2025 SENATE FINANCE AND TAXATION

SB 2320

2025 SENATE STANDING COMMITTEE MINUTES

Finance and Taxation Committee
Fort Totten Room, State Capitol

SB 2320
1/29/2025

Relating to the carbon dioxide pipeline tax exemption; and to provide an effective date.

9:30 a.m. Chairman Weber reconvened the meeting.

Members present: Chairman Weber, Vice Chairman Rummel, Senator Marcellais, Senator Patten, Senator Powers, Senator Walen

Discussion Topics:

- Carbon dioxide demand in North Dakota
- Ethanol production and enhanced oil recovery
- Tax exemption revenue relating to townships and counties

9:30 a.m. Senator Magrum, District 8, introduced SB 2320, testified in favor and submitted testimony #32888.

9:59 a.m. Zachary Cassidy, Organizer, Dakota Resource Council, testified in favor and submitted testimony #31991.

10:00 a.m. Lanny Kenner testified in favor.

10:02 a.m. Brady Pelton, Vice President, North Dakota Petroleum Council, testified in opposition and submitted testimony #32509, #32510, and #32511.

10:09 a.m. Charlie Adams, Agriculture and Stakeholder Relations Manager, Summit Carbon Solutions, testified in opposition and submitted testimony #32484.

10:19 a.m. Jonathan Fortner, VP of Government Relations, Lignite Energy Council, testified in opposition and submitted testimony #32461.

10:22 a.m. Laura Lacher, Executive Director, North Dakota Ethanol Producers Association, testified in opposition on behalf of Ryan Carter, North Dakota Ethanol Producers Association, Tharaldson Ethanol, and submitted testimony #32447.

Additional written testimony:

Gordon Greenstein submitted written testimony in opposition #31987.

Lon Klusmann submitted written testimony in favor #32235.

Lydia Gessele submitted written testimony in favor #32276.

Bruce Doolittle and Stephanie Doolittle submitted written testimony in favor #32403.

Andrea Pfennig, Greater North Dakota Chamber, submitted written testimony in opposition #32522.

10:23 a.m. Chairman Weber closed the hearing.

Chance Anderson, Committee Clerk

HB 2320

Senate Finance and Taxation

I am in support of SB 2320

Chairman Weber and Committee Members, This is a great bill, the tax exemption will no longer apply to interstate pipelines and associated equipment that bring CO2 into the state for geologic storage or enhanced oil/natural gas recovery. Even though in-state CO2 pipeline infrastructure will continue to receive the tax exemption, I do not believe it should still receive this tax exemption. The savings from this could help with the lowering or elimination of private property taxes. I urge a Do Pass on SB 2320, this will be in accordance with the North Dakota Constitution.

Thank You, Gordon Greenstein

US Navy (Veteran)

US Army NDNG (Retired)

Zach Cassidy
Organizer
Dakota Resource Council

Thank you Mr. Chair and member of the Senate Taxation Committee. I am Zachary Cassidy, writing in support of SB 2320, and removing interstate carbon pipelines from receiving tax benefits. Out-of-state carbon pipelines, who seek to use North Dakota as their dumping ground, should not be further encouraged through tax breaks. Why should companies owned by wealthy investors from out of state not pay their taxes like the rest of us?
As such, we recommend a DO PASS on this bill.

Support of SB 2320

Since residential property tax exemptions/credits are only available to North Dakota residents, then in no way should an out of state pipeline company be given the same tax breaks as a resident North Dakota company, you can't have it both ways,

If you are picking winners and losers then the ND companies should be the winner.

I urge a DUE PASS on SB 2320

Lon Klusmann

HB 2320
Senate Finance and Taxation

I am in support of SB 2320

Chairman Weber and Committee Members,

I think this is a great bill, and am glad to see that the tax exemption will no longer apply to interstate pipelines and associated equipment that bring CO2 into the state for geologic storage or enhanced oil/natural gas recovery. I see however that in-state CO2 pipeline infrastructure will continue to receive the tax exemption, I do not believe this should be the case. The savings from this could help lower the out of control spending in our state. I urge a Do Pass on SB 2320, this will be in accordance with the North Dakota Constitution.

Thank You,
Lydia R. Gessele
Wells County
District 14

Testimony in Support of SB 2320

Bruce & Stephanie Doolittle
Hazelton, ND
January 28, 2025

Carbon dioxide pipelines that gather waste from other states and transport it to ND for storage should not receive the same tax benefits as in-state companies.

Why should the ND taxpayers be responsible for paying their tax liability? For 10 years, the State is required to reimburse the counties (with our money). No private, out-of-state companies in the business of transporting waste and using our state as a dumping ground, should benefit from tax exemptions.

We ask for a DO PASS on SB 2320.

NDEPA
NORTH DAKOTA ETHANOL PRODUCERS ASSOCIATION

Testimony of Ryan Carter, Chief Operating Officer of Tharaldson Ethanol

North Dakota Ethanol Producers Association

Opposition of SB 2320

January 29, 2025

Chairman Weber and members of the Senate Finance and Taxation committee,

I am Ryan Carter, Chief Operating Officer of Tharaldson Ethanol in Casselton, ND. Our facility is the ninth largest ethanol manufacturing facility in the United States and produces a high-octane, clean burning fuel that reduces our nation's dependence on foreign oil, while utilizing our locally grown, renewable agricultural resources. In total our plant produces 175 million gallons of ethanol every year.

I am also the vice president of the North Dakota Ethanol Producers Association (NDEPA), which represents North Dakota's six ethanol plants, industry stakeholders and associated businesses. On behalf of NDEPA, I am here to oppose SB 2320, which repeals the property tax exemption for CO2 pipelines and associated equipment.

North Dakota's ethanol industry contributes nearly $1.7 billion annually to the state's economy, supporting thousands of jobs and ethanol production capacity stands at 550 million gallons per year, over fifty percent more than what it was a decade ago. The industry is committed to decarbonizing to remain competitive in the global push for low-carbon fuels. Accessing low-carbon fuel markets via carbon capture, utilization and storage (CCUS) at ethanol plants is critical to our future. A key component of building and strengthening these markets, as well as developing a robust sustainable aviation fuel (SAF) industry, the ability to capture and transport CO2 to geology that can safely and permanently store it.

North Dakota has positioned itself as a national leader in CCUS through 15 years of significant investment in research and development, creating a stable and thoughtful legal, tax and regulatory framework. This includes property tax exemptions and incentives designed to encourage private

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investment in CO2 capture and storage. This forward thinking approach has resulted in groundbreaking achievements like the approval of the first Class VI injection well by state regulators under EPA primacy.

Ethanol plants in North Dakota currently produce 2.4 million tons of CO2 annually, and CCUS has become a cornerstone of the industry's future. For example:

- **Red Trail Energy in Richardton** has been successfully capturing and storing its CO2 for over two years.
- **Harvestone Low Carbon Partners Blue Flint plant** has been successfully capturing and storing its CO2 for a year.
- **Tharaldson Ethanol** is part of the Summit Carbon Solutions pipeline, which will connect various Midwest ethanol plants to central North Dakota for CO2 storage.

Each of these projects represents years of effort, significant investment, and a shared commitment to advancing low-carbon energy solutions. However, SB 2320 would repeal an essential component of this framework – the property tax exemption for CO2 pipelines and associated equipment. This change threatens to discourage critical infrastructure investments, such as pipelines necessary for CO2 transport and storage.

Pulling the carpet out from under the tax policy on the cusp of a CO2 industry that benefits the ethanol and agriculture industry undermines the confidence of private investors and jeopardizes the ability of North Dakota's ethanol industry to decarbonize, access low-carbon fuel markets, and remain competitive. Without these incentives, the state risks losing its leadership position in carbon capture innovation, along with the economic benefits these projects bring to local communities, including jobs, tax revenue and agricultural stability.

The legislature's long-term vision and bipartisan commitment to CCUS has made North Dakota a model for innovation and economic growth. Repealing this exemption now, as the industry makes enormous investments for the benefit of the state and would undermine that legacy, and the opportunities it supports.

NDEPA strongly urges the committee to recommend a "Do Not Pass" on SB 2320 and continue supporting the policies and incentives that have made North Dakota a leader in carbon capture and storage. Thank you for your time and consideration.

Lignite Energy Council
LEADING THROUGH ADVOCACY AND INNOVATION

January 29, 2025

Chairman Weber and members of the Senate Finance and Tax Committee,

I am submitting this written testimony in opposition to Senate Bill 2320 on behalf of the Lignite Energy Council. This bill poses significant risks to North Dakota's emerging carbon economy by discouraging investment in critical CO_2 pipeline infrastructure. The current 10-year property tax exemption plays a vital role in attracting developers to our state for these capital-intensive projects, which are essential for enhanced oil recovery (EOR) in the Bakken and secure geologic storage.

Future CO_2 pipelines that transport carbon dioxide from coal plants to the Bakken oil fields will be essential for supporting North Dakota's tax revenue from oil production. Enhanced oil recovery, driven by these pipelines, allows us to maximize the value of our state's oil resources while simultaneously creating opportunities for coal plants to produce CO_2 as a marketable commodity for that production to occur. This dual benefit strengthens both the coal and oil industries, ensuring long-term economic growth and energy leadership for our state.

Removing or limiting the tax exemption would create uncertainty, driving investment away from North Dakota to other states. Additionally, while the exemption provides temporary relief during the early years of these projects, it results in significant long-term property tax revenue for local communities once the exemption period ends.

The exemption supports economic growth, innovation, and North Dakota's leadership in energy development. Senate Bill 2320 would jeopardize these benefits, hinder progress, and send a discouraging signal to investors. For these reasons, I respectfully urge the Senate Finance and Tax Committee to oppose this bill with a Do Not Pass recommendation.

Thank you for your consideration,

Jonathan Fortner
VP of Government Relations
Lignite Energy Council

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Summit Carbon Solutions Testimony on Senate Bill 2320
January 29, 2025, 9:30 A.M.
Senate Finance and Tax Committee
Representative Weber, Chairman

Charlie Adams, Agriculture & Stakeholder Relations Manager
Summit Carbon Solutions

Opposition to HB 2320

Thank you, Chairman Weber, and members of the committee. My name is Charlie Adams. I am the Agriculture and Stakeholder Relations Manager for Summit Carbon Solutions (SCS). I am here today to ask for your opposition to SB 2320.

SB 2320 proposes to remove a tax exemption for interstate CO_2 pipelines and therefore negatively changes the business landscape in North Dakota when it comes to the opportunity the state has with the CO_2 economy.

North Dakota is currently business friendly, and I know the legislature takes pride in the state's economic successes as a result. The North Dakota legislature has worked for many years to create a legal, tax, and regulatory framework to lead the world in CO_2 development, including the definition of pore space, the fee structure at the ND Industrial Commission, the long-term accountability for CO_2 storage, exempting CO_2 from sales and use tax, and important investments in research and development. This bill intends to remove specific tax incentives that were put in place through the wisdom of prior legislative action to promote the development of our important industries. The future of agriculture and energy – our two most important industries – depend on stable and predictable CO_2 policies.

The Carbon dioxide pipeline exemption was enacted specifically as an incentive to encourage development of the necessary infrastructure to continue these two most important industries. The proposed change arbitrarily singles out interstate pipelines. The proposed change is targeted at a

Summit Carbon Solutions Testimony on Senate Bill 2320
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Charlie Adams, Agriculture & Stakeholder Relations Manager
Summit Carbon Solutions

Opposition to HB 2320

specific project and intends to remove a specific incentive which was in place. The State of North Dakota enacted this section to encourage pipeline development. It worked. Summit Carbon Solutions has invested hundreds of millions of dollars in North Dakota to strengthen the Ag economy by helping 57 ethanol plants across the Midwest to access new markets for corn ethanol.

SB 2320 sends an unclear message to industry by arbitrarily singling out CO_2 and making developers weary of the business landscape in North Dakota. We respectfully encourage your opposition to this bill.

Thank you. I'm happy to answer any questions.

NORTH DAKOTA PETROLEUM COUNCIL
100 West Broadway, Ste. 200 | P.O. Box 1395 | Bismarck, ND 58501-1395
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Senate Bill 2320

Testimony of Brady Pelton

Senate Finance and Taxation Committee

January 29, 2025

Chairman Weber and members of the Committee, my name is Brady Pelton, vice president of the North Dakota Petroleum Council ("NDPC"). The North Dakota Petroleum Council represents more than 550 companies involved in all aspects of the oil and gas industry, including oil and gas production, refining, pipeline development, transportation, mineral leasing, consulting, legal work, and oilfield service activities in North Dakota, South Dakota, and the Rocky Mountain region. I appear before you today in opposition to Senate Bill 2320.

North Dakota has long been a national leader in energy innovation, with policymakers historically recognizing the importance of maintaining a stable and attractive investment climate. As early as 1991, previous legislatures had the foresight to create a ten-year property tax exemption for carbon dioxide pipelines, understanding that attracting capital investment into critical pipeline infrastructure would ensure long-term energy production, job creation, and economic growth.

The bill before you removes a significant incentive to oil and gas developers by eliminating the property tax exemption for interstate carbon dioxide pipelines and necessary associated equipment used for permanent sequestration or use in enhanced oil recovery ("EOR") of oil and gas.

The recently completed North Dakota CO_2-EOR Financial Analysis, prepared by the Office of the State Tax Commissioner, underscores the immense economic potential of enhanced oil recovery using carbon dioxide. At a time when investment in CO_2 EOR is accelerating and the economic benefits are becoming even more apparent, eliminating this exemption would send a chilling message to investors that North Dakota is retreating from its long-standing pro-business, pro-energy stance.

The study confirms that enhanced oil recovery is a critical tool in maintaining and increasing North Dakota's oil production. It creates a circular economic model, capturing CO_2 from industrial sources and using it to extend the productive life of North Dakota's oil fields. The key economic benefits outlined in the study are billions of dollars in additional oil tax revenue, long-term stability of oil production in the state, and ensuring that North Dakota remains at the forefront of responsible energy production, while also creating synergies between the oil industry and other energy sectors, such as coal and biofuels.

Eliminating the ten-year property tax exemption for interstate CO_2 pipelines would make these projects less economically viable by increasing capital costs and adding financial uncertainty. North Dakota should be attracting investment in CO_2 EOR, not discouraging it.

Simply put, the economic benefits of CO_2-EOR are too great to ignore. Removing an incentive that improves project feasibility will stifle investment, hinder oil recovery, and weaken North Dakota's energy future. Instead of eliminating this exemption, the state should be doing everything possible to attract capital investment and maximize the economic potential of CO_2 EOR.

North Dakota's previous legislatures recognized the long-term economic and energy security benefits of CO_2 pipeline development, using this exemption to attract investment and foster innovation. Repealing it now, when improving oil recovery is more important than ever, risks deterring future investment and undermining North Dakota's leadership in CCUS and enhanced oil recovery.

For these reasons, NDPC strongly opposes this bill, and we urge a **Do Not Pass recommendation** for Senate Bill 2320.

Thank you, and I would be happy to answer any questions.

North Dakota CO_2-EOR Financial Analysis

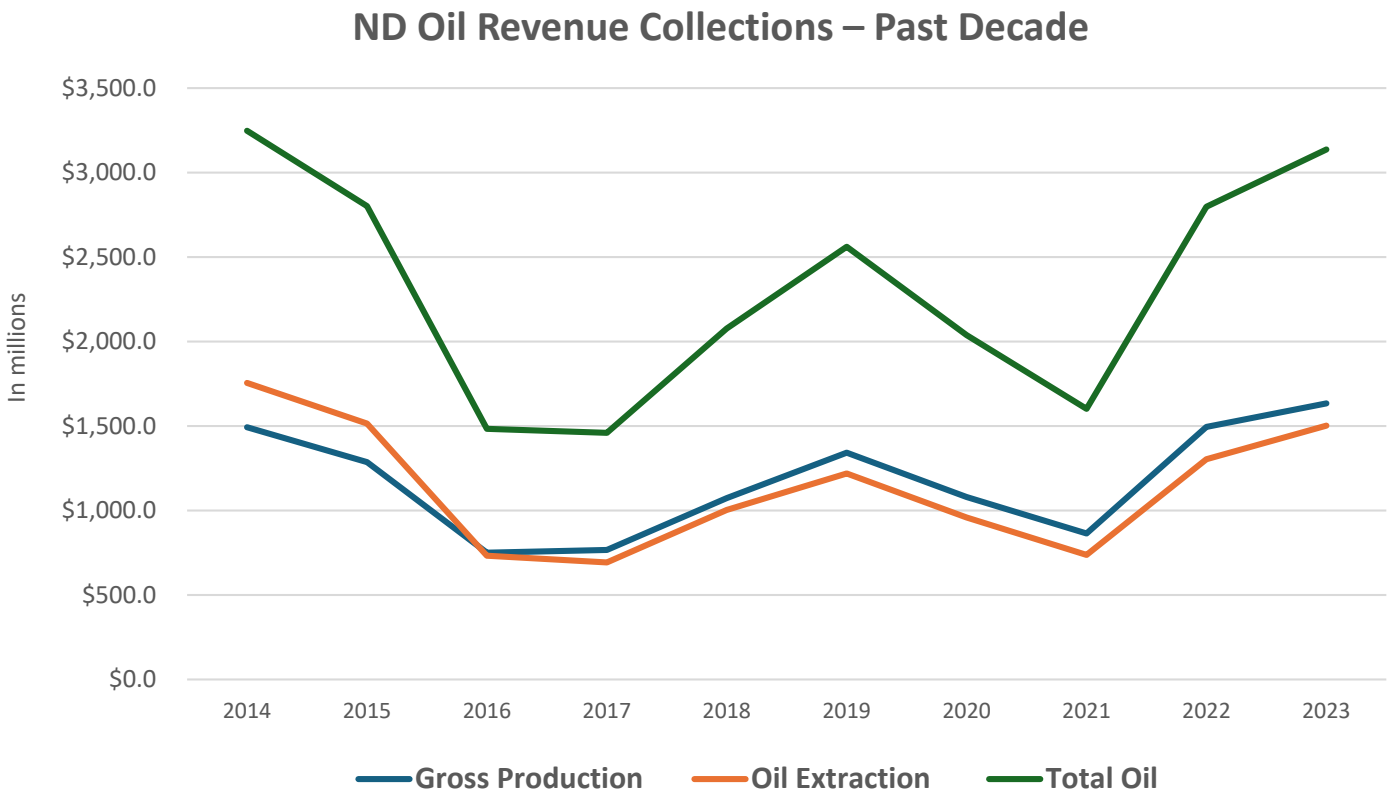
By: Brian Kroshus
Tax Commissioner
January 28, 2025

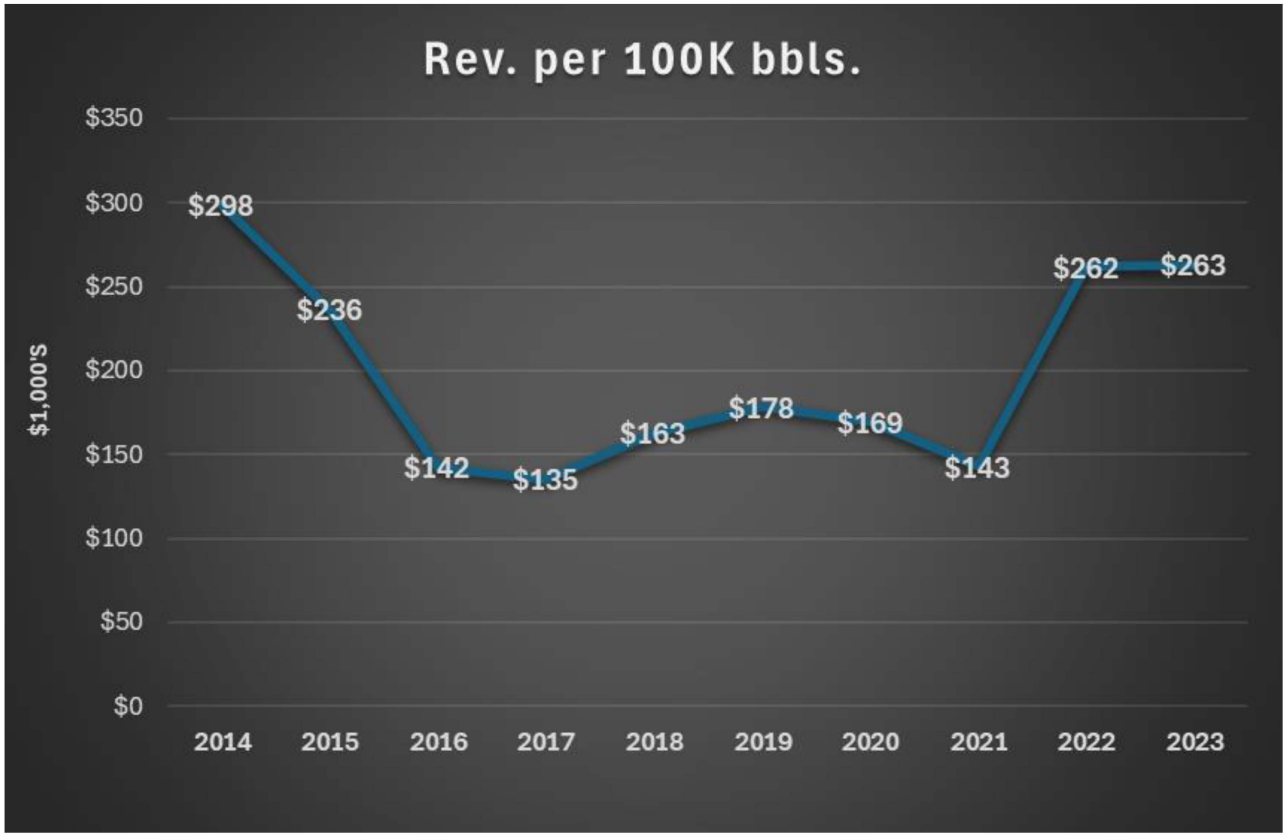
CO_2-EOR in North Dakota

- CO_2-EOR represents a significant opportunity for North Dakota
- The CO_2-EOR landscape is becoming increasingly competitive – being "next to market" is critical
- North Dakota is strategically positioned to implement CO_2-EOR
  - Size and scope of interrelated industry resources
  - Reasonable, fair and consistent regulatory framework
  - Favorable tax policy to incentivize investment
- CO_2-EOR further monetizes existing assets, minimizing surface disturbance
- The U.S. Geological Survey estimates that up to 3.3 billion barrels of undiscovered, technically recoverable oil are in the Bakken Formation
  - This equates to **$33 billion dollars** in additional oil production and extraction tax revenues, alone

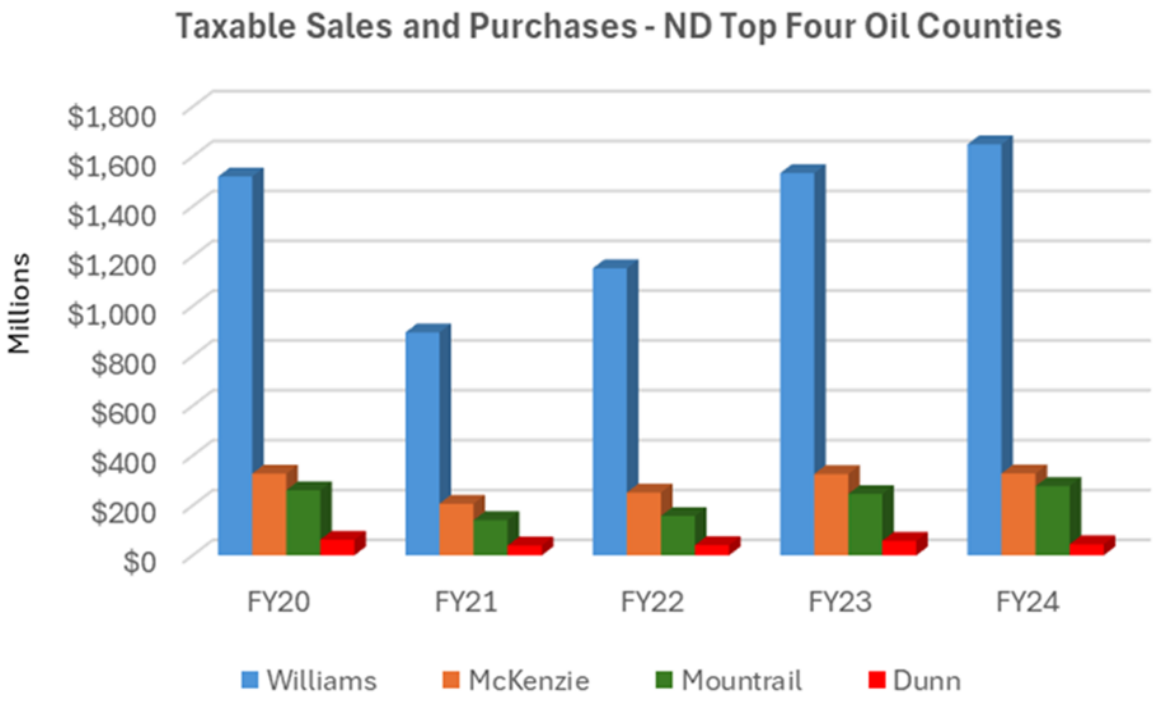
Oil and gas production helps drive the North Dakota economy

- Oil production and extraction tax collections have generated more than **$23 billion in revenue** to the state over the past decade
- Beyond oil production and extraction tax, billions more in both direct and indirect revenue collections from:
  - Sales and use tax
  - Corporate income tax
  - Individual income tax
- Oil-driven, legacy fund contributions and associated earnings, support important state priorities including providing property tax relief to citizens
- Oil and gas activity plays an integral role in directly supporting communities and main street businesses in western North Dakota
- North Dakota oil production plays a vital role in funding state priorities

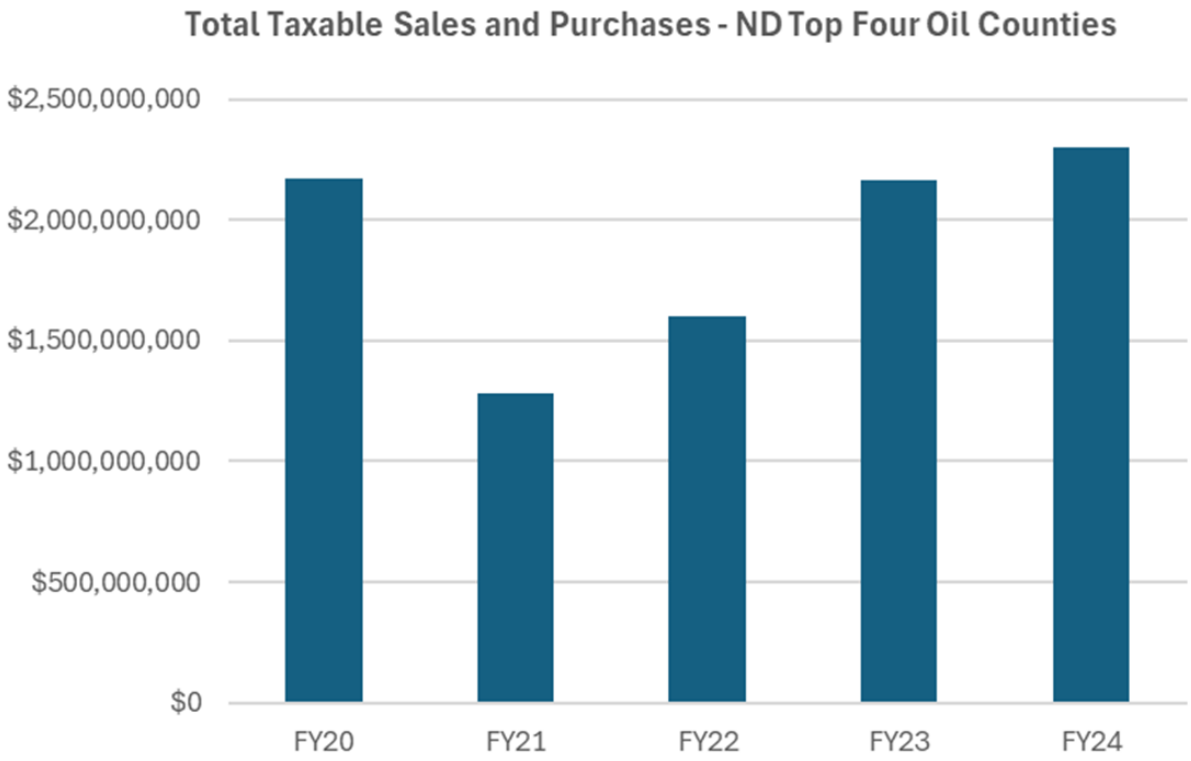

ND Oil Revenue Collections – Past Decade
In millions
$3,500.0
$3,000.0
$2,500.0
$2,000.0
$1,500.0
$1,000.0
$500.0
$0.0
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
Gross Production
Oil Extraction
Total Oil


Rev. per 100K bbls.
$1,000'S
$350
$300
$250
$200
$150
$100
$50
$0
$298
$236
$142
$135
$163
$178
$169
$143
$262
$263
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

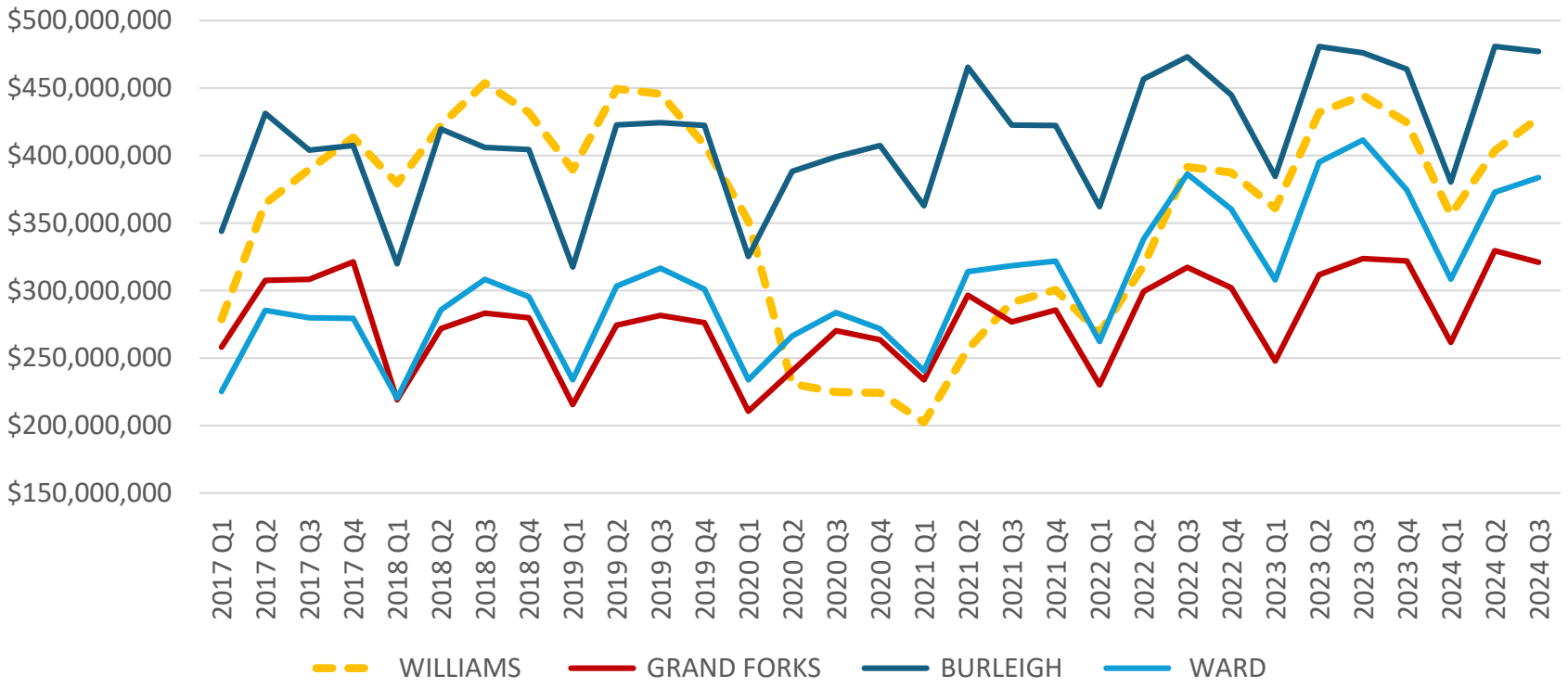
ND Oil Producing Counties "Big Four"



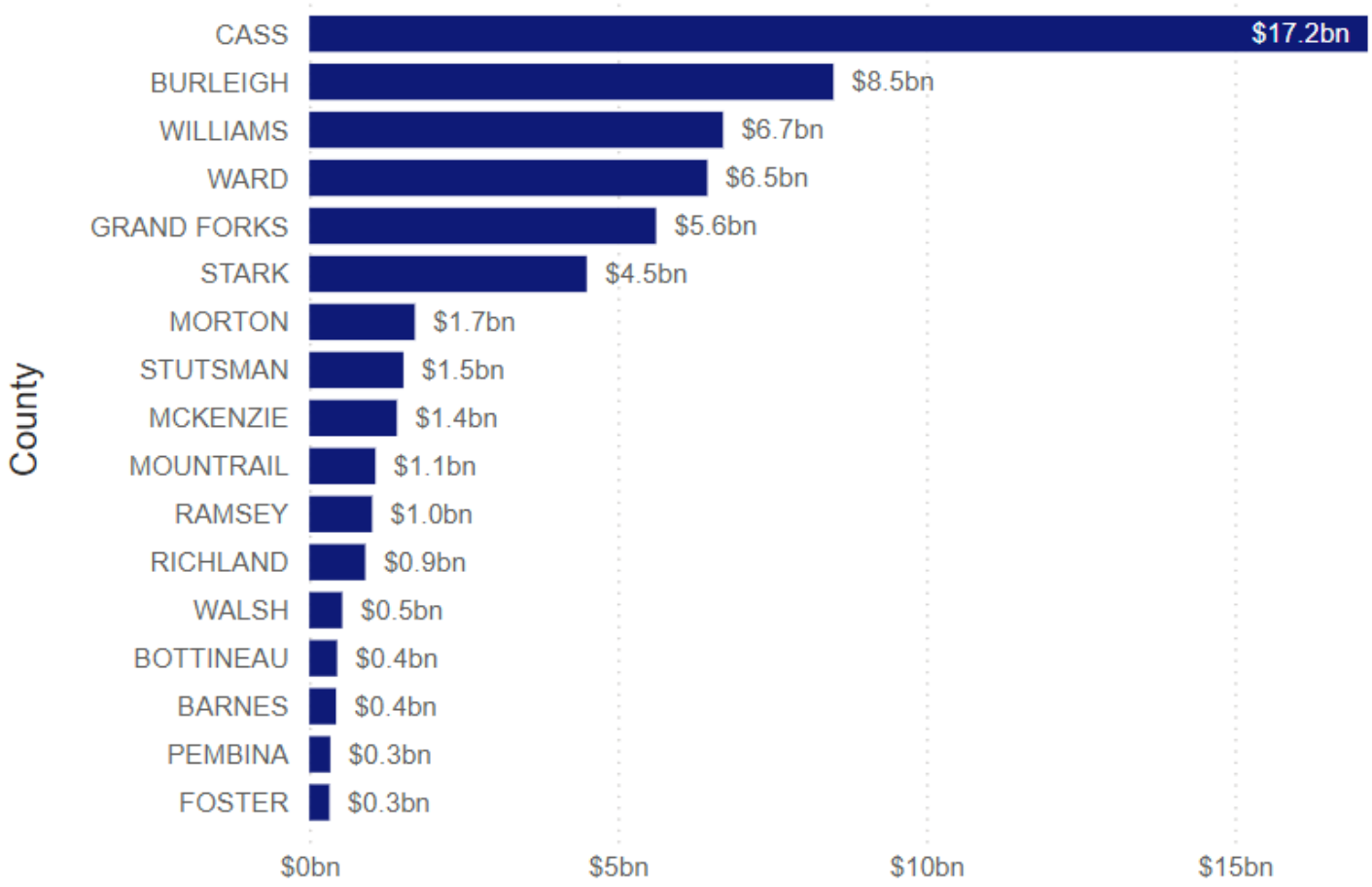
ND Oil Producing Counties "Big Four"



Taxable Sales and Purchases by ND County



Taxable Sales and Purchases by ND County[1]



[1]Taxable Sales and Purchases – past five years, 2020-2024 (Q4, 2019 through Q3, 2024)

Single Well CO_2-EOR– 5-yr. extraction tax exempt[1]

		Total Annual Production bbls.	Legacy Production bbls.	Incremental Production bbls.	Ave. price Bakken Crude	Incremental Production Tax Revenue	Incremental Extraction Tax Revenue	Total Incremental Revenue
2028	yr 1	71,781	9,211	62,570	$80.00	$250,280	$0	$250,280
2029	yr 2	45,192	7,375	37,817	$80.00	$151,268	$0	$151,268
2030	yr 3	33,222	5,905	27,317	$80.00	$109,268	$0	$109,268
2031	yr 4	20,043	4,728	15,315	$80.00	$61,260	$0	$61,260
2032	yr 5	12,911	3,785	9,126	$80.00	$36,504	$0	$36,504
2033	yr 6	8,719	3,030	5,689	$80.00	$22,756	$22,756	$45,512
2034	yr 7	6,016	2,426	3,590	$80.00	$14,360	$14,360	$28,720
2035	yr 8	4,148	1,943	2,205	$80.00	$8,820	$8,820	$17,640
2036	yr 9	3,010	1,555	1,455	$80.00	$5,820	$5,820	$11,640
2037	yr 10	1,732	1,392	340	$80.00	$1,360	$1,360	$2,720
	Total	**206,774**	**41,350**	**165,424**		**$661,696**	**$53,116**	**$714,812**

[1]Based on 10 yr. average price of $80.00

Single Well Revenue Model	Incremental Production Tax Revenue	Incremental Extraction Tax Revenue	Total - Single Well
EOR 10-year model - EIA Pricing	$502,149	$0	$502,149
EOR 10-year model - $80.00 WTI	$661,696	$0	$661,696
EOR 5-year model - EIA Pricing	$502,149	$46,248	$548,396
EOR 5-year model - $80.00 WTI	$661,696	$53,116	$714,812

CO_2-EOR Incremental Revenue Models North Dakota

**As indicated, if every certified, low-producing or stripper well currently identified in North Dakota is targeted for CO_2-EOR, the economic benefit is significantly higher in comparison to the low estimate, even with low-producing wells in the state being exempted from extraction tax for the life of the well under current statute. Conversely, the opportunity cost or potential revenue loss absent CO_2-EOR as demonstrated, equates to billions of dollars in unrealized collections.*

Single Well Revenue Model	Total - 5,744 Wells	Total - 12,515 Wells* (*Stripper Well Count - 7-24)
EOR 10-year model - EIA Pricing	$2,884,341,547	$6,284,389,704
EOR 10-year model - $80.00 WTI	$3,800,781,824	$8,281,125,440
EOR 5-year model - EIA Pricing	$3,149,988,103	$6,863,179,163
EOR 5-year model - $80.00 WTI	$4,105,880,128	$8,945,872,180

CO_2-EOR Incremental Revenue Models North Dakota

**As indicated, if every certified, low-producing or stripper well currently identified in North Dakota is targeted for CO_2-EOR, the economic benefit is significantly higher in comparison to the low estimate, even with low-producing wells in the state being exempted from extraction tax for the life of the well under current statute. Conversely, the opportunity cost or potential revenue loss absent CO_2-EOR as demonstrated, equates to billions of dollars in unrealized collections.*

CO_2-EOR Production Cost Model (single well)

Expense/Savings Centers	Cost per bbl.	Tax savings/bbl.	Tax savings/tonne CO_2	Net Cost/bbl.
CO_2 Transportation [1,2]	$5.00	$0	$0	$5.00
CO_2 price/bbl. ($30/t = 3 bbls.) [2]	$10.00	$0.50	$1.50	$9.50
Royalty payment est. (19% of $80/bbl. Oil)	$15.20	$0	$0	$15.20
Well and surface (taxable) [3]	$17.50	$0.88	$2.63	$16.63
Well and surface (non-taxable)[4]	$7.50	$0	$0	$7.50
Extraction tax savings - $80/bbl.*5%	$0	$4.00	$12.00	($4.00)
Totals	**$55.20**	**$5.38**	**$16.13**	**$49.83**

[1]Primary distribution delivery cost est. = $15/tonne
[2]Per bbl. based on $30/tonne CO2 and 3:1 bbl. oil/tonne CO2
[3]Includes well, distribution infrastructure & production costs
[4]Labor cost

CO_2-EOR Challenges and Opportunities

- 45Q incentive gap currently exists between EOR application and sequestration
  - EOR - $60 per metric tonne
  - Sequestration - $85 per metric tonne
- Closing the incentive gap is critical
- Competitive landscape – other oil producing states are aggressively pursuing mechanisms to incentivize CO_2-EOR within their borders
- Creating new efficiencies through advancements in technology represents a significant return on investment for North Dakota
- Shale plays like the Bakken experience rapid depletion rates
  - CO_2-EOR production revitalizes existing assets (wells) with minimal surface disturbance, within the same footprint
  - Creates greater, long-term assurances for oil producers which in turn, creates greater long-term financial certainty for North Dakota

Final Thoughts

- CO_2-EOR signifies the next chapter in North Dakota energy production
- Opportunity to accentuate existing and create new energy partnerships - increased value proposition
- CO_2-EOR and the race for capital will continue to intensify in what can best be described as a highly competitive landscape
- The ability to attract capital will be influenced by a multitude of factors, including advancements in technology - “cracking the code”
- Technology – tremendous progress to date, but more resources are needed to support continued advancement
- North Dakota is recognized as a global leader in shale oil production and can be in CO_2-EOR, as well

In closing, CO_2-EOR, represents a significant and exciting economic opportunity current and future generations can benefit from.

North Dakota CO_2-EOR Financial Analysis

November 15, 2024

Summary

The following document explores and evaluates various financial considerations related to CO2-EOR in North Dakota, potential synergies across multiple energy-sectors, and the influence policy will have on future CO2-based tertiary efforts in the state.

The U.S. Geological Survey estimates that up to 3.3 billion barrels of undiscovered, technically recoverable oil are in the Bakken formation, with much of that oil in North Dakota. CO2-EOR can play a central role in the recovery of these untapped resources.

By: Brian Kroshus
North Dakota Tax Commissioner

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Introduction

Enhanced oil recovery (EOR) development in North Dakota utilizing CO_2, particularly from CO_2 feedstocks sourced from in-state coal conversion facilities, biofuel plants and synfuels production, represents a significant economic opportunity.

Supporting and further enhancing an already favorable economic and regulatory environment to encourage CO_2-EOR versus CO_2 sequestration and permanent, geologic storage, will require evaluating both existing and new policy offerings to mitigate the current $25 differential between two of the three primary 45Q tax credit incentives currently available.

These incentives and economics on the surface favor sequestration over enhanced oil recovery. However, state policy from both a tax and regulatory perspective at least in part, holds the potential to offset the monetary gap and positively influence adoption of CO_2-EOR within our borders, promoting new, long-term capital investment in North Dakota.

From an industry perspective, beyond production-related economics, CO_2-EOR can play a key role in addressing and meeting corporate sustainability objectives, serving as a valuable extension of existing ecocentric practices.

Both internal and external factors will invariably influence CO_2 usage patterns. They include commodity pricing, other investment and capital deployment opportunities, and the regulatory and tax policy environment at the federal, state and local levels.

Further, recognizing the importance of fostering an environment that supports effective public-private partnerships and working collaboratively with tribal interests, is essential.

Arguably, CO_2-EOR in conjunction with existing energy resources in the state signifies the next chapter of oil production in North Dakota. For industry and public sector alike, there exists the potential to further monetize current oil, lignite, and biofuel energy infrastructure.

As North Dakota evaluates a path forward, it is important to recognize other oil and gas producing states including Texas, Oklahoma, New Mexico, and in proximity to North Dakota, Wyoming, are also actively positioning and competing to attract the same CO_2 supplies and capital investment dollars necessary to advance CO_2-EOR projects within their respective geographies.

To counter that reality, new incentive opportunities from a tax policy perspective to complement existing mechanisms and encourage CO_2-EOR and supporting infrastructure development, may be required to attract in-state capital investment for conventional and unconventional oil production alike, where CO_2-EOR is deemed economically viable and applied.

Further, supporting the development of critical CO_2 transportation infrastructure necessary to move feedstock from point-of-capture to application in North Dakota oil fields, will also play an important role in advancing CO_2-EOR efforts in the state.

The ability to establish greater CO_2 supply assurances necessary for industry to justify capital investment within and outside the Bakken, will be an essential element in the level of success experienced. Potential in-state supplies of CO_2 are optimal in the sense they support multiple industrial energy segments including oil, lignite, and agriculture, each playing an important role in the state's economy.

In essence, state regulatory and tax policy as previously mentioned will play a key role in advancing CO_2-EOR in what can best be described as a rapidly developing and highly competitive landscape.

It is important to emphasis that the benefits of CO_2-EOR are not exclusive to the production of oil. North Dakota's fleet of coal-fired plants in proximity to the Bakken and lone synfuels plant, Dakota Gasification, are also strategically positioned to benefit from the application of CO_2-EOR as suppliers and sellers of CO_2. That in turn supports the advancement of carbon capture technology and ultimately, implementation of CO_2-EOR.

North Dakota, with its diverse energy resource portfolio, is arguably more strategically positioned to implement CO_2-EOR in comparison to other oil-producing states, again in large part due to proximity and volume of interrelated energy resources.

While CO_2 transport challenges from an infrastructure placement standpoint currently exist, the ability to move feedstock from point-of-capture to actual use, while not entirely removed, is arguably less pronounced due to the relatively short distance between in-state supplies of CO_2 and oil field application.

North Dakota is in a unique position in that it also has very favorable geology for the sequestration and permanent storage of CO_2. Still, an equally compelling if not stronger argument to support CO_2-EOR can be made, the latter providing a broader and in effect, more favorable long-term economic platform to support incremental production in the Bakken. That in turn provides an attractive return on investment not only in the state, but nation from an energy production and security perspective.

Ultimately, the potential to sustain and increase oil production in North Dakota and subsequently, support and bolster associated revenue collections resulting from carbon capture and EOR, is significant. However, for that to become a reality, it is essential that the economic potential of CO_2-EOR exceeds sequestration.

Conversely, the opportunity cost and loss in potential revenue if sequestration instead displaces CO_2-EOR, particularly in oil-producing states like North Dakota, cannot be overlooked as the following analysis explains.

CO_2 EOR Incentives and Infrastructure by State

As previously noted, effectively competing for investment dollars targeted for carbon capture and transportation, whether from existing industry reserves or venture capital groups, will be paramount in determining the level of success experienced in North Dakota.

In many respects, North Dakota already heavily incentivizes utilizing CO_2 for EOR development. Numerous tax incentives currently exist to support CO_2-EOR, including as specified in NDCC § 57-51.1-02:

- Incremental production from a qualifying tertiary recovery project is exempt for a period of 10 years.
- Incremental production from a qualifying tertiary recovery project located outside the Bakken or Three Forks formations and that injects more than fifty percent carbon dioxide produced from coal, is exempt for twenty years from the date incremental production begins.
- Incremental production from a qualifying tertiary recovery project located within the Bakken or Three Forks formations and that injects more than fifty percent carbon dioxide produced from coal, is exempt for ten years from the date incremental production begins.

Beyond CO_2-EOR incentives, North Dakota exempts low-producing or marginal wells from the oil extraction tax. These wells, often referred to as "stripper wells," can qualify for tax-reduction incentives based on production and location criteria and then be exempt from the state's oil extraction tax for the remaining life of the well, once designated as a stripper well by the North Dakota Industrial Commission. While not necessarily a direct CO_2-EOR incentive, the net effect is still the same through elimination of the extraction tax obligation.

Additionally in North Dakota, the oil extraction tax rate for restimulated wells, identified as previously completed and producing oil and subsequently treated with an application of fluid under pressure for the purpose of creating additional fractures in a targeted geological formation outside the Bakken and Three Forks formations, is reduced from 5% to 2%,

effective for the first 75,000 barrels (bbl) or 18 months, whichever occurs first, after restimulation is complete.

To encourage carbon capture projects and development of infrastructure to support EOR, state policy provides a sales and use tax exemption for materials used in compressing, gathering, collecting, storing, transporting, or injecting carbon dioxide for secure geological storage or use in enhanced recovery of oil or natural gas (NDCC § 57-39.2-04.14) The incentive is broad-based in nature, applying not only to primary pipeline transportation projects but oilfield distribution networks as well.

For projects to be exempt under NDCC § 57-39.2-04.14, tangible personal property must be incorporated into a system used to compress, gather, collect, store, transport, or inject carbon dioxide for secure geologic storage or use in enhanced recovery of oil or natural gas.

Tangible personal property to replace an existing system to compress, gather, collect, store, transport, or inject carbon dioxide for secure geologic storage or use in enhanced recovery of oil or natural gas qualifies as sales tax exempt if the replacement creates an expansion of the original system.

Additionally, a CO_2 pipeline project exemption as specified in NDCC § 57-06-17.1, exempts property, not including land, from taxation during construction and for the first 10 full taxable years following initial operation. Associated equipment necessary for the transportation or storage of CO_2 for secure geological storage or for use in enhanced recovery of oil or natural gas, is also exempt.

Finally, under NDCC § 57-39.2-04.49, Gross receipts from sales of carbon dioxide used for enhanced recovery of oil or natural gas, or secure geologic storage, are exempt from sales tax.

Similarly, other oil-producing states in the U.S. are also aggressively positioning and engaging in policy discussions to incentivize CO_2-EOR within their borders and capture market share.

Virtually all oil producing states in the U.S. currently have mechanisms in place to address low-price cycles for crude oil, similar to previous North Dakota statute which established a low-price trigger and subsequent suspension of the oil extraction tax during market downturns to protect oil producers in the state. While the low-price trigger protection was repealed by North Dakota lawmakers in exchange for a permanent reduction in the extraction tax rate, from 6% to 5%, that same concept is still applicable in other states.

In Texas, the Texas Railroad Commission, the counterpart to North Dakota Public Service Commission, has the authority to incentivize CO_2-EOR projects. Under their current incentive, the producer of oil recovered through a CO_2-EOR project that qualifies, is entitled to an additional 50% reduction in the oil tax rate in Texas if in the recovery of the oil the EOR project uses CO_2 that:

- Is captured from an anthropogenic source in this state;
- Would otherwise be released into the atmosphere as industrial emissions;
- Is measurable at the source of capture; and
- Is sequestered in one or more geological formations as part of the enhanced oil recovery process

Other states, like Wyoming, continue to actively pursue new legislation to support CO_2-EOR development, to effectively compete for regional supplies of CO_2.

In some cases, CO_2 transportation infrastructure designated for CO_2-EOR is already operational, including the Kinder Morgan Cortez Pipeline, delivering approximately 800 million cubic feet or 22,654 metric tonnes of naturally occurring CO_2 daily from the McElmo Dome site in southwest Colorado to oil fields in the Permian Basin in New Mexico and West Texas. Incremental oil production attributed to that project is approximately 50,000 barrels per day (bbl/d).

Active CO_2-EOR projects in North Dakota include the Denbury CO_2 pipeline, stretching 105 miles from Wyoming to Southeast Montana and Southwest North Dakota, targeting the Cedar Creek Anticline.

Additionally, Dakota Gasification Company, a subsidiary of Basin Electric Power Cooperative, has been transporting CO_2 since October 2000 from the Great Plains Synfuels Plant through a 205-mile pipeline operated by Souris Valley Pipeline, Ltd. to the Weyburn-Midale oil fields in Canada, currently shipping up to 155 million cubic feet, or 4,389 tonnes of CO_2 daily for EOR.

In 2022, Red Trail Energy located outside of Richardton began operating North Dakota's first CO_2 storage well in June of 2022. Preceding that effort, test wells were drilled in Mercer and Oliver counties located in North Dakota, in 2018 to study the geologic potential for CO_2 sequestration sourced from North Dakota coal-conversion facilities.

While CO_2-EOR production accounts for only a small fraction of oil currently produced in the U.S. and even globally, new CO_2-EOR policy and projects as previously mentioned continue to be actively explored both in North Dakota and throughout the U.S.

While advancements in carbon capture technology and associated capital investment are rightfully at the forefront of the discussion, the ability to secure, transport and distribute economically viable volumes of CO_2 necessary to support large-scale CO_2-EOR is equally important, particularly from a North Dakota perspective given the opportunity to link multiple energy industry segments to one another.

In summary, North Dakota energy resources and current policy, will serve as a benchmark for future discussions supporting the advancement and application of CO_2-EOR in the state.

Economic Analysis – Current Oil and Gas Collections

Economic estimates are often constructed from a direct or linear, incremental gains' perspective, with limited focus placed on opportunity cost. In evaluating the application and potential economic benefit of CO_2-EOR in North Dakota, it not only has the potential to provide incremental benefits to the state as referenced, but equally important, help preserve existing production levels and associated revenue streams.

That latter aspect or preservation will be particularly evident during periods of oil price declines, whether cyclical or due to unanticipated market conditions, unfavorable supply and demand dynamics, or consequential geopolitical events.

The North Dakota Legislature, recognizing the finite nature of oil resources in the state, has established various reserve funds, most notably the Legacy Fund, intended to benefit future generations by protecting revenue streams should production levels drop below the current range.

Until that time, however, oil production and associated revenue collections in the state can be better optimized through strategic initiatives intended to improve recovery rates in western North Dakota, including CO_2-EOR.

As an energy producing state, North Dakota relies heavily on oil-related revenue to fund state and local government both within and beyond oil producing counties. Oil production and extraction tax collections alone are substantial, most recently exceeding $3 billion in FY2023 and FY2024 respectively, as illustrated in Figure 1. Beyond those collections, associated economic activity plays a vital role in supporting the state's economy, covered later in this document.

As shown on the following graph, oil revenue collections in aggregate over just the past decade, equate to $23 billion.

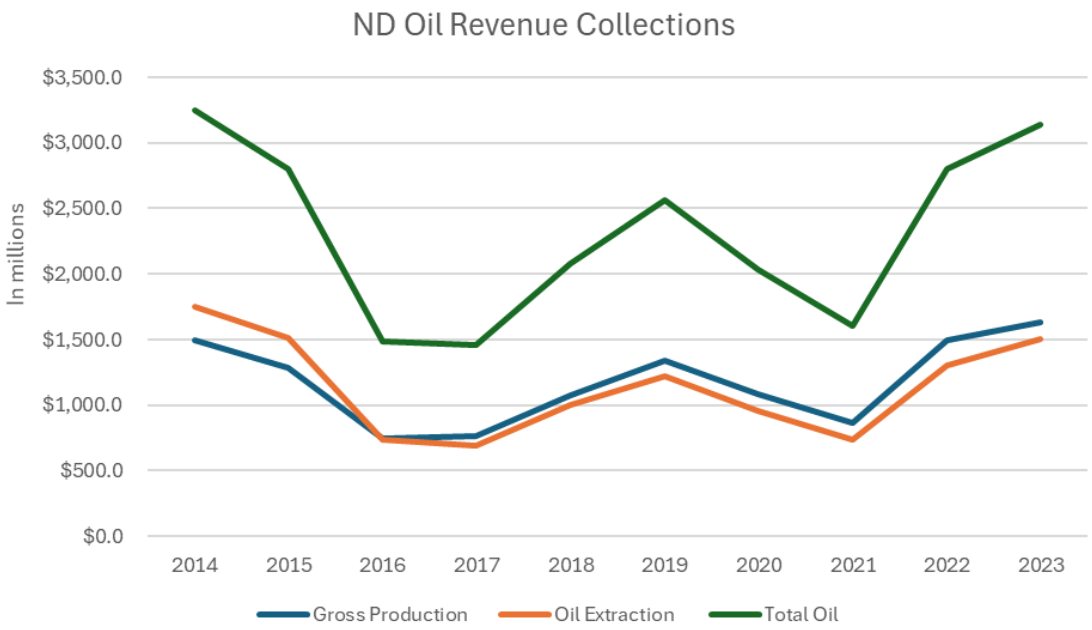

Figure 1

Figure 1 underscores the financial significance associated with oil production in North Dakota and illustrates the impact cyclical pricing, particularly price spikes and declines at various times (Figure 2), predictably has on revenue collections. This is most pronounced during the 2016-2017, 2020 and 2022 timeframes.

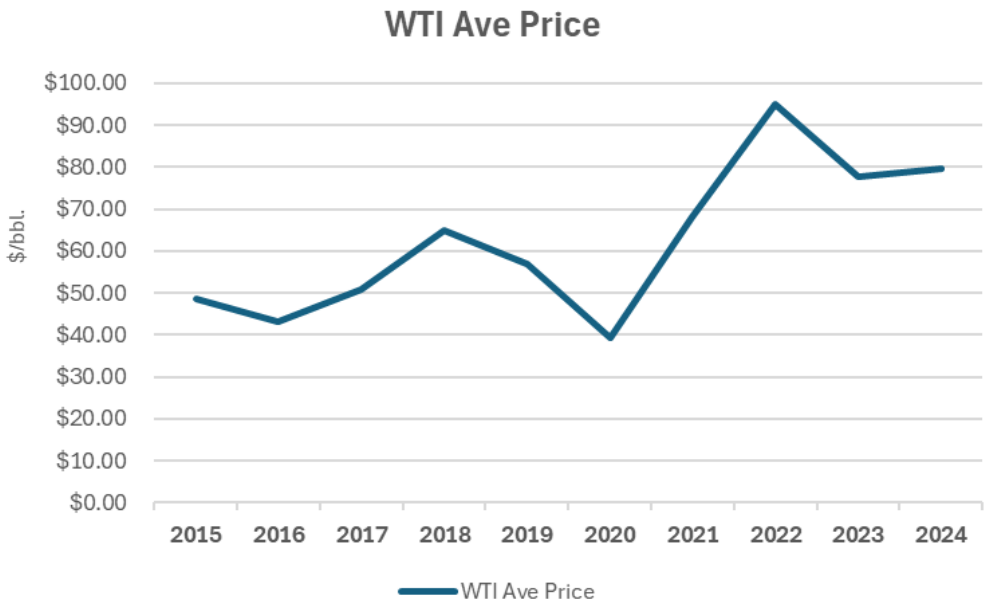

Figure 2

As noted, CO_2-EOR efforts have the potential to increase revenue collections, but equally importantly, preserve existing revenue streams by mitigating market-influenced price declines that inhibit drilling activity and subsequently, negatively impact production.

Historically, the ability to increase or maintain oil production levels in North Dakota has predominately correlated to drilling activity and the introduction of new wells. Absent that, output predictably declines due to high depletion rates experienced by wells drilled in shale plays like the Bakken, often exceeding 50% during the first year of production and falling below 10% of initial production, within 5 to 7 years.

Figure 3 illustrates shifts in economic value or revenue collected from a production and extraction tax standpoint, between 2014 and 2023, for every 100,000 bbl produced. The economic impact shown underscores the importance of maintaining production, particularly when oil prices are depressed over prolonged periods of time.

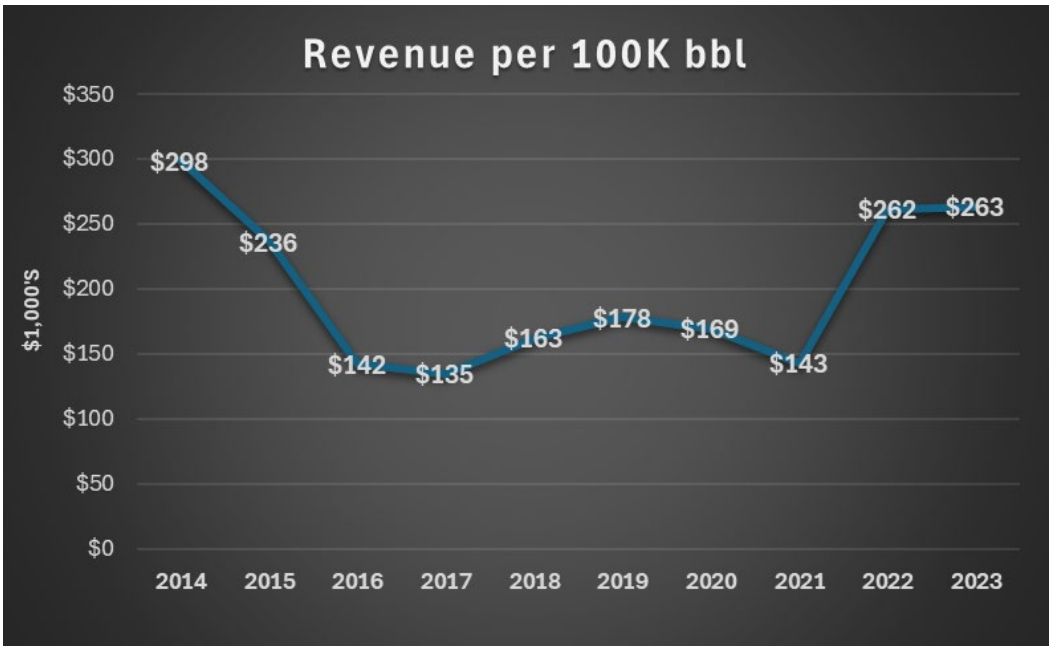

Figure 3

CO_2-EOR Fiscal Impact

Future commodity pricing combined with input costs including the cost of CO_2 itself, will significantly influence the degree of opportunity producers have to pursue CO_2-EOR. Unlocking additional crude oil from existing wells in inventory, reflected in the CO_2-EOR single well revenue models shown in Tables 2-5 to follow, demonstrate the revenue potential to the state, primarily from oil production tax collected on incremental barrels produced, based on different incentive scenarios including:

- 5-year extraction tax exempt models
- 10-year extraction tax exempt models

Models are formulated using the same, single well production estimates over the first 10 years following initiation of CO_2-EOR. Twenty-year and low producing, or stripper well models, are not calculated due to relatively immaterial, residual oil output and respective collections beyond the 10-year mark, resulting from rapid depletion rates associated with and prevalent in shale plays.

The following calculations (Tables 2-5) are based on oil pricing estimates over both 5-year and 10-year timeframes, using the U.S. Energy Information Administration (EIA) price outlook for Brent Crude as of June 2024 (Table 1) for the years 2028-2037 and for comparative purposes, applying an average net price of $80.00/bbl for Bakken crude.

U.S EIA Price Estimates/bbl – June 2024

Year range	Brent crude price projections (ave.)*	WTI after discount to Brent (3%)	Bakken discount to WTI ($3.75-$2.65)	Net price to Bakken producers
2025-2029	$61.00	$59.17	$3.20	$55.97
2030-2034	$73.00	$70.81	$3.20	$67.61
2035-2039	$80.00	$77.60	$3.20	$74.40
2040-2044	$87.00	$84.39	$3.20	$81.19
2045-2049	$91.00	$88.27	$3.20	$85.07
2050	$95.00	$92.15	$3.20	$88.95

Table 1

Net prices reflected in Table 1 and received by Bakken producers are extrapolated from EIA Brent price projections, applying a 3% discount to approximate the price for West Texas Intermediate and assuming an additional average discount rate of $3.20/bbl for Bakken crude, to determine net price.

Single Well CO_2-EOR – 10 yr. extraction tax exempt

Based on EIA 2028-2037 Price Estimates (Table 1)

	Total Annual Production bbl	Legacy Production bbl	Incremental Production bbl	Ave. price Bakken Crude	Incremental Production Tax Revenue	Incremental Extraction Tax Revenue	Total Incremental Revenue
yr 1	71,781	9,211	62,570	$55.97	$175,102	$0	$175,102
yr 2	45,192	7,375	37,817	$55.97	$105,831	$0	$105,831
yr 3	33,222	5,905	27,317	$67.61	$92,345	$0	$92,345
yr 4	20,043	4,728	15,315	$67.61	$51,772	$0	$51,772
yr 5	12,911	3,785	9,126	$67.61	$30,850	$0	$30,850
yr 6	8,719	3,030	5,689	$67.61	$19,232	$0	$19,232
yr 7	6,016	2,426	3,590	$67.61	$12,136	$0	$12,136
yr 8	4,148	1,943	2,205	$74.40	$8,203	$0	$8,203
yr 9	3,010	1,555	1,455	$74.40	$5,413	$0	$5,413
yr 10	1,732	1,392	340	$74.40	$1,265	$0	$1,265
Total	**206,774**	**41,350**	**165,424**		**$502,149**	**$0**	**$502,149**

Table 2

Single Well CO_2-EOR - 10-yr. extraction tax exempt

Based on 10 yr. average price of $80

	Legacy Production bbl	Incremental Production bbl	Total Annual Production bbl	Ave. price Bakken Crude	Incremental Production Tax Revenue	Incremental Extraction Tax Revenue	Total Incremental Revenue
yr 1	9,211	62,570	71,781	$80.00	$250,280	$0	$250,280
yr 2	7,375	37,817	45,192	$80.00	$151,268	$0	$151,268
yr 3	5,905	27,317	33,222	$80.00	$109,268	$0	$109,268
yr 4	4,728	15,315	20,043	$80.00	$61,260	$0	$61,260
yr 5	3,785	9,126	12,911	$80.00	$36,504	$0	$36,504
yr 6	3,030	5,689	8,719	$80.00	$22,756	$0	$22,756
yr 7	2,426	3,590	6,016	$80.00	$14,360	$0	$14,360
yr 8	1,943	2,205	4,148	$80.00	$8,820	$0	$8,820
yr 9	1,555	1,455	3,010	$80.00	$5,820	$0	$5,820
yr 10	1,392	340	1,732	$80.00	$1,360	$0	$1,360
Total	**41,350**	**165,424**	**206,774**		**$661,696**	**$0**	**$661,696**

Table 3

Single Well – CO_2-EOR – 5 yr. extraction tax exempt

Based on EIA 2028-2037 Price Estimates (Table 1)

	Total Annual Production bbl	Legacy Production bbl	Incremental Production bbl	Ave. price Bakken Crude	Incremental Production Tax Revenue	Incremental Extraction Tax Revenue	Total Incremental Revenue
yr 1	71,781	9,211	62,570	$55.97	$175,102	$0	$175,102
yr 2	45,192	7,375	37,817	$55.97	$105,831	$0	$105,831
yr 3	33,222	5,905	27,317	$67.61	$92,345	$0	$92,345
yr 4	20,043	4,728	15,315	$67.61	$51,772	$0	$51,772
yr 5	12,911	3,785	9,126	$67.61	$30,850	$0	$30,850
yr 6	8,719	3,030	5,689	$67.61	$19,232	$19,232	$38,463
yr 7	6,016	2,426	3,590	$67.61	$12,136	$12,136	$24,272
yr 8	4,148	1,943	2,205	$74.40	$8,203	$8,203	$16,405
yr 9	3,010	1,555	1,455	$74.40	$5,413	$5,413	$10,825
yr 10	1,732	1,392	340	$74.40	$1,265	$1,265	$2,530
Total	**206,774**	**41,350**	**165,424**		**$502,149**	**$46,248**	**$548,396**

Table 4

Single Well CO_2-EOR– 5-yr. extraction tax exempt

Based on 10 yr. average price of $80.00

	Total Annual Production bbl	Legacy Production bbl	Incremental Production bbl	Ave. price Bakken Crude	Incremental Production Tax Revenue	Incremental Extraction Tax Revenue	Total Incremental Revenue
yr 1	71,781	9,211	62,570	$80.00	$250,280	$0	$250,280
yr 2	45,192	7,375	37,817	$80.00	$151,268	$0	$151,268
yr 3	33,222	5,905	27,317	$80.00	$109,268	$0	$109,268
yr 4	20,043	4,728	15,315	$80.00	$61,260	$0	$61,260
yr 5	12,911	3,785	9,126	$80.00	$36,504	$0	$36,504
yr 6	8,719	3,030	5,689	$80.00	$22,756	$22,756	$45,512
yr 7	6,016	2,426	3,590	$80.00	$14,360	$14,360	$28,720
yr 8	4,148	1,943	2,205	$80.00	$8,820	$8,820	$17,640
yr 9	3,010	1,555	1,455	$80.00	$5,820	$5,820	$11,640
yr 10	1,732	1,392	340	$80.00	$1,360	$1,360	$2,720
Total	**206,774**	**41,350**	**165,424**		**$661,696**	**$53,116**	**$714,812**

Table 5

Using the single well production model provided by the Energy & Environmental Research Center (EERC) North Dakota 20-year CO_2-EOR Forecast, incremental tax revenues generated on a per well basis range from $502,149 to $714,812 (Table 6) over the initial 10-year period of production following commencement of CO_2-EOR, depending on various pricing scenarios for crude oil.

Single Well CO_2-EOR - Revenue Model Comparisons

Single Well Revenue Model	Incremental Production Tax Revenue	Incremental Extraction Tax Revenue	Total - Single Well
EOR 10-year model - EIA Pricing	$502,149	$0	$502,149
EOR 10-year model - $80.00 WTI	$661,696	$0	$661,696
EOR 5-year model - EIA Pricing	$502,149	$46,248	$548,396
EOR 5-year model - $80.00 WTI	$661,696	$53,116	$714,812

Table 6

Applying the single well model to the estimated 271 grids and 5,744 associated EOR wells targeted in the EERC study, under the high-case scenario and current stripper well count in North Dakota as of July 2024 (12,515), in conjunction with EIA price estimates for Brent crude as illustrated in Tables 2 and 4 and average price of $80/bbl (Tables 3 and 5), generates approximately $2.9 to $9 billion in incremental revenue (Table 7) to the state, alone.

It's worth noting that high-end estimates exceed the available supply of CO_2 required to achieve production estimates, but nonetheless demonstrate the economic potential of CO_2-EOR from an incremental oil production and associated tax revenue perspective.

Overall CO_2-EOR Incremental Revenue Model - North Dakota

Single Well Revenue Model	Total - 5,744 Wells	Total - 12,515 Wells* (*Stripper Well Count - 7-24)
EOR 10-year model - EIA Pricing	$2,884,341,547	$6,284,389,704
EOR 10-year model - $80.00 WTI	$3,800,781,824	$8,281,125,440
EOR 5-year model - EIA Pricing	$3,149,988,103	$6,863,179,163
EOR 5-year model - $80.00 WTI	$4,105,880,128	$8,945,872,180

Table 7

As indicated, if every certified, low-producing or stripper well currently identified in North Dakota is targeted for CO_2-EOR, the economic benefit is significantly higher in comparison to the low estimate, even with low-producing wells in the state being exempted from extraction tax for the life of the well under current statute. Conversely, the opportunity cost or potential revenue loss absent CO_2-EOR as demonstrated, equates to billions of dollars in unrealized collections.

Associated Fiscal Impact – Oil Producing Counties in North Dakota

Beyond direct benefits resulting from incremental oil production, associated economic impacts for CO_2-EOR extend exponentially beyond revenues generated from production and oil extraction tax levied on oil produced in North Dakota.

Target energy sectors including oil and coal, support state and local economies through employment opportunities, sales and use tax collections, property tax or equivalent of, and a plethora of other economic benefits.

Over the most recent five-year period roughly $10 billion in purchases, with associated state sales tax collections totaling approximately $500 million, can be attributed to oil-induced economic activity in the state's four largest oil and gas producing counties comprised of McKenzie, Dunn, Mountrail and Williams.

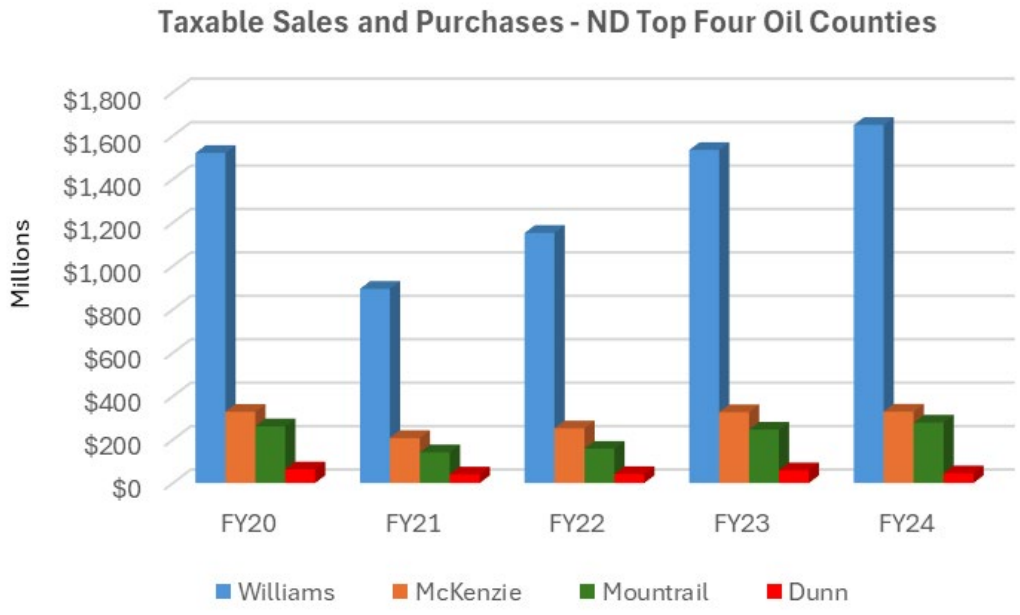

Figure 4

As shown in Figure 4, Williams County, including the city of Williston, continues to be an economic powerhouse in the region with approximately $7 billion in taxable purchases taking place over the past five fiscal years (FY20-FY24). While seemingly overshadowed by their larger economic cousin, the counties of McKenzie, Mountrail and Dunn combined still represent significant economic activity, approaching $3 billion in taxable sales and purchases over the same timeframe.

In addition to the 5% state sales and use tax rate, both cities and counties can levy and collect local sales and use tax in addition to the state requirement, with funds collected channeling directly back to the respective political subdivision.

While rates vary depending on location, the additional local options tax on qualifying purchases yields incremental collections equal to approximately one-third of the amount collected by the state, or $160-$170 million during the same 5-year period.

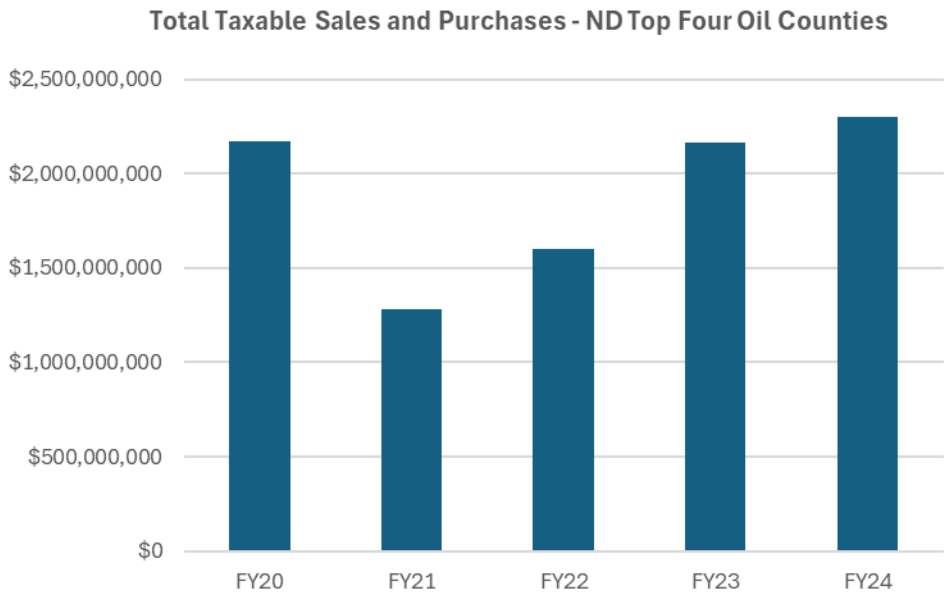

Figure 5

In aggregate, economic activity for North Dakota's four largest oil producing counties (Figures 4 and 5) is significant, despite challenges within the reflected period due to the effects of the pandemic, negatively impacting purchasing activity in FY20, FY21 and FY22.

While the agriculture sector throughout the state including in northwestern North Dakota continues to serve as the foundation of the state's economy, a predominant driver of the forementioned economic activity in the referenced region is energy, or more specifically oil-related, further supporting the case to advance CO_2-EOR in North Dakota.

Addressing the 45Q Incentive Gap

Given the significant economic opportunity related to CO_2-EOR development in North Dakota, ongoing discussions to evaluate and where applicable, improve upon existing policies and incentives to accentuate their influence on pricing models, are warranted.

Gaining a better understanding of the plethora of financial considerations and decisions industry is faced with, including addressing the $25 tax credit incentive differential between CO_2-EOR and permanent sequestration, and how policy-driven incentives and offsets can reduce the 45Q delta, will also be an important part of the conversation.

Production and infrastructure costs associated with CO_2-EOR and incurred by industry should also be recognized as key points of discussion, as prominent expense categories.

Specifically, primary expense centers include CO_2 acquisition cost, associated transportation and distribution costs, and well surface costs to support effective, large-scale implementation of CO_2-EOR, each an equally important factor in determining the financial outlook for tertiary recovery projects utilizing CO_2.

The cost model estimate below (Table 8) is based on the following criteria:

- Well development and surface costs represent approximately two-thirds of total project cost
- CO_2 supply expense equaling approximately one-third of total project cost
- No additional CO_2 compression costs
- Limited cost associated with filtration systems, waste fluid injection and electricity

CO_2-EOR Production Cost Model (Single Well)

Expense/Savings Centers	Cost per bbl	Tax savings/bbl	Tax savings/tonne CO_2	Net Cost/bbl
CO_2 Transportation [1,2]	$5.00	$0	$0	$5.00
CO_2 price/bbl ($30/t = 3 bbl) [2]	$10.00	$0.50	$1.50	$9.50
Royalty payment est. (19% of $80/bbl)	$15.20	$0	$0	$15.20
Well and surface (taxable) [3]	$17.50	$0.88	$2.63	$16.63
Well and surface (non-taxable)[4]	$7.50	$0	$0	$7.50
Extraction tax savings - $80/bbl*5%	$0	$4.00	$12.00	($4.00)
Totals	**$55.20**	**$5.375**	**$16.13**	**$49.83**

Table 8

[1] Primary distribution delivery cost est. = $15/tonne
[2] Per bbl based on $30/tonne CO2 and 3:1 bbl oil/tonne CO_2
[3] Includes well, distribution infrastructure & production costs
[4] Labor cost

Numerous price projection models for CO_2 exist with some in the $10-20 per tonne range. However, like other commodities, CO_2 pricing will vary by region and be influenced by a variety of factors including transportation capacity, available supply, industry demand, and proximity to end use whether geological storage or oil fields targeted for CO_2-EOR. Based on what is anticipated to be a highly competitive landscape for CO_2 acquisition in North Dakota, a $30/tonne estimate is used and reflected in Table 8.

Compression costs as previously noted are determined to be relatively inconsequential based on the assumption that CO_2 transportation projects, i.e. pipelines required to move CO_2 from point-of-origin to oil field distribution networks and ultimately targeted wells, will be accomplished with new infrastructure placement and not through the repurposing of existing facilities, which may be pressure limited.

A high percentage of project cost impacting economic performance is expected to originate from three primary areas including well and surface costs, royalty payments, and CO_2 acquisition costs. While not absent from the equation, filtration system, waste fluid injection, and electricity costs are anticipated to be relatively limited in scope compared to overall project costs and embedded in the "well and surface" cost category.

As demonstrated, tax savings resulting from various state-supported incentives are reflected in the cost model, representing an estimated savings of $5.375 per bbl of incremental oil produced, and based on a bbl of oil produced per tonne CO_2 ratio of 3:1, $16.13 in tax-related incentives per tonne of CO_2 acquired and deployed.

While the $25 credit differential for 45Q as described is not entirely removed through available North Dakota state tax incentives, current exemptions whether direct or indirect are nevertheless material from an economic standpoint, in the sense they offset approximately 64.5%, or almost two-thirds, of the 45Q tax credit differential per tonne of CO_2.

In aggregate, the model (Table 8) equates to $889,000 in tax-related savings, on a per well basis, assuming 165,424 bbl in incremental production over the immediate 10-year period following commencement of CO_2-EOR.

From a state revenue collection perspective using the same production estimates, taxes levied on incremental oil production generate an additional $502,000 to $715,000 (Table 6) in new revenue per well through production and extraction taxes levied, funds that would otherwise not materialize.

Summary

Encouraging industry to pursue CO_2-EOR, sets the stage to further monetize North Dakota energy resources in the Bakken and southwestern portion of the state, well into the future.

From a state perspective, CO_2-EOR certainly provides a considerably greater economic return in comparison to permanent geological storage, with no incremental oil production and associated benefits. Mineral owners, shareholders, and North Dakota citizens benefit as well whether in the form of royalty payments, dividends, or tax-related collections used to fund state priorities.

Similar to the introduction of new wells in unconventional shale plays like the Bakken, CO_2-EOR can serve as a profit center and help mitigate risk for producers, particularly during an oil price downturn, if large volumes of CO_2 can be effectively secured and transported to distribution networks and targeted oil plays.

Producers, in order to justify significant upfront capital investment needed to support CO_2-EOR, will require long-term CO_2 supply contracts structured in a manner that ensures acceptable pricing, whether pricing is fixed or as a percentage of WTI, and the reliable delivery of economic viable quantities of CO_2.

Effectively addressing the 45Q incentive gap between CO_2-EOR and sequestration or permanent storage, will again require adequately incentivizing industry to pursue CO_2-EOR by:

- Funding research to advance technology
- Supporting the development of new energy infrastructure
- Maintaining a reasonable and consistent regulatory environment
- Promoting existing and exploring new CO_2-EOR tax-related policy deemed mutually beneficial to industry and state alike

As emphasized, CO_2-EOR development in states like North Dakota can assist energy producers in addressing increasingly rigid social and environmental standards, challenging federal emissions requirements and aggressive, self-identified sustainability targets.

Even though a federal carbon tax is not currently in place, discussion surrounding that topic will undoubtedly continue but even absent that, a growing number of states have either adopted or are considering cap-and-trade systems and regulations. California has a cap-and-trade program and Washington, a cap-and-invest program.

Eleven northeastern states have organized and participate in a program referred to as the Regional Greenhouse Gas Initiative (RGGI) including Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont, and Virginia.

Under RGGI, which was established in 2005 as the first market-based regulatory program in the United States, CO_2 emissions from power plants operating in that region are capped and the regulated power plants, participate in a program to auction or trade emission allowances, with each "allowance" permitting the holder to emit one short ton (2,000 lbs.) of CO_2.

Although these programs are beyond North Dakota's borders, state-driven greenhouse gas reduction initiatives arguably pose a future challenge from a trade standpoint. Subsequently, if not effectively countered, they create long-term risk to both industry and the state's ability to continue as a major exporter of energy and agriculture products, key contributors to the North Dakota economy.

CO_2-EOR as a mechanism to permanently store CO_2 in the reservoir, does not entirely remove those concerns, but holds the potential to certainly lessen the potential impact and reduce CO_2 intensity levels across multiple energy sectors operating in North Dakota.

Despite sequestration appearing to hold an economic advantage over CO_2-EOR due to the $25 dollar tax credit differential, CO_2-EOR nonetheless presents a unique and attractive opportunity for industry to further monetize existing holdings and more effectively distribute previously established costs over new, incremental barrels produced within the same geographic footprint.

While a degree of uncertainty exists regarding the direction federal policy will take long-term and future of the 45Q tax credit program, there remains an exceptional opportunity to pursue CO_2-EOR in North Dakota, given a current construction deadline date of January 1, 2033, and subsequent 12-year timeframe in which tax credits can be received under the program.

In closing, CO_2-EOR presents a significant opportunity to monetize existing resources, create new synergies among critical energy sectors in the state, and act as a catalyst to effectively enhance and extend the life of the Bakken for decades to come.

GREATER NORTH DAKOTA CHAMBER
SB 2320
Senate Finance & Taxation Committee
Chair Mark Weber
January 29, 2025

Mr. Chairman and members of the Committee, my name is Andrea Pfennig, and I am the Vice President of Government Affairs for the Greater North Dakota Chamber. GNDC is North Dakota's largest statewide business advocacy organization, with membership represented by small and large businesses, local chambers, and trade and industry associations across the state. We stand in **opposition** of Senate Bill 2320.

We support the advancement of innovation and entrepreneurship through targeted incentives and economic development policies that position North Dakota to be globally competitive. We recognize the benefits of a diversified economy for the economic health of North Dakota.

Two of our major industries, energy and agriculture, are continually adapting and innovating to meet consumer demands by investing in new technologies. These investments take significant amounts of time and resources. By excluding carbon dioxide pipelines from the exemption at this juncture, North Dakota would be creating an inconsistent, unstable policy environment that would have a chilling effect on attraction of capital.

Our state has worked for decades to lead the nation when it comes to innovation, especially in the energy sector. Now is not the time to go backwards. Smart approaches to infrastructure are vital to ensure that North Dakota has the infrastructure necessary to support and grow a thriving economy. We hope you will OPPOSE SB 2320.

701.222.0929 ndchamber@ndchamber.com ndchamber.com PO Box 2639 • Bismarck, ND 58502

Legislative Assembly

STATE CAPITOL
600 EAST BOULEVARD
BISMARCK, ND 58505-0360

Senator Jeffery J. Magrum
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P.O. Box 467
Hazelton, ND 58544-0467
C: 701-321-2224
jmagrum@ndlegis.gov

COMMITTEES:
Finance and Taxation
Energy and Natural Resources

01/29/2025

Good morning, Chairman Weber and committee members.

For the record I am Senator Jeff Magrum serving district 8. I am standing before you to present SB2320.

The reason is that the property tax exemption for CO2 pipelines was not intended for Interstate pipelines.

The original intent was to help keep the Dakota Gasification Company in business. Former Senator Don Moore from Forbes called and told me that before he passed away.

I'll refer to the minutes from 1991.

Another question that I have is why we would exempt property taxes for a pipeline owned partially by the Chinese Communist Party our number one foreign adversary, South Korea and Saudi Arabia. I'll refer to the document provided by Summit Carbon Solutions.

Summit Carbon Solutions advertises that they contribute close to a billion dollars in taxes. It surely isn't in ND because they are exempt from property and sales taxes. Property for ten years.

Another issue is fairness. All other pipelines pay property tax as I understand. I will refer to the long sheet.

For these reasons I ask for a do pass on SB2320

CHAPTER 652

SENATE BILL NO. 2249
(Senators Streibel, Naaden, DeKrey)
(Representatives Brown, Rennerfeldt, Whalen)

CARBON DIOXIDE PIPELINES

AN ACT to create and enact two new sections to chapter 57-06 of the North Dakota Century Code, relating to a property tax exemption for certain centrally assessed pipeline and associated property used to promote enhanced recovery of oil or natural gas and to provide for payments in lieu of taxes; and to provide an effective date.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. A new section to chapter 57-06 of the North Dakota Century Code is created and enacted as follows:

Carbon dioxide pipeline exemption. Property, not including land, is exempt from taxation for the first ten full taxable years after commencement of construction if it consists of a pipeline and necessary associated equipment for the transportation or storage of carbon dioxide to an oilfield in this state for use in enhanced recovery of oil or natural gas.

SECTION 2. A new section to chapter 57-06 of the North Dakota Century Code is created and enacted as follows:

Payments in lieu of taxes. Carbon dioxide pipeline property described in section 1 of this Act is subject to payments in lieu of property taxes during the time it is exempt from taxation under section 1 of this Act. For the purpose of these payments, carbon dioxide pipeline property described in section 1 of this Act must be valued annually by the state board of equalization in the manner that other pipeline valuations are certified. The county auditor shall calculate taxes on the carbon dioxide pipeline property described in section 1 of this Act in the same manner that taxes are calculated on other pipeline property. Not later than December twenty-sixth of each year, each county auditor shall submit a statement of the amount of taxes that would have been assessed against carbon dioxide pipeline property, exempted under section 1 of this Act, to the state treasurer for payment. The state treasurer shall make the required payment to each county not later than March first of the following year, and the county auditor shall distribute the payments to the political subdivisions in which the exempt pipeline property is located.

SECTION 3. EFFECTIVE DATE. This Act is effective for taxable years beginning after December 31, 1990.

Approved April 11, 1991
Filed April 12, 1991

BILL SUMMARY: SB 2249 Prepared by the Legislative Council staff

DATE: March 21, 1991

SUBJECT: Tax exemption for carbon dioxide pipeline

GENERALLY, THIS BILL:

As amended, exempts a carbon dioxide pipeline from property taxes if it is used to transport carbon dioxide for enhanced oil recovery and provides that the counties in which the tax would have been payable are entitled to reimbursement of the lost property tax revenues by the state.

REP. WARDNER Then at this time the counties wouldn't be receiving any revenue from these pipelines, so then the part about the state treasurer having to send money to the counties, the counties would end up getting more out of it?

REP. BROWN That is the way I see it.

LOWELL RIDGEWAY, ND PETROLEUM COUNCIL Testified in support of the bill. When we had HB 1414 before this committee, we shared with you a study that showed that there is about three hundred and forty three point eight million barrels of oil that have been identified from seventy reservoirs that could be brought to the surface with tertiary production which is carbon dioxide, in this case. That is the market for CO_2. We think this type of legislation could possibly prove to be a partial carrot to encourage the construction of such a line. The original bill as was discussed with you did provide for a property tax exemption on a CO_2 line built from the gasification plant to the oil fields to be exempt from taxation. We are aware of at least one other potential CO_2 pipeline, referred to as the Amoco one, actually it is the EXON one from Wyoming. They explored the idea of bringing natural CO_2 from Wyoming to western North Dakota and perhaps even to Canada. Those are the two potential pipelines I am aware of. I think the committee should understand that if there ever is a CO_2 pipeline built in North Dakota, there is probably going to be one built, not two or three. There seemed to be some question about the gathering lines, gathering lines traditionally, were exempt from property taxes, rightly or wrongly. Our Supreme Court, couple of years ago ruled that gathering lines are subject to taxes, many companies that have gathering lines are paying taxes today.

GARY JACOBSON, MGR. OF GOVERNMENT RELATIONS DIV. OF BASIN ELECTRIC POWER COOPERATIVE. Testified in support of the bill. There is a little confusion about where is Dakota Gasification Company on this issue. Dakota Gas Company is a subsidiary of Basin Electric Power Cooperative. It is a for profit company. When we are talking about the ability of Dakota Gasification Company to produce CO_2, we are talking about the fact that it does produce a loss fuel too, it does not produce a purified CO_2. In order to produce a purified CO_2 it would require a tremendous investment at that gasification plant. Yes, we can produce CO_2. Because CO_2 is a byproduct of the process out there, it would require a tremendous investment on our part. At this point, the company is trying to hang on for dear life right now, with the falling of the oil prices and the world situation right now. We have been producing at record level for the last two years. We are encouraging the development of the tertiary recovery process, CO_2 is part of that process. Everybody is a gainer on this, that is what we are supporting.

REP. TIMM What do you do now with the CO_2?

GARY JACOBSON I am not sure, I will get a response on that.

COMMITTEE ACTION Tape #2, Side A, Meter 2140

REP. ANDERSON Made a motion to adopt the amendments as presented #10341.0301. REP. GROSZ Second the motion. Motion carried by voice vote.

REP. ANDERSON Made a motion for a Do Not Pass
REP. LINDERMAN Second the motion. Motion carried

12 Yes 4 No 0 Absent

REP. LINDERMAN Was given the floor assignment.

COMMITTEE ACTION 3-18-91 SB 2249 Tape 1, Side A Meter 800

The committee met again to reconsider the action by which the bill was passed out of committee with a Do Not Pass As Amended.

BARRY HASTI, STATE TAX DEPARTMENT Appeared before the committee to answer questions the committee might have.

REP. NICHOLS Would there be a cost to the state if the tax exemption were granted to the pipeline, is there an in lieu of payment that goes to the counties that would have to be paid by the state?

BARRY HASTI In Section 2, there would be a negative impact on the state.

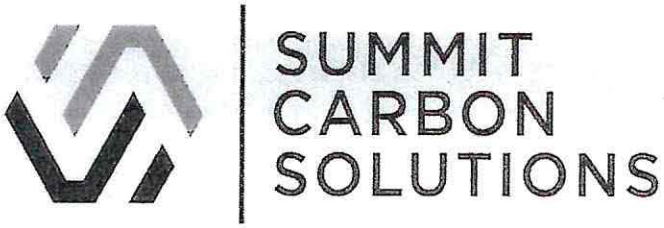
REP. WARDNER How long does this exemption go?

BARRY HASTI If it is added as a section to 57-02-08, there is no limiting language on here so it would be perpetual.

REP. TIMM When Gary Jacobson was testifying I was surprised at how unenthusiastic he was about the pipeline, in fact, in talking to him privately, he stated that if they got a contract with some oil company out in Williston, got a thirty or forty year contract to send them CO_2, that would be their deciding factor to build this pipeline. It wouldn't be a tax exemption that would be the deciding factor.

REP. FREIER If section 2 is the problem, why don't we just amend it out.

REP. FREIER Made a motion to reconsider the action by which the bill was passed out of committee 3-13-91. REP. BELTEP Second the motion. Motion carried 9 Yes 6 No 1 Absent



SUMMIT CARBON SOLUTIONS, LLC

INVESTOR LIST

Investor	Website
Continental Resources, Inc	https://www.clr.com
TPG Rise Climate CHINA	https://therisefund.com/tpgriseclimate
Summit Agricultural Group	https://www.summitag.com
SK Group SOUTH KOREA	https://www.sk-perspectives.com
Tiger Infrastructure Partners SAUDI ARABIA	https://www.tigerinfrastructure.com

Decision Innovation Services (DIS) conducted a study that found Summit Carbon Solutions' proposed carbon capture, transportation, and storage project will create jobs, generate new tax revenue for local communities, support local suppliers, and strengthen the Midwest regional economy.

Project-Wide Findings (*Construction* Phase)

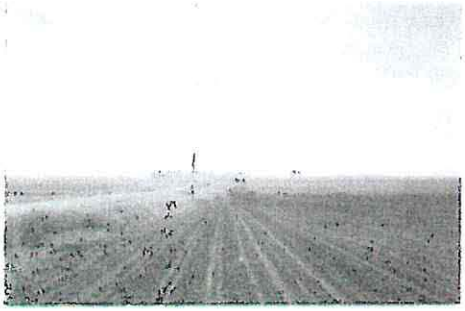
Total Investment	$8.9 billion*
Total Average Annual Jobs Created	12,293
Total Federal, State, Local Taxes Generated by the Project	$752 million
Total Income Paid	$2.1 billion
Total Right-of-Way and Other Landowner Payments	$776 million

*this number is subject to change and based on internal calculations

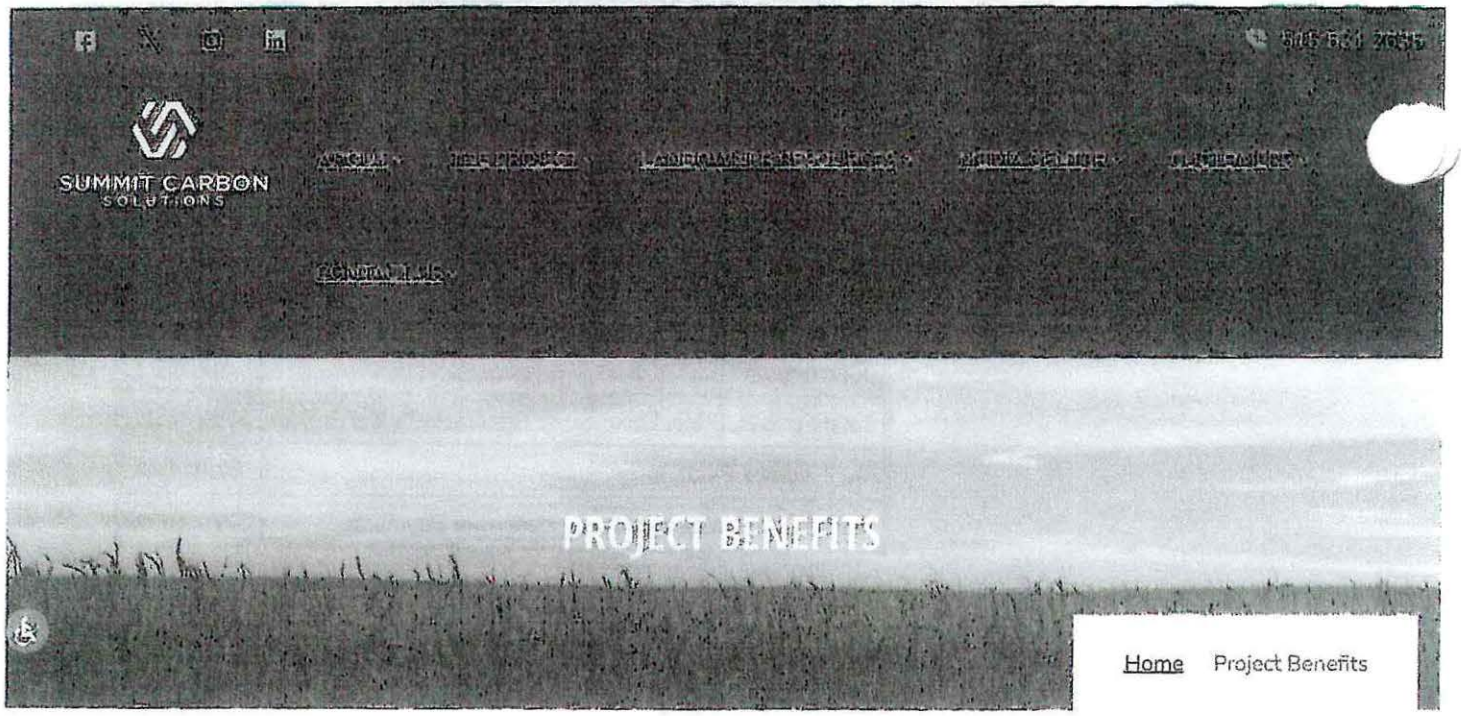
Project-Wide Findings (*Operations* Phase)

Annual Expenditures	$377 million
Total Jobs Supported	1,200+
Total Labor Paid	$122 million
Total Federal, State, Local Taxes Generated by the Project	$206 million

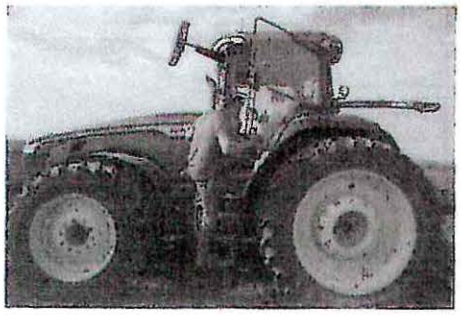
ENVIRONMENTAL BENEFITS



Once completed, Summit Carbon Solutions' Project will be the largest carbon capture and storage project in the world. This project will have the capacity to capture and permanently store up to 18 million tons of CO2 every year. That's the equivalent of removing 3.9 million vehicles from our roads annually.



AGRICULTURAL BENEFITS

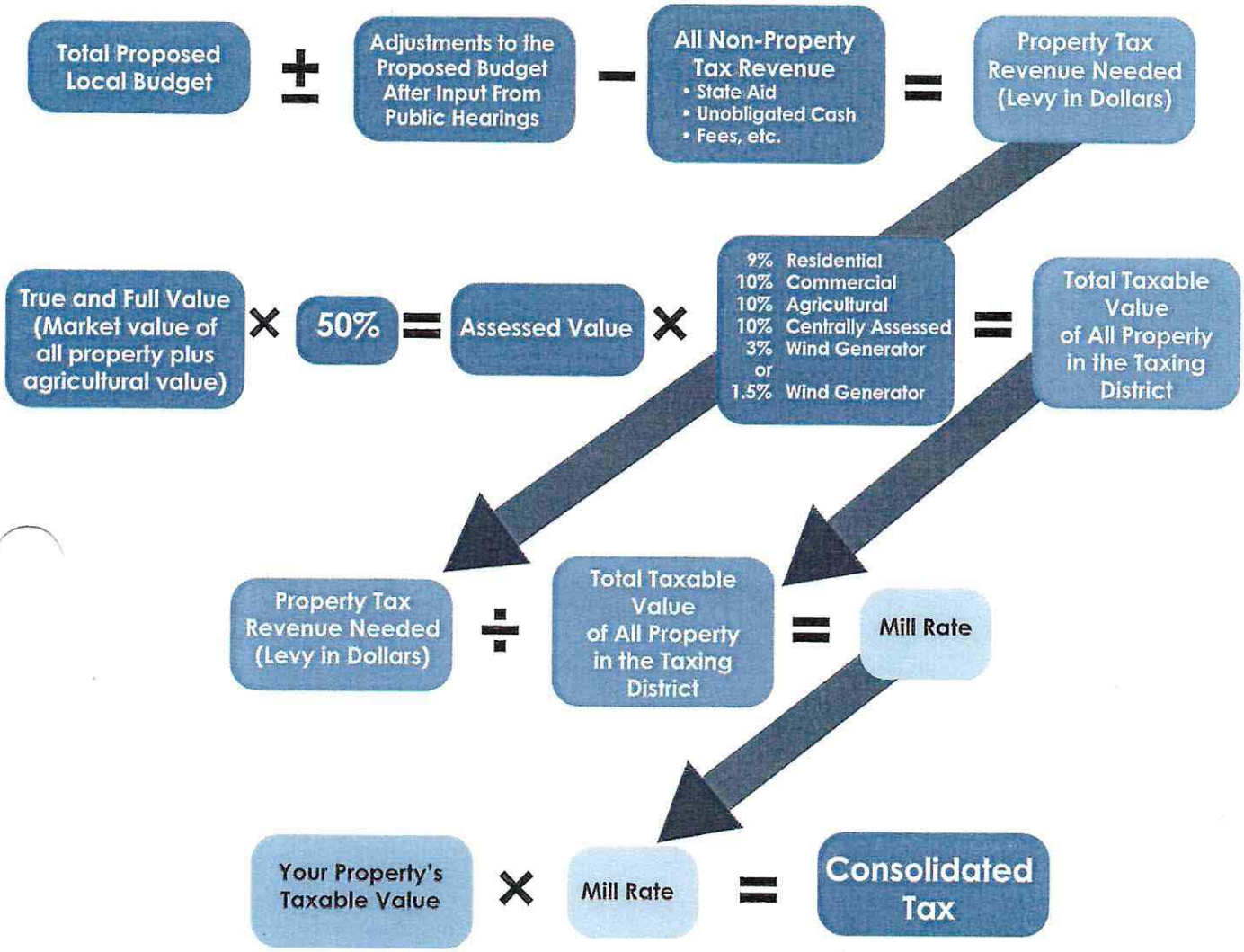


Summit Carbon Solutions will open new economic opportunities for the ethanol and agricultural industries that are so critical to the Midwest economy. Our carbon capture and storage project will put the ethanol produced at our 57 partner facilities on track to become a net-zero fuel by 2030. This will allow these plants to sell their product at a premium in the growing number of states and countries that have adopted low carbon fuel standards, as well as allow them access to emerging markets like sustainable aviation fuel.

Today, ethanol supports 360,000 jobs and contributes $45 billion to the annual U.S. GDP. But maybe most importantly, ethanol plants purchase approximately half of all the corn produced in the United States. Summit Carbon Solutions' investment will strengthen this marketplace even further for farmers, while maintaining strong land and commodity prices.

ECONOMIC BENEFITS

North Dakota Property Tax System



All property in North Dakota is subject to property tax unless it is specifically exempted. Except for a one-mill levy for the State Medical Center, property taxes are administered, levied, collected, and expended at the local level for the support of schools, counties, cities, townships, and other local units of government. The State does not levy a property tax for general government operations.

The property tax is an "ad valorem" tax, that is, it is based on the value of the property subject to tax.

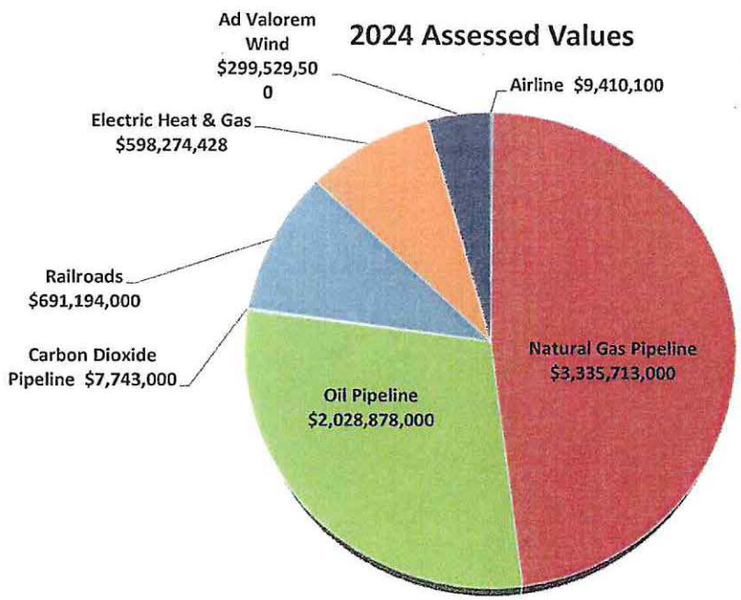
Source: Office of State Tax Commissioner **tax.nd.gov.**

NORTH DAKOTA STATE BOARD OF EQUALIZATION

CENTRAL ASSESSMENT - 2024 SUMMARY

2024 CENTRALLY ASSESSED - ASSESSED VALUES

Airline	$	9,410,100
Natural Gas Pipeline	$	3,335,713,000
Oil Pipeline	$	2,028,878,000
Carbon Dioxide Pipeline	$	7,743,000
Railroads	$	691,194,000
Electric Heat & Gas	$	598,274,428
Ad Valorem Wind	$	299,529,500

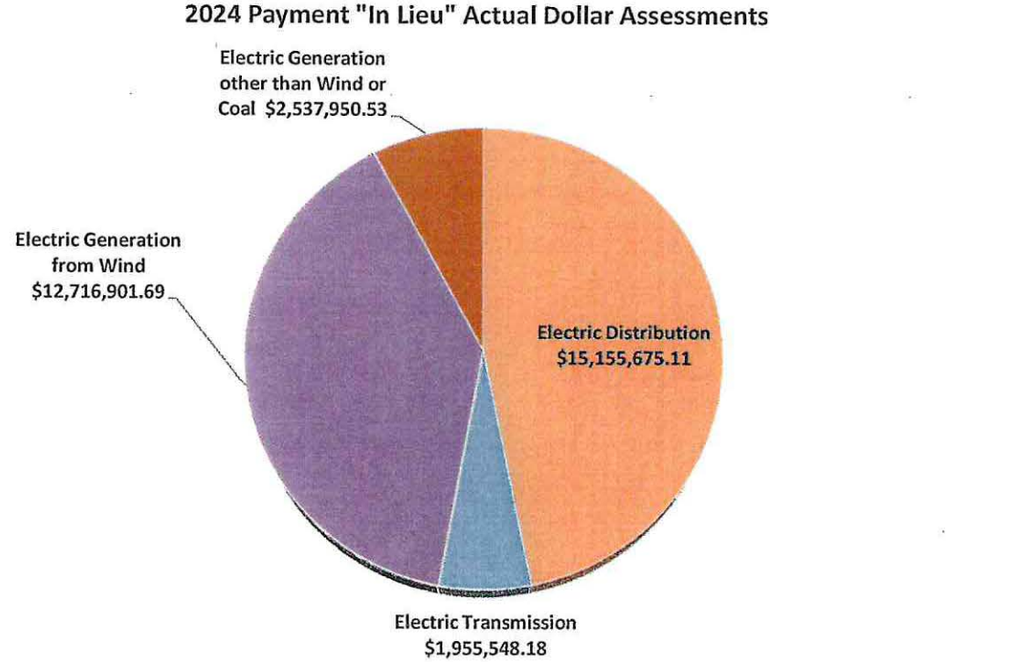


NORTH DAKOTA STATE BOARD OF EQUALIZATION

CENTRAL ASSESSMENT - 2024 SUMMARY

2024 CENTRALLY ASSESSED - PAYMENT "IN LIEU"

Electric Distribution	$	15,155,675.11
Electric Transmission	$	1,955,548.18
Electric Generation from Wind	$	12,716,901.69
Electric Generation other than Wind or Coal	$	2,537,950.53



2025 SENATE STANDING COMMITTEE MINUTES

Finance and Taxation Committee
Fort Totten Room, State Capitol

SB 2320
2/3/2025

Relating to the carbon dioxide pipeline tax exemption; and to provide an effective date.

10:58 a.m. Chairman Weber opened the hearing.

Members present: Chairman Weber, Vice Chairman Rummel, Senator Marcellais, Senator Patten, Senator Powers, Senator Walen

Discussion Topics:

- Amendment regarding enhanced oil and natural gas recovery

10:59 a.m. Senator Patten moved a Do Not Pass.

10:59 a.m. Senator Rummel seconded the motion.

10:59 a.m. Senator Walen moved a Do Pass on Amendment LC#25.0972.01002.

10:59 a.m. Senator Powers seconded the motion.

Senators	Vote
Senator Mark F. Weber	Y
Senator Dean Rummel	N
Senator Richard Marcellais	AB
Senator Dale Patten	N
Senator Michelle Powers	Y
Senator Chuck Walen	Y

Motion on Amendment Passed 3-2-1.

11:14 a.m. Chairman Weber recessed the meeting.

11:30 a.m. Chairman Weber reconvened the meeting.

Chairman Weber took up Senator Patten's Do Not Pass motion, which is now on the amended bill.

Senators	Vote
Senator Mark F. Weber	Y
Senator Dean Rummel	Y
Senator Richard Marcellais	Y
Senator Dale Patten	Y
Senator Michelle Powers	N
Senator Chuck Walen	N

Motion on Do Not Pass passed 4-2-0.

Senator Patten will carry the bill.

11:33 a.m. Chairman Weber adjourned the meeting.

Chance Anderson, Committee Clerk

RS 2/3/25

1 of 1

25.0972.01002
Title.02000

Prepared by the Legislative Council staff for Senator Magrum
January 30, 2025

Sixty-ninth
Legislative Assembly
of North Dakota

PROPOSED AMENDMENTS TO

SENATE BILL NO. 2320

Introduced by

Senator Magrum

Representative Morton

A BILL for an Act to amend and reenact section 57-06-17.1 of the North Dakota Century Code, relating to the carbon dioxide pipeline tax exemption; and to provide an effective date.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. AMENDMENT. Section 57-06-17.1 of the North Dakota Century Code is amended and reenacted as follows:

57-06-17.1. Carbon dioxide pipeline exemption - Exception.

~~Property~~Subject to the limitations in this section, property, not including land, is exempt from taxation during construction and for the first ten full taxable years following initial operation if it consists of a pipeline, constructed after 1996, and necessary associated equipment for the transportation or storage of carbon dioxide for secure geologic storage or use in enhanced recovery of oil or natural gas. The exemption under this section does not apply to an interstate pipeline and necessary associated equipment for the transportation of carbon dioxide into the state for secure geologic storage ~~or use in enhanced recovery of oil or natural gas.~~

SECTION 2. EFFECTIVE DATE. This Act is effective for taxable years beginning after December 31, 2024.

REPORT OF STANDING COMMITTEE
SB 2320

Finance and Taxation Committee (Sen. Weber, Chairman) recommends **AMENDMENTS (25.0972.01002)** and when so amended, recommends **DO NOT PASS** (4 YEAS, 2 NAYS, 0 ABSENT AND NOT VOTING). SB 2320 was placed on the Sixth order on the calendar. This bill does not affect workforce development.