports fueled record monthly trade deficit in January.** US agricultural exports fell to $14.41 billion in January while agricultural imports rose to a record $20.66 billion, resulting in a record trade gap of $6.25 billion. The data put US agricultural exports at $63.97 billion so far in Fiscal Year (FY) 2025 while imports are now at $75.95 billion, leaving a deficit of $11.98 billion.
- **Year-round E15 delayed in Ohio, South Dakota.** EPA announced Friday (Feb. 28) that year-round sales of E15 would be delayed in Ohio and South Dakota after the two states requested the delay so that infrastructure can be put in place. The waiver to allow year-round sales of E15 will be in place for Illinois, Iowa, Minnesota, Missouri, Nebraska, and Wisconsin.
- **Mexican Senate clears constitutional ban on GMO corn planting.** Mexico's Senate Wednesday approved a constitutional reform measure that would ban cultivation of genetically modified (GM) corn. The lower House last week cleared the measure. It now must be approved by the local legislatures in 17 of the 32 Mexican states. The language does not make any mention of imports.
- **Port deal reached with Panama Canal**. A consortium led by American asset manager BlackRock reached agreement on the purchase of stakes in two ports in the Panama Canal via a deal worth nearly $23 billion. The deal would include Hong Kong-based CK Hutchison's 90% ownership of Panama's Balboa and Cristóbal ports, strengthening US influence over the key trade route.

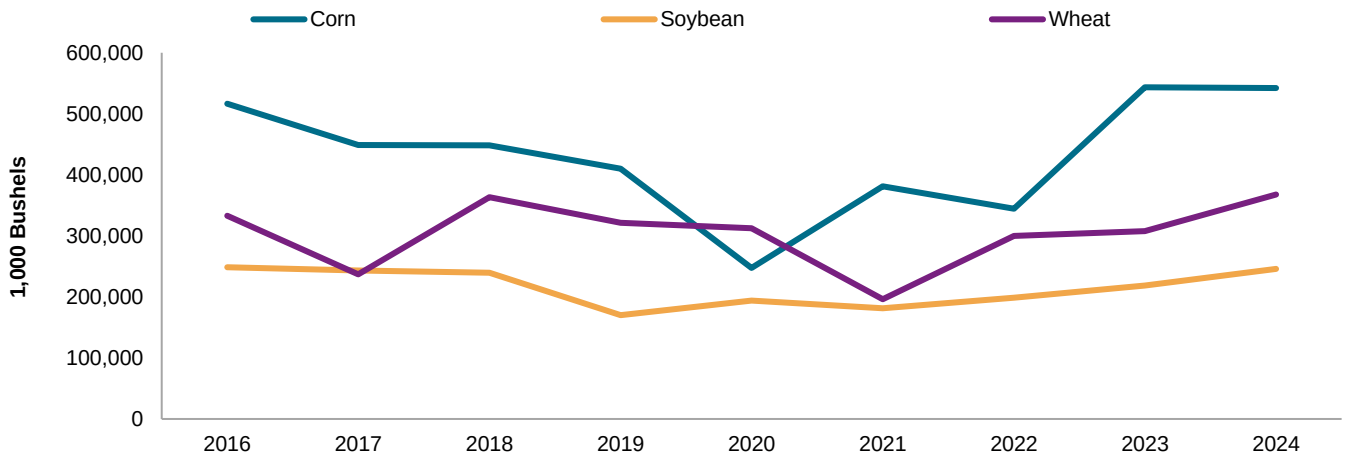
For 2024/25, North Dakota soybeans has slightly surpassed wheat in terms of acres planted by 10,000 acres. Corn acres planted decreased slightly year over year. Due to fewer acres planted corn production in North Dakota was lower in 2024 compared to 2023, but favorable yields made the kept the decline around 1 million bushels. Meanwhile, soybean production increased by 32 million bushels and wheat production increased by 59.9 million bushels.

North Dakota crop plantings



Source USDA NASS.

North Dakota production by crop



Source: USDA NASS

IV. Deep Dive into the Tax Streams

To forecast the tax revenues for North Dakota, S&P Global Market Intelligence has developed custom econometric models for major sources of state tax revenue.

- The forecasted amounts are based on quarterly data with quarterly economic drivers associated with the underlying economic activity. The economic drivers were carefully selected after reviewing historical data and comparing economic data to the tax collections.
- Quarterly forecasts are aggregated into fiscal year totals and biennial totals.

March 2025 Forecasts

Revenue Source	2021-23 Biennium Actual	2023-25 Biennium Forecast	2025-27 Biennium Forecast	2027-29 Biennium Forecast
Sales and use tax	***2,130,643,947***	***2,440,317,770***	***2,592,826,181***	***2,803,383,935***
		15%	***6%***	***8%***
Motor vehicle excise tax	***308,681,830***	***338,466,454***	***343,024,958***	***386,049,672***
		9.6%	***1.3%***	***12.5%***
Individual income tax				
Total individual income tax collections	1,348,172,563	1,108,825,980 *-17.8%*	1,172,675,563 *5.8%*	1,256,296,193 *7.1%*
Transfer to refund reserve accounts	(409,400,000)	(326,297,204)	(249,000,000)	(267,000,000)
Net individual income tax collections	**938,772,563**	**782,528,776** ***-17%***	**923,675,563** ***18%***	**989,296,193** ***7%***
Corporate income tax				
Total corporate income tax collections	608,247,251	614,775,262 *1.1%*	622,413,941 *1.2%*	622,017,964 *-0.1%*
Transfer to refund reserve accounts	(86,551,687)	(77,000,000)	(105,000,000)	(106,000,000)
Net corporate income tax collections	**521,695,564**	**537,775,262** ***3%***	**517,413,941** ***-4%***	**516,017,964** ***0%***

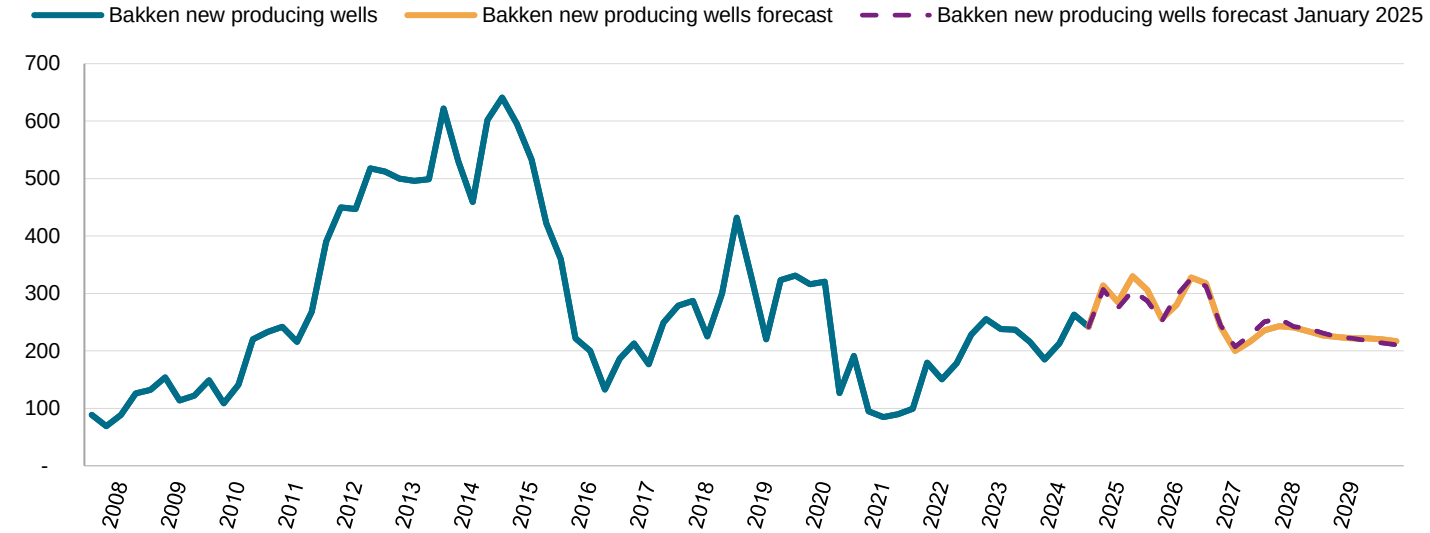
Note: The percentages in the table reflect the change from the prior biennium

The specific market drivers and concept behind each of the forecasted tax steams are provided in detail below.

Sales and use tax

- First, the fifteen taxable sales sectors are modeled at the quarterly level and a forecast is produced for each sector. The sector forecasts are summed to a total taxable sales forecast. The tax rate is then applied to the total taxable sales forecast to calculate sales and use tax revenue.
- Most of the taxable sales sectors are driven by the energy sector. Of the fifteen taxable sales sectors, nine sectors have a strong correlation with (1) new producing wells in the Bakken play. These nine sectors are accommodation and food services, construction, financial services, manufacturing, mining and oil, miscellaneous, other services, transportation and warehousing, and wholesale trade. Since hitting lows in 2021 from the COVID-19 pandemic and global price wars, the well count in the Bakken has been recovering slowly. The number of new producing wells grew through 2024 and is expected to fall slightly in the outer years of the forecast.

Bakken new producing wells

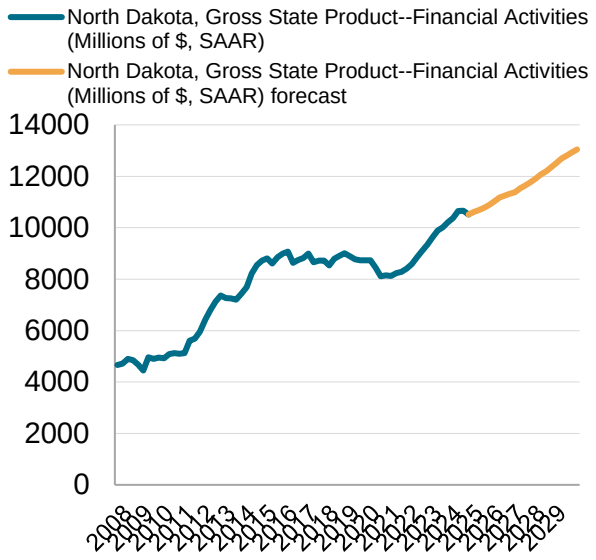


As of Mar. 2025
Source: S&P Global Market Intelligence.

> Another driver used in some of the sector-level equations is (2) gross state product in North Dakota by sector and can be found in the models for accommodations and food services, construction, education, health care, and social services, financial services, other services, professional services, arts and recreation, transportation and warehousing, wholesale trade, information industries and utilities.

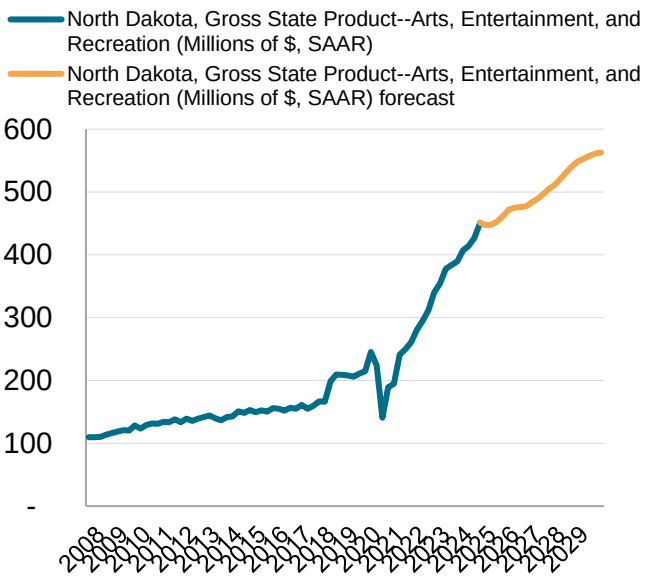
> In 2024, gross state product grew relative to the previous year in all sectors except for transportation and warehousing (1.8% decline). The gross state product in the entertainment, arts, and recreation sector experienced the largest growth of 18% year-over-year.

North Dakota, Gross State Product--Accommodation and Food Services (Millions of $, SAAR)



As of Mar. 2025.
Source: S&P Global Market Intelligence.

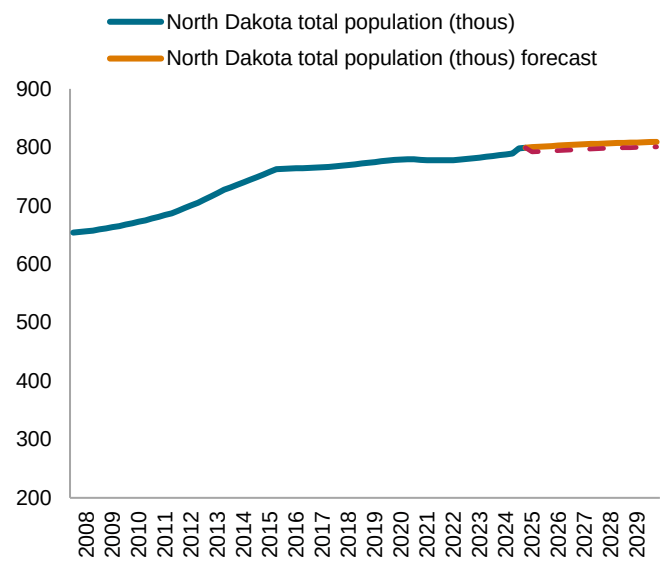
North Dakota, Gross State Product-- Arts, Entertainment, Recreation (Millions of $, SAAR)



As of Mar. 2025.
Source: S&P Global Market Intelligence.

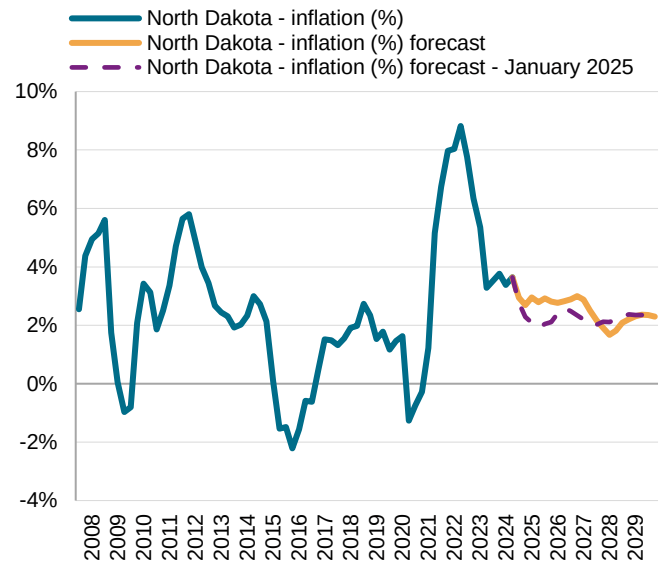
Population and inflation in North Dakota are the main drivers for the retail trade taxable sales sector. S&P Global assumes per-capita purchases are stable and align with population growth. Inflation is assumed to have peaked in the second quarter of 2022 and will normalize to 2% in 2026.

North Dakota - total population



As of Mar. 2025
Source: S&P Global Market Intelligence.

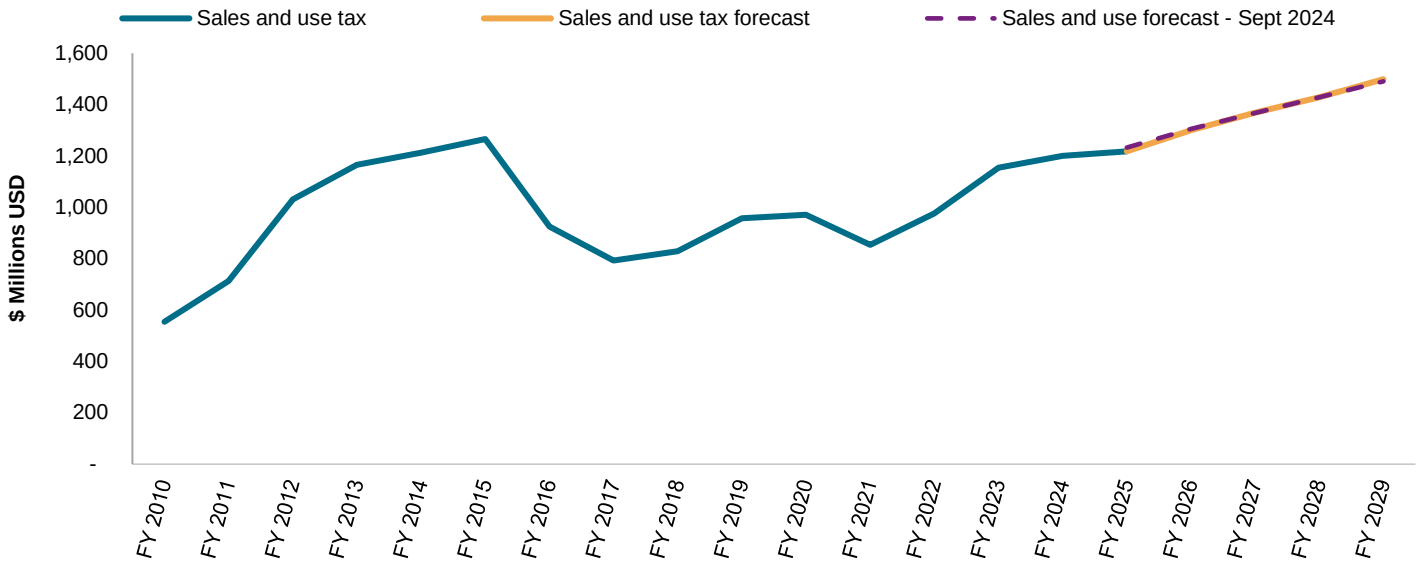
North Dakota - inflation



As of Mar. 2025.
Source: S&P Global Market Intelligence.

> After summing the sector-level taxable sales to a total and applying the 5% tax rate and 91.3% for transfer to the general fund, S&P Global forecasts 3.3% increase in sales and use tax in FY 2025, followed by 3.3% growth in FY 2026.

Sales and tax use forecast

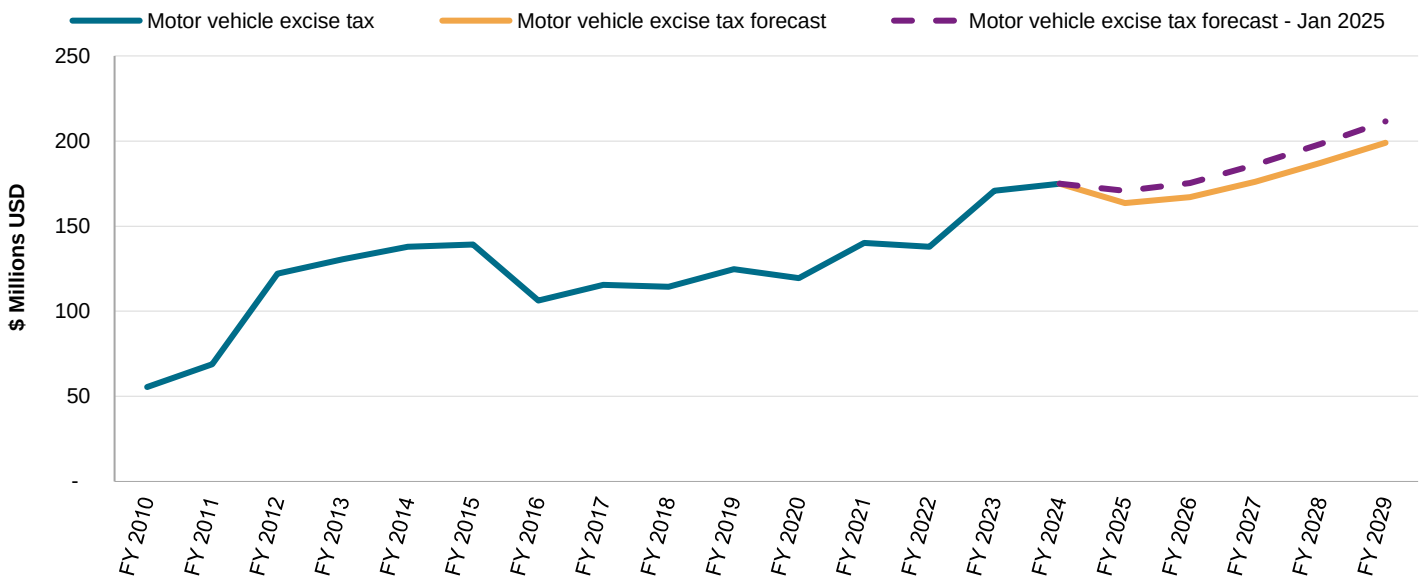


As of Mar. 2025
Source: S&P Global Market Intelligence.

Motor vehicle excise tax

> For motor vehicle excise tax, the main driver of the model is personal consumption of motor vehicles. After the initial shock of the COVID-19 pandemic, motor vehicle purchases recovered quickly and reached a high of $2.2 billion in late 2023.

Motor vehicle excise tax forecast



Note: Beginning in FY2024, approximately 50% of MV excise taxes were redirected from the general fund
Source: S&P Global Market Intelligence.

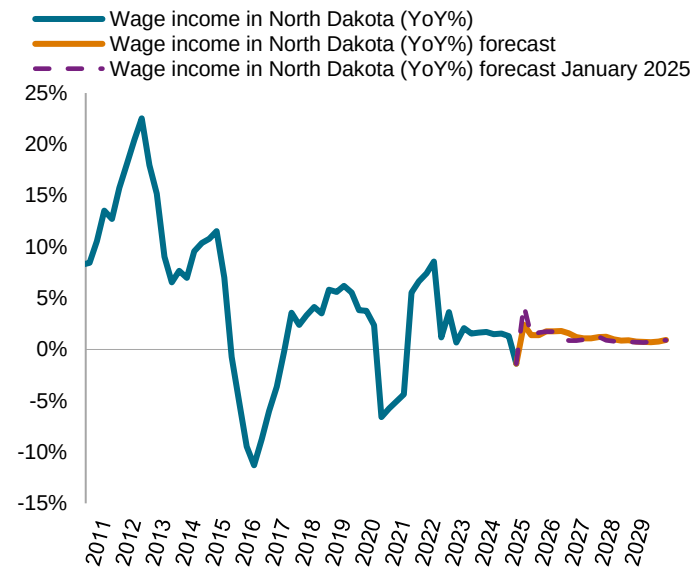
- The outlook for the motor vehicle excise tax in the upcoming years is mixed. A 6.5% decline is expected in FY2025 followed by growth of 2.1%, and 5.5% in FY 2026 and FY 2027 respectively. Beginning in FY2024, 50% of funds from the motor vehicle excise collections were directed to funds other than the general fund. For consistency with previous forecasts, the full amount of collections are included in the FY2024 history and forecast.

Individual income tax

- S&P Global built separate models for individual income tax submitted as withholdings versus as estimated payments to model and forecast individual income tax revenues.
- Our model for individual income tax submitted as withholdings has a single driver: (1) total wage income in North Dakota. As income withholding is relatively stable and largely driven by total wage income in the state, the elasticity of income withholding with respect to total income is approximately one. This means that one percent growth of wage income will translate to one percent of withholding. Wage income grew from a dip at the end of 2020 from the pandemic and peaks in 2022. Growth has gradually fallen from the high in 2022 and is expected to normalize between 4 and 5% in 2025.
- The tax base of individual income tax submitted as estimated payments, on the other hand, is more volatile due to the nature of capital gains realization. That being said, a reasonable amount of variations in the tax base of individual income estimated payments is captured by changes in the (1) state's property income, i.e., personal rental income, personal dividend income, and personal interest income. State property income is the single driver for individual income tax submitted as estimated payments.

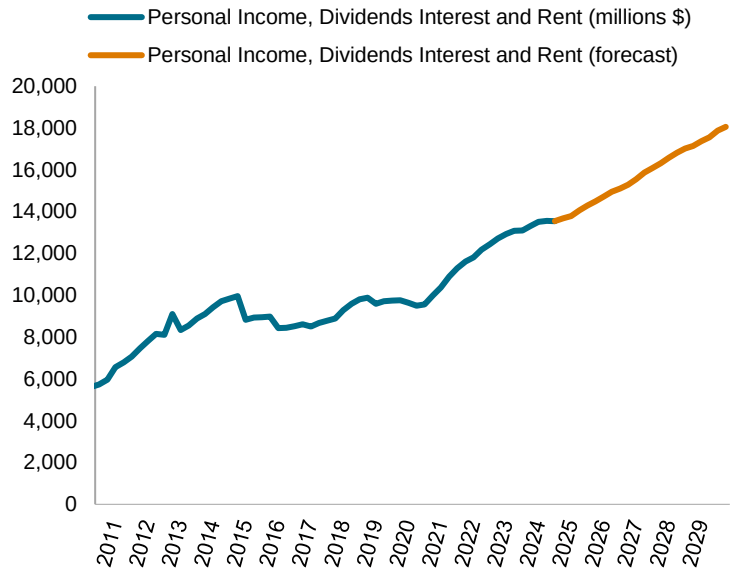
- Insight about the estimated transfer to reserve fund accounts was provided by NDLM. About 21.2% rounded to the nearest million of the gross individual income tax revenue at the annual level is transferred to the reserve fund account. The percentage is based on historical averages.

Wage income in North Dakota (YoY growth)



As of Mar. 2025.
Source: S&P Global

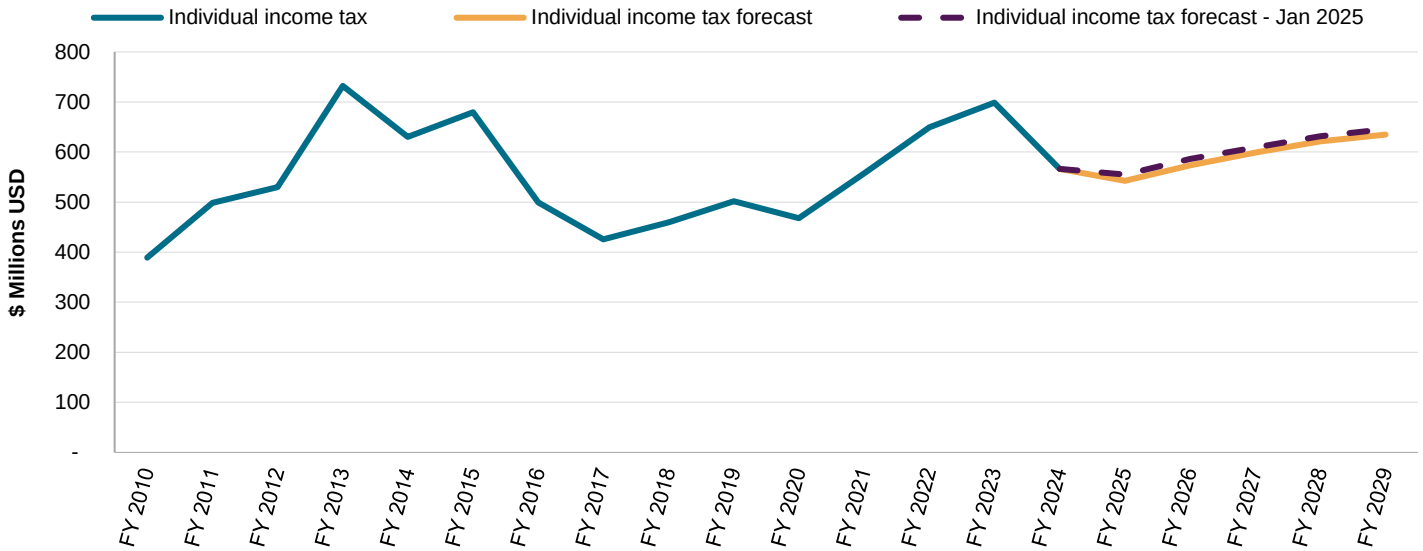
Personal Income, Dividends Interest and Rent (millions $)



As of Mar. 2025.
Source: S&P Global

- In total, S&P Global projects the gross individual income revenue to decline in FY 2025 by 4.2% followed by growth in FY 2025 of 5.7% and growth in FY 2027 of 4.5%.
- Declines in gross and net individual income tax collections in FY 2024 reflect the updated tax structure resulting from the enactment of HB1158. Reforms included the elimination of the lowest tax bracket, combining and reducing rates in the middle-income brackets, and reducing rates for the top income brackets. Following the declines in FY2024, S&P Global expects a return to steady, modest growth in years 2025 and beyond.

Individual income tax forecast

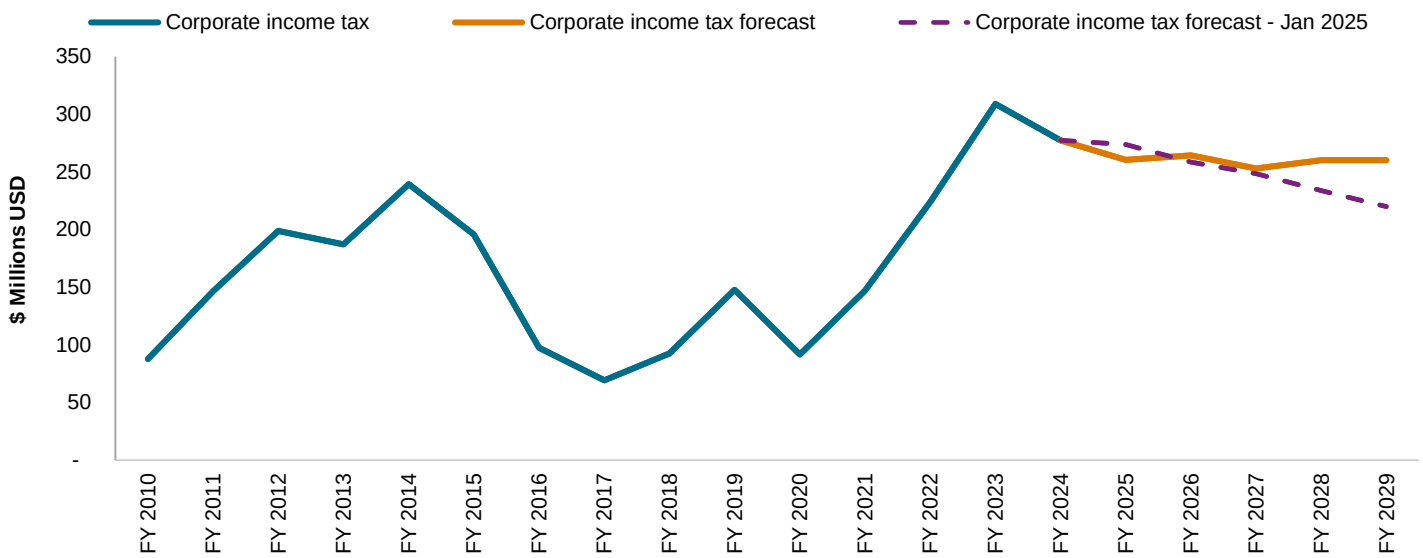


As of Mar. 2025
Source: S&P Global Market Intelligence.

Corporate income tax

- The main driver of gross corporate income tax collections is new producing wells in the Bakken play. The well counts are used as an indicator of the well-being of oil companies. The new producing well count in the Bakken had dropped during the pandemic and has slowly been recovering the past few years. In the forecast, Bakken new wells are expected to rise through the forecast horizon, though still below levels seen pre-pandemic.
- Insight about the estimated transfer to reserve fund accounts was provided by NDLM. About 16.9% rounded to the nearest million of the gross corporate income tax revenue at the annual level is transferred to the reserve fund account. The percentage is based on the historical average.

Net Corporate Income Tax forecast



As of Mar. 2025
Source: S&P Global Market Intelligence.

> A decline of 6.1% in FY 2025 followed by growth of 1.6% in FY 2026 are estimated for net corporate income tax collections in the forecast update.

V. Scenarios

Given the significant fiscal impacts of oil price variations in North Dakota, S&P Global customizes high/low scenarios. The Base Forecast is the S&P Global Market Intelligence short-term forecast, originally published on Feb. 11, 2025. In this scenario, real GDP growth eases from 2.5% in 2024 to 2.0% in 2025 and 2026. The Optimistic scenario incorporates a 20% increase in oil price and increased production in the Bakken play to 1.4 million b/d. The pessimistic scenario is characterized by slowing demand and lower oil prices by 17%, driving activity down to 1.0 million b/d.

Revenue Source	2023-25 Biennium Baseline	2023-25 Biennium Optimistic	2023-25 Biennium Pessimistic
Sales and use tax	2,440,317,770 *14.5%*	2,470,939,515 *16.0%*	2,365,504,687 *11.0%*
Motor vehicle excise tax	338,466,454 *9.6%*	346,614,607 *12.3%*	326,244,226 *5.7%*
Net individual income tax	782,528,776 *-16.6%*	816,182,866 *-13.1%*	736,962,404 *-21.5%*
Net corporate income tax	537,775,262 *3.1%*	544,261,184 *4.3%*	529,636,715 *1.5%*

Revenue Source	2025-27 Biennium Baseline	2025-27 Biennium Optimistic	2025-27 Biennium Pessimistic
Sales and use tax	2,592,826,181 *6.2%*	2,667,208,366 *7.9%*	2,147,403,042 *-9.2%*
Motor vehicle excise tax	343,024,958 *1.3%*	377,327,454 *8.9%*	291,571,215 *-10.6%*
Net individual income tax	923,675,563 *18.0%*	1,005,140,618 *23.2%*	742,403,663 *0.7%*
Net corporate income tax	517,413,941 *-3.8%*	629,207,010 *15.6%*	421,550,920 *-20.4%*

Note: The percentages in the table reflect the change from the prior biennium

VI. Disclosures

The forecasts included in this report, including, but not limited to, those regarding tax revenues, are estimates, which have been prepared on the basis of certain assumptions and hypotheses. No representation or warranty of any kind is or can be made with respect to the accuracy or completeness of, and no representation or warranty should be inferred from, these forecasts. The tax revenue forecast contained in this report is based upon assumptions as to future events and, accordingly, is subject to varying degrees of uncertainty. Some assumptions inevitably will not materialize and, additionally, unanticipated events and circumstances may occur. Therefore, for example, actual tax revenues inevitably will vary from the forecasts included in this report and the variations may be material and adverse.

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