2025 HOUSE ENERGY AND NATURAL RESOURCES

HB 1574

2025 HOUSE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee
Coteau AB Room, State Capitol

HB 1574
1/30/2025

Relating to the authority of the industrial commission; to provide for application; and to provide an expiration date.

2:44 p.m. Chairman Porter called the meeting to order.

Members Present: Chairman Porter, Vice Chairman Anderson, Vice Chair Novak, Representatives: Dockter, Hagert, Headland, Heinert, Johnson, Marschall, Olson, Ruby, Conmy, Foss

Discussion Topics:

- SNL Plants
- CO2 in the soil
- Ethanol Plants
- Regulation of carbon dioxide
- Above-ground capture units

2:44 p.m. Representative Olson introduced the bill and submitted testimony. #32793 #32794 #32795

2:54 p.m. Zachary Cassidy, ND Resource Council, testified in favor.

2:57 p.m. Doyle Turner, Resident from Moville Iowa, testified in favor.

3:00 p.m. Kurt Swenson, ND Resident, testified in favor and submitted testimony. #31416

3:14 p.m. Tyler Hamman, Assistant Vice President, EERC, testified in opposition and submitted testimony. #32860 #33283

3:18 p.m. Andrea Pfenning, Vice President of Government Affairs, GNDC, testified in opposition ##33035

3:21 Jonathan Fortner, VP of Government Relations for Lignite Energy Council, testified in Opposition #32772

Additional written testimony:

Travis Kuhlka, TK Veterinary Service, Submitted testimony in favor #32084 #32426

Dawn Shepard, ND Resident, Submitted testimony in favor #32604

Samuel Wagner, Ag and food Field Organizer, Dakota Resource Council, submitted testimony in favor. #32774

Dawn Shepard, ND Resident, submitted testimony in favor. #33017

3:22 p.m. Chairman Porter closed the hearing.

Leah Kuball, Committee Clerk

House Energy and Natural Resources Committee

Testimony on HB 1574 (IN SUPPORT)

Kurt Swenson, Beulah, ND District 33

Chairman Porter, Vice Chairs Anderson and Novak and members of the House Energy and Natural Resources Committee, my name is Kurt Swenson from Beulah.

Today, the Industrial Commission has NO authority to review, regulate, administer or approve any type of permit related to the "capture" portion of these facilities. Just as NDIC does not regulate the production and capture of CO2 from power plants, ethanol plants or the like, they have no regulating authority over facilities which capture CO2 from our atmosphere.

As you may know, there are currently no Direct Air Capture Plants in North Dakota. While at least one has been proposed which was to be in Morton County, it was met with great concern by local residents surrounding the facility due to light and noise pollution, safety concerns from suffocating CO2 releases, dust and traffic related concerns.

This bill simply clarifies and memorializes today's lack of Industrial Commission authority - allowing these types of facilities to be best handled in concert with local political subdivisions who are closest to the affected people with their zoning ordinances – such as Morton County is currently developing.

I would like to recommend an amendment that would strike the expiration date as it is unnecessary.

I respectfully ask you to vote DO PASS vote on HB 1574.

25.0913.01000

Sixty-ninth
Legislative Assembly
of North Dakota

HOUSE BILL NO. 1574

Introduced by

Representatives S. Olson, Henderson

Senators Clemens, Magrum, Weston

A BILL for an Act to create and enact a new section to chapter 38-22 of the North Dakota Century Code, relating to a prohibition on direct air carbon dioxide capture projects; to amend and reenact section 38-08-21 of the North Dakota Century Code, relating to the authority of the industrial commission; to provide for application; and to provide an expiration date.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. AMENDMENT. Section 38-08-21 of the North Dakota Century Code is amended and reenacted as follows:

38-08-21. Regulation of carbon dioxide and nitrogen gas.

1. The commission is vested with the authority and duty to regulate the exploration, development, and production of carbon dioxide, coal bed methane gas, helium gas, and nitrogen gas within the state, in the same manner, ~~insofar~~ as is practicable, as ~~it~~the commission regulates oil or gas as defined in this chapter.
2. The commission may not approve or authorize a direct air carbon dioxide capture project as defined under section 2 of this Act.

SECTION 2. A new section to chapter 38-22 of the North Dakota Century Code is created and enacted as follows:

Direct air carbon dioxide capture projects - Prohibition.

A person may not construct, implement, or operate a direct air carbon dioxide capture project in this state. As used in this section, "direct air carbon dioxide capture" means the process of removing carbon dioxide directly from the atmosphere by using scrubbers and chemical processes for underground storage or use in products.

SECTION 3. APPLICATION. The prohibition under section 2 of this Act does not apply to an operator of a direct air carbon dioxide capture project in possession of necessary local, state, and federal permits and approvals before the effective date of this Act.

SECTION 4. EXPIRATION DATE. This Act is effective through July 31, 2027, and after that date is ineffective.

To the members of the House Energy and Natural Resources Committee,

My name is Dr. Travis Kuhlka, I am a beef cattle veterinarian and a local landowner, from District 36. I am writing in SUPPORT to HB 1574.

Due to federal government tax incentives, there has been a drastic increase in out of state agencies trying to place new, unproven, and in many situations, dangerous green energy projects in rural areas. In most cases there are no ordinances or zoning parameters in the books, which are known by these outside interests. North Dakota is a great state to live in, one of the positive aspects is the low population of the rural areas, hence a common reason these projects are aimed for us.

With no regulations in place green energy projects can get approved with fanfare for the cash they hand out to landowners and local towns. The unseen risk to the lives and health of the people living nearby is real, but disregarded thanks to the lack of critical ordinances.

I live in Mortin County, where recently a moratorium was enacted to allow zoning ordinances to be drawn from scratch related to Direct Air Carbon Capture. There were no regulations in existence guiding the zoning or permitting for this project. In this example a company from Denver, CO wanted to place an unproven, first of its kind facility in a rural area. They garnered local support through large payouts to landowners, but in the end could not show proof of nor be honest when questioned on the safety of the technology.

Currently zoning and permitting authorities are in the hands of the local municipalities and not the Industrial Commission. This bill is important in clarifying that.

I recommend a DO PASS. Thank you for your time.

Respectfully submitted,

Dr. Travis Kuhlka

TK Veterinary Service

Glen Ullin, ND 58631

tckuhlka@gmail.com

701-400-2953

January 28, 2025

Dawn Shepard
3470 County Road 87
New Salem, ND 58563

RE: Testimony in Support of HB 1574

To the Members of the House Energy and Natural Resources Committee;

My fiancé and I live on a 160 acre farm northwest of New Salem that we purchased in 2009. It's a property with a smaller home, outbuildings, and all pasture, which we need for our cattle and horses. Since moving there, we've cleared out dozens of dead trees, planted hundreds of evergreens, re-fenced everything, and cross fenced to make it through the dry years. We've worked hard on this property, because, more than anything, we love the location. We don't like traffic and it's on a gravel road. 3 miles from blacktop one way, 7 miles the other. The roads are incredibly maintained by our county. Our driveway is a quarter mile long, and our home is right in the middle, so neighborly traffic going by doesn't even faze us. And we have the best neighbors in the world there. Friendly, helpful, caring. Courteous when we meet on the road, slowing down, giving each other room. We have the greatest sense of safety and security living there. We can see Storm Creek and Danzig Dam just across the field SE of us, so we enjoy a great deal of wildlife near our home, especially when the birds are migrating. When we moved there, it was a beautiful, pristine, serene location on all four sides of our home. We loved it.

Since 2011, we've lost a lot of that beauty. A power company from MN started putting up wind towers that year. Apparently, it was something that had been a "done deal" they told us, before we bought this property. It was not disclosed to us by the seller, and these things called wind farms weren't even on our radar at that time. So we weren't happy with it, but there was nothing we could do. At first, we were only told of about a dozen turbines going up at that time. We thought it would be tolerable. Today, I can drive up our county road and when I get a mile from our property heading north; it's a skyline of wind turbines. Currently, I can easily count over 150 from the end of our driveway. 5 are just a mile from our home, with about another dozen in the second mile. When looking out my kitchen window, I am staring at 3 of them less than a mile of our home. When we work outside, they're always there. No more pristine view on three sides of us. I do a lot of photography and it's tough to get a photo without a wind tower in them anymore. We received no compensation for the loss of beauty or the loss of value in our home from them. Red lights flickering at night, certain days the noise is like a jet engine roaring. But we just learned to be grateful for the view from our front deck, where we could still sit and enjoy the scenery to the south. No turbines there. Nothing but blue skies, low rolling hills and Danzig Dam still there to make things beautiful and serene.

Fast forward to summer of 2023 when some strangers from a company out of Colorado were knocking on everyone's doors within 20 miles of our home with leases in hand, asking to turn over the rights to our property to them for a direct air capture facility. None of us had even heard of such a thing. We'd all heard about the Summit Pipeline, and carbon capture from the ethanol plants, but NONE of us had any idea of what this was. When we started doing some research, there was very little to go on. It was such a new concept; there was minimal information for us. What we did find was that it was massively energy intensive, required extreme amounts of water, and that it involved giant fans that were extremely noisy, that attempted to capture the CO_2 from the ambient air. DAC attempts to capture CO_2 that is normally at a rate of less than .04% in an area like ours. Plants need .03% to grow. Any lower and they start to die. As do humans and all forms of life. How are the crops and grass in our area supposed to grow if all residual CO_2 is removed? We'd never heard of anything so insane, and to put it in a farming area where the air was clean and people lived because they didn't want to be around any industries! Common sense tells you that just building such a thing out there would create more pollution than it would capture.

This company said they REALLY wanted to put it up right across from us, because they were going to need a LOT of water, and figured they could take it from Storm Creek and the Danzig area. Over our dead bodies! We told them no, go away, and don't come back. And then we learned of all the government subsidies that would need to go to pay for these facilities. Insane amounts of taxpayer dollars...OUR dollars!

Neighbors started talking and a group of over 80 people met one night to discuss this facility and the leases. The DAC company was NOT invited. Everyone's questions were answered from others there about what direct air capture really was. There was not one person there who wanted this near their homes or in their neighborhoods, and we all agreed we weren't going to sign. Our beauty, privacy, peace, our sense of safety and our entire futures would be stolen from us; everything all of us had worked for, many who'd lived there their entire lives, it would all be gone if this thing went up near any of our homes.

Winter came, and we all thought we were out of the woods and that these people had given up and gone back to Colorado. Until early February of 2024, when we received a letter from our county planning and zoning that this company had filed for a Special Use Permit to put this facility a mile and half straight south of our home, with a sequestration area that would border the gravel road right across from our pasture where our cattle graze and just 1/4 mile from our home. I was shaking when I read that letter. Stunned, thinking, how could this happen? My neighbor across the road called me and she was in tears. She and her husband and daughter and parents still lived on the same property they always had...she'd grown up there. She felt her entire world collapse when she read that letter. It was an instant fear that this safe, peaceful, serene way of life we'd been living was over. It gripped us all.

Word spread like wildfire to neighbors. We only had 2 weeks to figure out how we were going to stop this and save our way of life and our neighborhood from this noisy, ugly, industrial complex that an unknown out of state company was trying to put up here. And who had signed the leases with them? We found it was people who'd grown up there, still owned the land, but had moved far away. None who signed leases lived anywhere near us. Some of them even lived out of state. They wouldn't have THEIR lives destroyed, but they had no problem destroying ours. They were talking about a 100+ acre facility with 144 units approximately 30'wx60'lx35' high - and each with 6 huge fans on them...before the sequestration land was even included.

Long story short, we fought back. We didn't sleep, we didn't eat. It consumed every moment of our daily lives. We banded together. Neighbors from 25 miles or more away stood by our side, as we would do for them if it had been in their back yard. Our stomachs were in knots. The stress, the fear and grief was immeasurable. Our entire futures, our livelihoods, our health, the safety and security of our families rested on the outcome of this meeting. That night, after over 3 hours of testimony from opponents of the facility, the planning and zoning committee voted to recommend a denial for the permit. It was an immediate ton of bricks lifted off our shoulders. We felt like we had our lives back. The permit application would still get a chance with the County Commissioners, but we at least had some breathing space & hope.

Because of our continued concern they could still be permitted, we and our neighbors pitched in and hired an attorney, should another permit battle ensue. We were glad we did, because though the DAC applicant withdrew that application, they reapplied in June. Our county had already started the procedure to issue a temporary moratorium on DAC, as much discussion had taken place on the subject that there were no current county land use standards for DAC siting or anything even close to it. But because the applicant applied before the moratorium could be fully enacted, they were allowed to go through the permitting process a second time with their newly beefed up application.

Our peace of mind had been short lived. And once again, here we were preparing for another battle against DAC in our neighborhood. For the next month leading up to the permit meeting, we were all more stressed than the first. None of us slept, barely ate, missed family activities staying home to do research, sent emails and letters to the P&Z with our findings, and prepared testimony for the meeting.

We were mentally, physically and emotionally drained, again, at the thought of losing our sense of safety, our health, security, and livelihoods should this thing get permitted and go up near our homes. We were not going to have another massive industry on the fourth side of our home, destroying our lives and devaluing our property even more, making it nearly worthless. Who would want to live near this monstrosity?

At the P&Z hearing for the second application in late July, another full house was there battling it out. This hearing went as long as the first one. The planning and zoning finally voted again to recommend a denial of the DAC permit. The joy and relief we all felt was immense. The applicant ended up withdrawing their application a month later, before it went to the county commissioners. The moratorium had passed and was now in effect, and we could all finally breathe a real sigh of relief and enjoy our lives again, instead of every waking moment being consumed in fear and stress with this battle.

In October, the P&Z Subcommittee began meeting to work on land use codes to develop specific use standards for direct air capture facilities. This is the way things SHOULD be done. Land use codes and standards specific for such a facility need to be developed by all counties in order that rural families like ours can avoid going through what we did. Blindsided, months of stress, emotional, physical and mental strain, wear and tear on family relationships because of the pressure, thousands of dollars spent in legal fees to protect our families, our homes, our very livelihoods and our futures.

And that is why I am supporting HB1574. A 2 year statewide moratorium would give all counties the time to work on specific use standards for direct air capture facilities that work for their residents, where special use permits should not be approved for projects that adversely affect the health and safety of the residents, or the farming in the area. As our subcommittee has been going through the process, each meeting seems to open up another area of a DAC facility that needs standards that had not been considered at the previous meeting. They are immense and complex facilities.

There are numerous types of methods, equipment, fan sizes, and chemicals used to capture and process the minimal amount of CO2 they claim they can capture. Some of the chemicals are cancer causing and can drift to people's front yards. DAC noise is a major problem in a rural community. People live in the country to get away from city and industrial noise, not to have it shoved down their throats nonstop, 24/7/365 from fans and generation systems and power plants needed to supply electricity for these facilities.

Power must come from their own generation source, which is normally natural gas and therefore creates more CO2 for them to capture and get paid for that didn't exist in the first place. They create more of a problem than they solve and need to be regulated and sited very carefully to avoid a massive waste of taxpayer dollars and destruction to the lives of those living closest to them, and to the wildlife in the area.

These facilities are the most expensive and energy intensive, while also the least productive, form of carbon capture in existence. They can cost 3-4 times the amount of what it costs for a normal carbon capture unit to be built at the site of the emissions. As of November 2024, DAC facilities were still averaging a cost of $700-$1100 per ton of CO2 captured versus on site carbon capture facilities, averaging $50-$150 per ton. That's a lot of wasted taxpayer dollars that could be used more wisely. Additionally, most DAC facilities only capture 15-30% of their "expected capability" because it takes 1600 tons of air to be moved around to capture just one ton CO2. At this time, DAC just cannot survive without continual government subsidies. It is NOT economic development when taxpayers are footing the bill.

Water availability is a major issue with a DAC. They need it for cooling, for separating, for rinsing the fan blades; the applicant we fought were talking millions of gallons per year for theirs. Where are they going to get it? There are also lighting standards needed. People live in the country so they can gaze at the stars at night, not so the skies can be invaded by lighting from a massive facility they don't want there.

Fire safety is a major issue. When these facilities are in a remote rural area, who's going to put a prairie fire out that could start from an industrial fire on a windy day? Local rural volunteer fire fighters are at work. By the time someone could get to it, hundreds to thousands of acres and homes could be burning. All of this needs to be considered when siting a DAC, for the safety of the residents in the area.

Traffic is a big issue. The areas DAC companies want to build have gravel roads, families traveling on them, young teen drivers with little experience, farming equipment during planting and harvesting, school buses. Rural residents know their neighbors, their community and their traffic flow and use caution, looking out for their neighbors. A 5-6 year construction plan for a DAC means drivers and large trucks on the roads unfamiliar with the residents and a high risk of accidents, some serious or deadly. Not to mention the wear and tear on the roads and the dust, and all of this needs to be considered in siting standards and road use agreements before permitting.

People don't want CO2 sequestered next to their property, where it can spread and leak into underground water sources, or worse yet, have a leaking pipe that causes it to dangerously escape into the air. The state of Illinois has once again recently enacted a moratorium on CO2 sequestration because of the underground leaks they are finding. Caution needs to be used for sequestration siting in a residential area. We need to pay attention to what is happening in other parts of the country and learn from it.

Don't let the residents of North Dakota become guinea pigs for this industry. A two year state moratorium on DAC would give the people of the state time to research the need for safety regulations for this new technology, as there is very little history for it that can be used for human health and environmental impact studies at this time. We still don't know enough about this technology to even know what conditions to apply for siting. We are researching and learning. This moratorium will give counties time to create land use standards necessary for safe and responsible siting of this technology. It will save massive amounts of taxpayer dollars being wasted for something that is proving futile, and instead allows those funds to be used for something more productive and useful for the state of North Dakota.

My personal story and the knowledge gained about DAC because of it, brings me to support HB1574. I urge the members of this committee to vote to pass this bill.

Thank you for your consideration.

Dawn M. Shepard _____ January 28, 2025

Lignite Energy Council
LEADING THROUGH ADVOCACY AND INNOVATION

January 30, 2025

Chairman Porter and House Energy and Natural Resource Committee Members,

I am submitting this testimony in opposition to House Bill 1574 on behalf of the Lignite Energy Council. Prohibiting direct air carbon dioxide capture (DAC) projects would limit significant economic opportunities for North Dakota, especially for coal plants and related industries.

Direct air capture (DAC) technology requires significant power, presenting a valuable opportunity for coal plants to supply this energy and support their operations. Moreover, DAC could serve as a reliable future source of carbon dioxide for enhanced oil recovery (EOR) projects. These initiatives would maximize the utilization of pore space, boost oil production, generate additional tax revenue for the state, and bolster local economies.

Eliminating the possibility of DAC projects would discourage private investment, restrict innovation, and harm North Dakota's competitive position in the emerging carbon economy. State policy should remain technology-neutral and support efforts that encourage growth in both coal and oil industries.

For these reasons, I urge the committee to oppose House Bill 1574 with a Do Not Pass recommendation.

Thank you for your consideration,

Jonathan Fortner
VP of Government Relations
Lignite Energy Council

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701.258.7117 www.lignite.com LEC@lignite.com

Testimony HB1574

Sam Wagner
Ag and Food Field Organizer
Dakota Resource Council
1902 E Divide Ave
Bismarck ND 58501
Testimony in Support for HB1574

Dear Chairman and members of the Energy and Natural Resources Committee.
I am writing in support of HB 1574, which would create a moratorium on Direct Air Capture facilities. If we are indeed going to allow these types of facilities in our state, let us wait to know more about them. As such, a temporary ban on their construction is common sense.
These projects are often noisy, disturb cattle and wildlife, and have not been around long enough for us to know if there might be additional public nuisances or even threats to public health.

I've often stated when it comes to Direct Air Capture, It's way easier and cheaper to just plant trees or reseed large grasslands. They do the exact same thing and the area you plant becomes habitat for wildlife or a nice park. Not some industrial wasteland that is a nuisance to the public. Here we are spending so much time and energy trying to build mechanical trees.

As such, we recommend DO PASS on this bill.

25.0913.01001
Title.

Prepared by the Legislative Council staff for Representative S. Olson
January 29, 2025

Sixty-ninth
Legislative Assembly
of North Dakota

PROPOSED AMENDMENTS TO

HOUSE BILL NO. 1574

Introduced by

Representatives S. Olson, Henderson

Senators Clemens, Magrum, Weston

A BILL for an Act to create and enact a new section to chapter ~~38-22~~11-11 of the North Dakota Century Code, relating to a prohibition on direct air carbon dioxide capture projects; to amend and reenact section ~~38-08-21~~38-22-03 of the North Dakota Century Code, relating to the authority of the industrial commission; to provide for application; and to provide an expiration date.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

~~**SECTION 1. AMENDMENT.** Section 38-08-21 of the North Dakota Century Code is amended and reenacted as follows:~~

~~**38-08-21. Regulation of carbon dioxide and nitrogen gas.**~~

~~1. The commission is vested with the authority and duty to regulate the exploration, development, and production of carbon dioxide, coal bed methane gas, helium gas, and nitrogen gas within the state, in the same manner, insofar as is practicable, as it~~the commission regulates oil or gas as defined in this chapter.~~

~~2. The commission may not approve or authorize a direct air carbon dioxide capture project as defined under section 2 of this Act.~~

~~**SECTION 2.** A new section to chapter 38-22 of the North Dakota Century Code is created and enacted as follows:~~

~~**Direct air carbon dioxide capture projects - Prohibition.**~~

~~A person may not construct, implement, or operate a direct air carbon dioxide capture project in this state. As used in this section, "direct air carbon dioxide capture" means the~~

~~process of removing carbon dioxide directly from the atmosphere by using scrubbers and chemical processes for underground storage or use in products.~~

SECTION 1. A new section to chapter 11-11 of the North Dakota Century Code is created and enacted as follows:

Development of direct air carbon dioxide capture facility - Prohibition.

1. A board of county commissioners, including a board in a home rule county, may not procure, authorize, or approve a development agreement, building plan, or proposal relating to county development with a person seeking to construct, implement, or operate a facility conducting direct air carbon dioxide capture within a county of this state.
2. As used in this section, "direct air carbon dioxide capture" means the process of removing carbon dioxide directly from the atmosphere by using scrubbers and chemical processes for underground storage.

SECTION 2. AMENDMENT. Section 38-22-03 of the North Dakota Century Code is amended and reenacted as follows:

38-22-03. Commission authority.

The commission has authority:

1. Over all persons and property necessary to administer and enforce this chapter and its objectives.
2. To regulate activities relating to a storage facility, including construction, operation, and closure.
3. To enter, at a reasonable time and manner, a storage facility to inspect equipment and facilities; to observe, monitor, and investigate operations; and to inspect records required to be maintained at the facility.
4. To require that storage operators provide assurance, including bonds, that money is available to fulfill the storage operator's duties.
5. To exercise continuing jurisdiction over storage operators and storage facilities, including the authority, after notice and hearing, to amend provisions in a permit and to revoke a permit.
6. To dissolve or change the boundaries of any commission-established oil or gas field or unit that is within or near a storage reservoir's boundaries.

7. To permit storage facilities from all sources of carbon dioxide except facilities receiving carbon dioxide from a direct air carbon dioxide capture process, as defined under section 1 of this Act.

8. To grant, for good cause, exceptions to this chapter's requirements and implementing rules.

SECTION 3. APPLICATION. The prohibition under section ~~2~~1 of this Act does not apply to an operator of a direct air carbon dioxide capture project in possession of necessary local, state, and federal permits and approvals before the effective date of this Act.

SECTION 4. EXPIRATION DATE. This Act is effective through July 31, 2027, and after that date is ineffective.

HB 1574: Two Year Moratorium on Direct Air to Air CO2 Capture
House Energy & Natural Resources Committee
January 30, 2015
Presented by Rep. SuAnn Olson

Mr. Chairman and members of the committee, please note that I am presenting HB 1574 with an amendment.

HB 1574 is a bill that puts a 2-year moratorium on Direct Air Carbon Capture. The bill amends Sec. 11-11 and 38-22-03 and puts a stay on this type of project until July 31, 2027. This type of project is new and needs some time for the development of local ordinances. In addition, with the change in the federal administration, I think it makes sense to also allow some time to see the direction they want to take regarding these projects.

Dawn Shepherd has provided detailed testimony about what one county faced when a project was proposed that they were unprepared for. She has been ill and is unable to attend today. There were so many things to consider that the county simply wasn't prepared to address. Water issues, noise, viewshed, traffic safety, highway wear and impact on surrounding landowners and neighboring counties all must be considered. This is not something that is thrown together on the fly. One county has been working on their ordinances since last summer and still has a way to go. Calling for a two-year moratorium will allow counties to begin or continue thoughtful dialogue and the work of crafting ordinances that consider all the issues that will cover new projects that were unheard of just a few short years ago.

A two-year moratorium will also give us time to understand the agricultural impact of direct air capture. North Dakota is an agricultural state. Our pastures and cropland need CO2. Do rural areas, where these projects will be placed, have an excess of CO2? These projects will not generally be placed next to an industrial process that is generating CO2. So, shouldn’t we require measuring the level of CO2 in the air to ensure that we don't drive levels below what is optimum for plant growth? Do we have adequate guidelines for measuring CO2 in the air? Should these projects be banned from agricultural zones? These are valid questions that should be answered. We owe it to our farmers and ranchers. Agriculture is big business in our state, and we have a duty to protect it.

Mr. Chairman and members of the committee, I respectfully urge you to give HB 11574 as amended a DO PASS recommendation. Thank you.

Olson, SuAnn

From: Melissa Friesz <melissa.friesz@securityfirstbank.bank>
Sent: Wednesday, January 29, 2025 8:33 AM
To: Olson, SuAnn
Subject: Letter

Hello SuAnn,
That last letter I copied and pasted, pasted 2x. Sorry about that. Here is the one I wanted to get to you. I would love to watch the meeting. We are short of help at work on that day unfortunately. Thanks for you help. I greatly appreciate you going to bat for us. Thanks so very much.

SuAnn Olson,

Hello, my name is Melissa Friesz. I live at 3463 County Rd 87 New Salem ND. We are about 1.75 miles from the proposed site. As a kid I have always wanted to live back home, and we didn't come back by it easily. Many times, that land was almost lost due to illness in the family. My uncle saved the place, and we bought it 16 years ago and have been working our butts off to make this a beautiful place and our home. New barns, new fences, lots and lots of tearing down and putting up. We have added water lines. Started a herd of cattle with 4 head and now 70 head. Raising 1 kiddo and about 10 horses. We love where we live and not one time did, we ask for handouts but did it on our own. We have worked hard for what we love. Not one person gave us free money to get rich. We busted our butts and still are to make ends meet.
Having these Retract guys in our backyard makes me sick. We bought land out of town and build our lives around this peaceful area. I can only imagine the amount of chaos this will cause, and our peace destroyed and our safety compromised. Just too many unknowns that could cause a great deal of destruction or death if something were to happen with this plant.
I say this because I worked in the oil field in Beulah for 7 yrs. There was a beautiful farmstead across the road from the oil plant. Trucks and people were lined up 24 hours a day and it ran 365 days a year. The farmer across the road had a lot of problems in the time I was there. He had stuff stolen and people trespassing on his land several times. I believe a lot of these out of state guys were good, but it brought in a bunch of riff raff in too. He and his family eventually moved due to the constant noise and disruption of their safety and peace. I believe the oil company bought them out due to a lawsuit against the oil company. So, I have seen this firsthand.
I do not believe or feel this is the place for this project to go. We are an agricultural community. People live here. There is a wildlife area within this community. This sort of project should go next to a power plant, not in the middle of our livestock, farming and family.
There is really no land code that could be used in this area. Carbon capture is absolutely not the same as wind towers because they have fans. Where do fans have a leak that could kill animals or ppl. The 2 aren't even comparable. Am I crazy about the wind towers…no not really but I pick them over this crazy idea any day.
This is agricultural land also. People live here, agriculture is our living. How would anyone feel if stuff or ppl started to die? This is something that is not fixable. Is it worth taking the chance even? How much time would I and my elderly parents that live down the hill from us have to get to safety. Depending on the wind and weather I don't think we would have a chance. Our family, cattle and pets all gone in second. No one is trained to even fight a fire or disaster that could come from this plant. I visited with a firefighter from New Salem, volunteers of course. He told me he wouldn't even attempt to go out there, too dangerous. We wouldn't have a chance. If the wind is blowing like it has been this could be a major catastrophe.

Retract has been nothing but sneaky about this whole process. They only told a few neighbors. They have told many lies. They even have gone and had people who don't live in our area sign their form letters. How the heck can they approve this plant when it has nothing to do with them? It won't affect them as they don't live in the area even. Trying to get support from people who have absolutely nothing to do with this is crazy.
How about the health & safety of our families and livestock in the area or safety of people who live there? Traffic safety during and after construction, air pollution from the construction, security of the residents from hundreds of construction workers from who knows where, during the 18-month expected construction period sure seems like a few things that could cause problems in our area. Will our drinking water remain safe? Will it contaminate wells? No one knows and how can this risk even be considered.
What about the noise? I don't believe their studies are legit at all. I can hear the interstate or wind towers and a train on a calm night. The train is the furthest away from us. About 5 miles. We don't live where there is a lot of noise. I don't believe for a second that this won't make noise we won't hear.
How will anyone handle the CO2 dangers or sequestration leaks, explosions, chemicals/solvents used by the facility being emitted in the air. The air, my animals, and my FAMILY will breathe this. How will anyone live with the fact that a decision made to put this plant in our area may hurt or cause some major destruction at some time?
What about the way this plant is going to devalue all I have worked so hard for. My land and property. I sure would not want to live next to this if I was looking for a house or real estate.
There are so many impacts to county/public resources/expenditures. Retract is not being fiscally responsible, allowing billions of taxpayer dollars to be used through government programs for Direct Air Capture and Sequestration of CO2, especially in an area where there is so little CO2. We depend on CO2 to feed our cattle, for our crops and pastures and make hay. We have had some of the best crops in our area in the last few years. Now some guys who have no experience in the agricultural realm want to change it. They don't care about the environment; they admitted it's all about the money. It's a transfer of wealth. This company has zero history of building a DAC or Sequestration Facility. Zero credibility. Zero ability to get REAL studies for overall impact to area. No other facility like it in the country or elsewhere in the world in a community like ours. It is absurd! Agriculturally zoned land should not be used for an 86-acre industrial complex.
What kind of farming disruption will there be. Their equipment using the road throughout planting/harvesting/haying seasons. My family trying to get to work and school with all this going on. What kind of danger will this all cause with all the facility truck traffic.
What about Danzig Dam and the pore space right up to it. Will wetlands be disturbed? Bird migration patterns disrupted. Wildlife will be disturbed and most likely will leave. Pollinators such as bees/bird/butterflies will most likely get sucked into the fans.
Utilities must be self-generated with new substation, water must be trucked in daily, all creating new additional pollution not there now. This is country life at its best. Please don't allow all this to happen where we live.
Will all this massive energy consumption to capture the CO2 lead to our rates going up? It has to come from somewhere.
I know this all must be a broken record already. I appreciate all you do and your work on getting a moratorium for these projects. Just wanted to touch on a few things. Sorry to get so long but this is scary and as you would say, I have LOST sleep over it. We have been kicked out of our pastures we rented for years from Fabian Fitterer. I have even had some of the landowners stoop so low to call my boss and complain about me. Like what I do at work has anything to do with CO2 but they are trying to cause issues for me because I don't agree with them. Neighbors that have been neighbors for years fighting and not getting along anymore. This has been very disturbing and now going on 2 years. I know landowners have the right to do what they want with their land, but this project just doesn't work here. Next, we will be putting strip clubs in our churches! This is about how crazy I feel this is.
Please don't allow this in our area. We love where we live. This keeps me up at night worrying how unsafe my home could become. Put yourself in our shoes. We have worked hard for what we have. We don't want to leave or live where we fear for our lives. This was my grandpa's land, and we take great pride in living there and making it our beautiful home. We don't want this plant in the middle of our neighborhood. It's ridiculous. Of course, the people that are signed up for it, don't live anywhere near the plant. They just have land they rent out. Their homes are elsewhere. So no worries for them, unlike us who live with our kids and families. It scares me to death.
Again! Thanks so much. I appreciate all you do. Please put this project somewhere else it would fit better, not in our agricultural community, not by our cherished homes. Thanks for your time. I appreciate it.

Melissa Friesz

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Chairman Porter, members of the committee, on behalf of the Energy & Environmental Research Center (EERC), thank you for this opportunity to provide feedback on House Bill 1574. As a leading developer of technologies to advance optimization of our energy resources and address environmental challenges, the EERC has spent decades assisting in the research and development of carbon capture technologies, carbon dioxide (CO_2) utilization, and CO_2 storage, as well as providing science-based support for regulatory frameworks that ensure proper oversight and safety of carbon capture utilization and storage (CCUS). Since 2003, the EERC has also led the Plains CO_2 Reduction (PCOR) Partnership with the goal of advancing CCUS through site characterization, demonstration, and commercial deployment.

Accordingly, while the federal government, namely the Environmental Protection Agency, has developed regulations under a waste disposal framework, North Dakota has adopted one of a commodity-based resource management program, which has been recommended by the Interstate Oil and Gas Compact Commission. A resource management framework recognizes the regulatory complexity of CO_2 storage and allows for the integration of environmental protection; ownership and management of the pore space; maximization of storage resource; and responsibility for long-term liabilities into an all-encompassing (i.e., cradle-to-grave) regulatory framework.

The timeline of North Dakota's regulatory development is summarized as follows:

- Effective April 2009: Senate Bill 2139 created North Dakota Century Code (NDCC) Chapter 47-31, Subsurface Pore Space Policy, which granted the title of pore space ownership to the overlying surface estate and prohibited severing the title to the pore space from surface ownership, although leasing is allowed. The relationship between pore space and mineral estates identified the mineral estate as dominant.

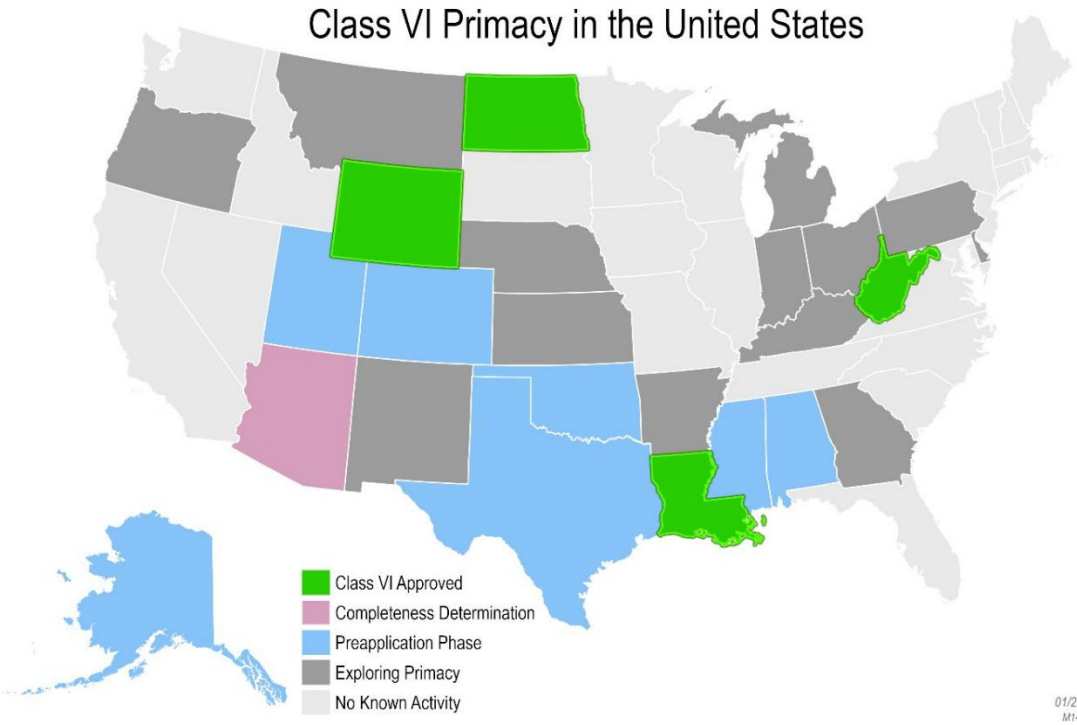
- Effective July 2009: Senate Bill 2095 created NDCC Chapter 38-22, Carbon Dioxide Underground Storage, a new statutory chapter that granted regulatory authority to NDIC, established permit requirements that included pore space amalgamation, created an administrative fund and a long-term trust fund, and addressed responsibility for long-term liability through a certificate of project completion (to be issued no sooner than 10 years postinjection following demonstration of a stable CO_2 plume in the subsurface) and transfer of title of the stored CO_2.

- Effective April 2010: North Dakota Administrative Code (NDAC) Chapter 43-05-01, Geologic Storage of Carbon Dioxide, provided a first-of-a-kind state regulatory framework that incorporates permitting, well construction, and detailed engineering and geological data analyses, along with a CO_2 injection plan that includes a description of the mechanisms of geologic confinement to ensure the prevention of horizontal or vertical migration of CO_2 beyond the proposed storage reservoir. The operator is also required to submit for state approval an emergency response plan, worker safety plan, corrosion monitoring and prevention plan, and a facility and storage reservoir leak detection and monitoring plan.

- 2011: House Bill 1014 provided an appropriation of $532,000 from the general fund to the CO_2 storage facility administrative fund, which was established in 2009, creating one full-time position to prepare a Class VI primacy application and secure approval of Class VI primacy for the state of North Dakota.

- Effective April 2013: NDAC Chapter 43-05-01, Geologic Storage of Carbon Dioxide, was amended (effective April 2013) to meet the "as stringent as" standard of the federal Class VI UIC program. EPA required rules to be codified as part of North Dakota's Class VI primacy application.

This regulatory environment led to North Dakota being the first state in the nation to be awarded primacy status for Class VI injection of CO_2. Gaining primacy status represents that North Dakota regulations meet the "as stringent" standard of federal Class VI underground injection control program requirements. Since then, three other states have been awarded primacy status, while seven are in the preapplication phase, and a dozen are exploring the prospect of Class VI primacy as depicted below:



Concurrently with these regulatory developments, monetary incentives for the commercial deployment of CCUS projects have also developed in the form of federal tax incentives and further evolution of CO_2 credits and voluntary markets such as low-carbon fuel programs, firmly establishing CO_2 as a commodity resource. The cumulative result of this progress being that North Dakota is now home to four commercial-scale CCUS projects. These projects are helping secure the economic viability of the state's (and Northern Hemisphere's) only coal gasification plant, producing incremental oil from legacy operations in southwest North Dakota, and creating new economic opportunity for North Dakota

agriculture and ethanol producers. Looking forward, the stage that North Dakota has set for CCUS continues to drive interest for development of CO_2 capture projects, including point source capture from in-state facilities, development of sustainable aviation fuel and other low-carbon energy sources, and direct air capture (DAC).

DAC is a CO_2 capture technology similar to that which would be applied to a point source, except that the CO_2 is captured from ambient air versus the flue gas of a power plant or industrial facility. DAC has gained significant interest from the private sector and energy industry for the ability to provide CO_2 offsets and comply with scope 3 emissions requirements. Several companies have expressed interest in siting DAC facilities in North Dakota due to access to CO_2 storage and opportunity for utilization via enhanced oil recovery (EOR). Further, as DAC is a net electric consumer, project developers see opportunity in utilizing North Dakota natural gas for on-site power generation.

In the interest of developing a commodity-based economy for CO_2, North Dakota should be technology agnostic. Enabling CO_2 capture from all sources serves multiple purposes – ensuring the successful development of carbon capture technologies, providing for EOR that will extend Bakken production, providing a safeguard for the state's coal industry, and supporting the growth of other low-carbon agricultural and energy sectors. CO_2 utilization secures the benefits our state has enjoyed from its energy resources through tax revenues, jobs, and low-cost reliable energy for generations to come.

House Bill 1574, as well as other legislation being considered by this committee today only serves to preclude development of this technology and devalue CO_2 as an important commodity for North Dakotans. Further, as mentioned above, while North Dakota benefits from its head start in this space, there is growing opportunity for competition in the region and across the nation. As our economy has demonstrated time and again, investment will go somewhere, and tends to go where it is welcome. Reaping the benefits of CO_2 capture to maximize the Bakken, preserve our coal industry, and provide future opportunities for generations of North Dakotans relies on the continued consistency, and certainty, of North Dakota's CO_2 policy and regulatory framework.

Thank you again for this opportunity to provide comments on this important issue and I would be happy to answer any questions.

January 28, 2025

Dawn Shepard
3470 County Road 87
New Salem, ND 58563

RE: Testimony in Support of HB 1574

To the Members of the House Energy and Natural Resources Committee;

My fiancé and I live on a 160 acre farm northwest of New Salem that we purchased in 2009. It's a property with a smaller home, outbuildings, and all pasture, which we need for our cattle and horses. Since moving there, we've cleared out dozens of dead trees, planted hundreds of evergreens, re-fenced everything, and cross fenced to make it through the dry years. We've worked hard on this property, because, more than anything, we love the location. We don't like traffic and it's on a gravel road. 3 miles from blacktop one way, 7 miles the other. The roads are incredibly maintained by our county. Our driveway is a quarter mile long, and our home is right in the middle, so neighborly traffic going by doesn't even faze us. And we have the best neighbors in the world there. Friendly, helpful, caring. Courteous when we meet on the road, slowing down, giving each other room. We have the greatest sense of safety and security living there. We can see Storm Creek and Danzig Dam just across the field SE of us, so we enjoy a great deal of wildlife near our home, especially when the birds are migrating. When we moved there, it was a beautiful, pristine, serene location on all four sides of our home. We loved it.

Since 2011, we've lost a lot of that beauty. A power company from MN started putting up wind towers that year. Apparently, it was something that had been a "done deal" they told us, before we bought this property. It was not disclosed to us by the seller, and these things called wind farms weren't even on our radar at that time. So we weren't happy with it, but there was nothing we could do. At first, we were only told of about a dozen turbines going up at that time. We thought it would be tolerable. Today, I can drive up our county road and when I get a mile from our property heading north; it's a skyline of wind turbines. Currently, I can easily count over 150 from the end of our driveway. 5 are just a mile from our home, with about another dozen in the second mile. When looking out my kitchen window, I am staring at 3 of them less than a mile of our home. When we work outside, they're always there. No more pristine view on three sides of us. I do a lot of photography and it's tough to get a photo without a wind tower in them anymore. We received no compensation for the loss of beauty or the loss of value in our home from them. Red lights flickering at night, certain days the noise is like a jet engine roaring. But we just learned to be grateful for the view from our front deck, where we could still sit and enjoy the scenery to the south. No turbines there. Nothing but blue skies, low rolling hills and Danzig Dam still there to make things beautiful and serene.

Fast forward to summer of 2023 when some strangers from a company out of Colorado were knocking on everyone's doors within 20 miles of our home with leases in hand, asking to turn over the rights to our property to them for a direct air capture facility. None of us had even heard of such a thing. We'd all heard about the Summit Pipeline, and carbon capture from the ethanol plants, but NONE of us had any idea of what this was. When we started doing some research, there was very little to go on. It was such a new concept; there was minimal information for us. What we did find was that it was massively energy intensive, required extreme amounts of water, and that it involved giant fans that were extremely noisy, that attempted to capture the CO2 from the ambient air. DAC attempts to capture CO2 that is normally at a rate of less than .04% in an area like ours. Plants need .03% to grow. Any lower and they start to die. As do humans and all forms of life. How are the crops and grass in our area supposed to grow if all residual CO2 is removed? We'd never heard of anything so insane, and to put it in a farming area where the air was clean and people lived because they didn't want to be around any industries! Common sense tells you that just building such a thing out there would create more pollution than it would capture.

This company said they REALLY wanted to put it up right across from us, because they were going to need a LOT of water, and figured they could take it from Storm Creek and the Danzig area. Over our dead bodies! We told them no, go away, and don't come back. And then we learned of all the government subsidies that would need to go to pay for these facilities. Insane amounts of taxpayer dollars...OUR dollars!

Neighbors started talking and a group of over 80 people met one night to discuss this facility and the leases. The DAC company was NOT invited. Everyone's questions were answered from others there about what direct air capture really was. There was not one person there who wanted this near their homes or in their neighborhoods, and we all agreed we weren't going to sign. Our beauty, privacy, peace, our sense of safety and our entire futures would be stolen from us; everything all of us had worked for, many who'd lived there their entire lives, it would all be gone if this thing went up near any of our homes.

Winter came, and we all thought we were out of the woods and that these people had given up and gone back to Colorado. Until early February of 2024, when we received a letter from our county planning and zoning that this company had filed for a Special Use Permit to put this facility a mile and half straight south of our home, with a sequestration area that would border the gravel road right across from our pasture where our cattle graze and just 1/4 mile from our home. I was shaking when I read that letter. Stunned, thinking, how could this happen? My neighbor across the road called me and she was in tears. She and her husband and daughter and parents still lived on the same property they always had...she'd grown up there. She felt her entire world collapse when she read that letter. It was an instant fear that this safe, peaceful, serene way of life we'd been living was over. It gripped us all.

Word spread like wildfire to neighbors. We only had 2 weeks to figure out how we were going to stop this and save our way of life and our neighborhood from this noisy, ugly, industrial complex that an unknown out of state company was trying to put up here. And who had signed the leases with them? We found it was people who'd grown up there, still owned the land, but had moved far away. None who signed leases lived anywhere near us. Some of them even lived out of state. They wouldn't have THEIR lives destroyed, but they had no problem destroying ours. They were talking about a 100+ acre facility with 144 units approximately 30'wx60'lx35' high - and each with 6 huge fans on them...before the sequestration land was even included.

Long story short, we fought back. We didn't sleep, we didn't eat. It consumed every moment of our daily lives. We banded together. Neighbors from 25 miles or more away stood by our side, as we would do for them if it had been in their back yard. Our stomachs were in knots. The stress, the fear and grief was immeasurable. Our entire futures, our livelihoods, our health, the safety and security of our families rested on the outcome of this meeting. That night, after over 3 hours of testimony from opponents of the facility, the planning and zoning committee voted to recommend a denial for the permit. It was an immediate ton of bricks lifted off our shoulders. We felt like we had our lives back. The permit application would still get a chance with the County Commissioners, but we at least had some breathing space & hope.

Because of our continued concern they could still be permitted, we and our neighbors pitched in and hired an attorney, should another permit battle ensue. We were glad we did, because though the DAC applicant withdrew that application, they reapplied in June. Our county had already started the procedure to issue a temporary moratorium on DAC, as much discussion had taken place on the subject that there were no current county land use standards for DAC siting or anything even close to it. But because the applicant applied before the moratorium could be fully enacted, they were allowed to go through the permitting process a second time with their newly beefed up application.

Our peace of mind had been short lived. And once again, here we were preparing for another battle against DAC in our neighborhood. For the next month leading up to the permit meeting, we were all more stressed than the first. None of us slept, barely ate, missed family activities staying home to do research, sent emails and letters to the P&Z with our findings, and prepared testimony for the meeting.

We were mentally, physically and emotionally drained, again, at the thought of losing our sense of safety, our health, security, and livelihoods should this thing get permitted and go up near our homes. We were not going to have another massive industry on the fourth side of our home, destroying our lives and devaluing our property even more, making it nearly worthless. Who would want to live near this monstrosity?

At the P&Z hearing for the second application in late July, another full house was there battling it out. This hearing went as long as the first one. The planning and zoning finally voted again to recommend a denial of the DAC permit. The joy and relief we all felt was immense. The applicant ended up withdrawing their application a month later, before it went to the county commissioners. The moratorium had passed and was now in effect, and we could all finally breathe a real sigh of relief and enjoy our lives again, instead of every waking moment being consumed in fear and stress with this battle.

In October, the P&Z Subcommittee began meeting to work on land use codes to develop specific use standards for direct air capture facilities. This is the way things SHOULD be done. Land use codes and standards specific for such a facility need to be developed by all counties in order that rural families like ours can avoid going through what we did. Blindsided, months of stress, emotional, physical and mental strain, wear and tear on family relationships because of the pressure, thousands of dollars spent in legal fees to protect our families, our homes, our very livelihoods and our futures.

And that is why I am supporting HB1574. A 2 year statewide moratorium would give all counties the time to work on specific use standards for direct air capture facilities that work for their residents, where special use permits should not be approved for projects that adversely affect the health and safety of the residents, or the farming in the area. As our subcommittee has been going through the process, each meeting seems to open up another area of a DAC facility that needs standards that had not been considered at the previous meeting. They are immense and complex facilities.

There are numerous types of methods, equipment, fan sizes, and chemicals used to capture and process the minimal amount of CO2 they claim they can capture. Some of the chemicals are cancer causing and can drift to people's front yards. DAC noise is a major problem in a rural community. People live in the country to get away from city and industrial noise, not to have it shoved down their throats nonstop, 24/7/365 from fans and generation systems and power plants needed to supply electricity for these facilities.

Power must come from their own generation source, which is normally natural gas and therefore creates more CO2 for them to capture and get paid for that didn't exist in the first place. They create more of a problem than they solve and need to be regulated and sited very carefully to avoid a massive waste of taxpayer dollars and destruction to the lives of those living closest to them, and to the wildlife in the area.

These facilities are the most expensive and energy intensive, while also the least productive, form of carbon capture in existence. They can cost 3-4 times the amount of what it costs for a normal carbon capture unit to be built at the site of the emissions. As of November 2024, DAC facilities were still averaging a cost of $700-$1100 per ton of CO2 captured versus on site carbon capture facilities, averaging $50-$150 per ton. That's a lot of wasted taxpayer dollars that could be used more wisely. Additionally, most DAC facilities only capture 15-30% of their "expected capability" because it takes 1600 tons of air to be moved around to capture just one ton CO2. At this time, DAC just cannot survive without continual government subsidies. It is NOT economic development when taxpayers are footing the bill.

Water availability is a major issue with a DAC. They need it for cooling, for separating, for rinsing the fan blades; the applicant we fought were talking millions of gallons per year for theirs. Where are they going to get it? There are also lighting standards needed. People live in the country so they can gaze at the stars at night, not so the skies can be invaded by lighting from a massive facility they don't want there.

Fire safety is a major issue. When these facilities are in a remote rural area, who's going to put a prairie fire out that could start from an industrial fire on a windy day? Local rural volunteer fire fighters are at work. By the time someone could get to it, hundreds to thousands of acres and homes could be burning. All of this needs to be considered when siting a DAC, for the safety of the residents in the area.

Traffic is a big issue. The areas DAC companies want to build have gravel roads, families traveling on them, young teen drivers with little experience, farming equipment during planting and harvesting, school buses. Rural residents know their neighbors, their community and their traffic flow and use caution, looking out for their neighbors. A 5-6 year construction plan for a DAC means drivers and large trucks on the roads unfamiliar with the residents and a high risk of accidents, some serious or deadly. Not to mention the wear and tear on the roads and the dust, and all of this needs to be considered in siting standards and road use agreements before permitting.

People don't want CO2 sequestered next to their property, where it can spread and leak into underground water sources, or worse yet, have a leaking pipe that causes it to dangerously escape into the air. The state of Illinois has once again recently enacted a moratorium on CO2 sequestration because of the underground leaks they are finding. Caution needs to be used for sequestration siting in a residential area. We need to pay attention to what is happening in other parts of the country and learn from it.

Don't let the residents of North Dakota become guinea pigs for this industry. A two year state moratorium on DAC would give the people of the state time to research the need for safety regulations for this new technology, as there is very little history for it that can be used for human health and environmental impact studies at this time. We still don't know enough about this technology to even know what conditions to apply for siting. We are researching and learning. This moratorium will give counties time to create land use standards necessary for safe and responsible siting of this technology. It will save massive amounts of taxpayer dollars being wasted for something that is proving futile, and instead allows those funds to be used for something more productive and useful for the state of North Dakota.

My personal story and the knowledge gained about DAC because of it, brings me to support HB1574. I urge the members of this committee to vote to pass this bill.

Thank you for your consideration.

Dawn M. Shepard

January 28, 2025

Greater North Dakota Chamber

GREATER NORTH DAKOTA CHAMBER
HB 1574
House Energy and Natural Resources Committee
Chair Todd Porter
January 30, 2025

Mr. Chairman and members of the Committee, my name is Arik Spencer, President and CEO OF 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** to House Bill 1574.

HB 1574, which would prohibit direct-air carbon capture projects, changes North Dakota's well-thought-out energy regulatory environment by stopping projects in development and flies in the face of the regulatory certainty our members expect from all government levels. This bill is not just about direct-air carbon capture projects; more concerningly, it sends a message to other industries that ND is a risky state to invest in because we lack regulatory certainty, an issue we have seen at the federal level but not the state level thus far.

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 backward or for the legislature to pick winners and losers. 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 HB 1574.

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

NORTH Dakota | Industrial Commission

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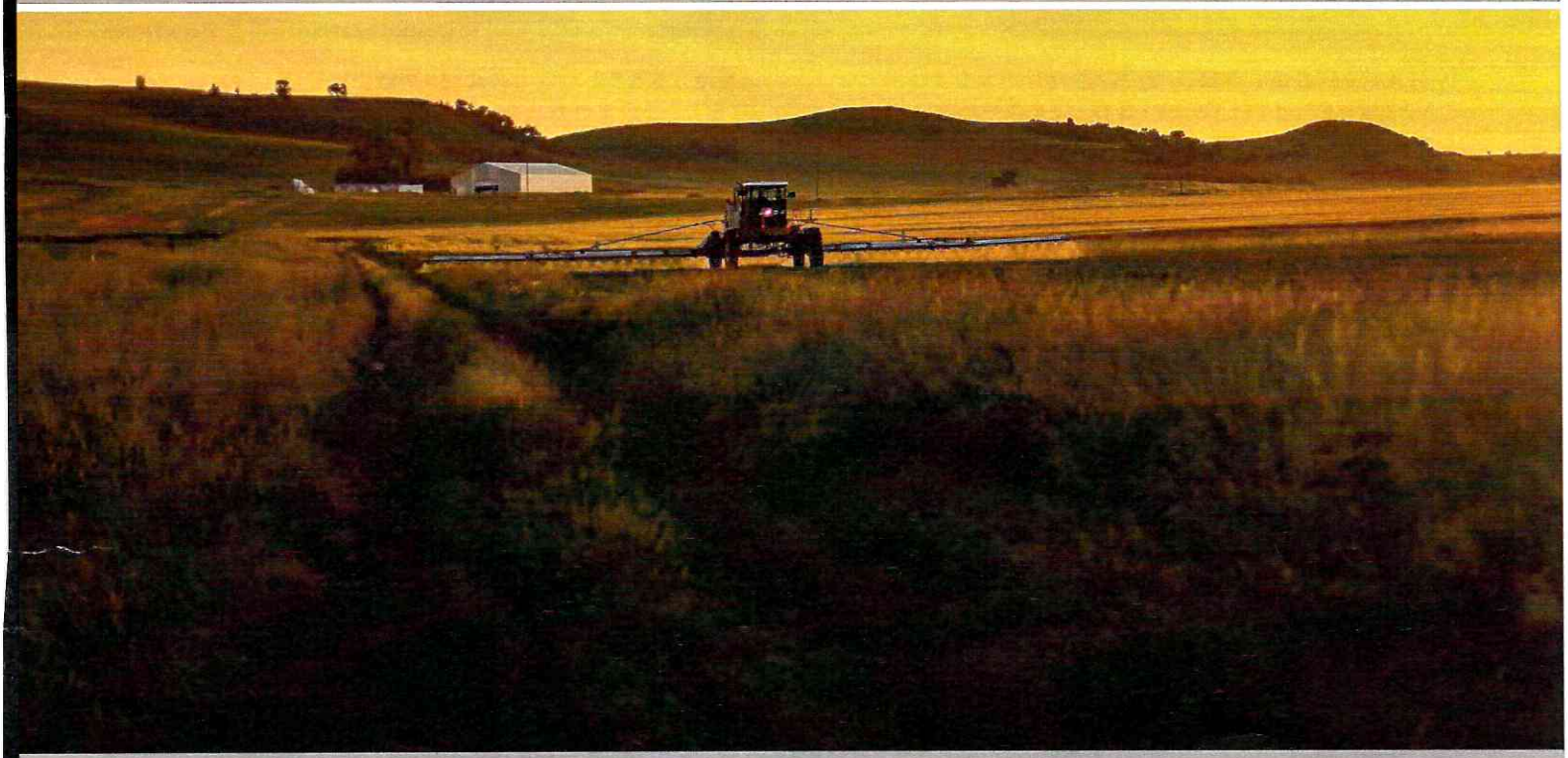


UNDERSTANDING CO_2: NORTH DAKOTA'S ROLE

LANDOWNER FREQUENTLY ASKED QUESTIONS

In North Dakota, we take great pride in our agricultural and energy heritage—it's a core part of who we are. But now, we're facing new challenges. Federal regulations are tightening their grip on the oil, gas, biofuel, and coal industries, leading to a sharp rise in the need for capturing, using, and storing carbon dioxide (CO_2) deep underground.

While there's still debate about how much CO_2 impacts our atmosphere, the reality is our local farmers and energy workers are under increasing regulations to produce low- or no-carbon products and energy.

For our community, navigating these changes is crucial. It's about finding the best ways to adapt, ensuring that our way of life continues while meeting these new demands.

WHAT IS CO_2 AND WHAT IS CARBON CAPTURE, UTILIZATION, STORAGE, AND/OR SEQUESTRATION?

Carbon Dioxide, or CO_2, is a non-flammable, non-explosive, naturally occurring gas. It is exhaled by humans every time you breathe; is used in hundreds of products including soda, dry ice and fire extinguishers; and is a necessary component of plant growth.

- **Carbon Capture** is the act of separating CO_2 molecules from the flue gas of an industrial facility (such as a power plant or ethanol plant), or directly from the atmosphere.
- **Carbon Storage**, or Sequestration, is injecting captured CO_2 deep underground (nearly a mile or more in North Dakota) within porous rock beds, covered by a solid rock cap.
- **Carbon Utilization** is using captured CO_2 for other purposes, including enhanced oil recovery (EOR).

IS STORING CO_2 UNDERGROUND SAFE?

North Dakota has been at the forefront of studying and implementing CO_2 initiatives for more than 20 years. CO_2 capture, utilization and storage projects are designed to be safe for people, animals, plants, and the environment. Before a CO_2 storage project ever begins, scientists identify and evaluate acceptable sites to be considered.

Our unique geology is perfectly suited for safe storage of CO_2 nearly a mile or more below the surface, and thousands of feet below the water table.

WILL STORING CO_2 UNDERGROUND BE HARMFUL TO MY GRASS, CROPS OR DRINKING WATER?

Similar to how oil reserves deep underground do not have an impact on the surface or water supply, CO_2 will also remain safely beneath an impervious cap rock and will not have an impact on the surface, water, soil, or plants thousands of feet above. Crops and grass can grow above these areas and animals will be able to safely graze.

IS IT SAFE TO TRANSPORT CO_2 IN UNDERGROUND PIPELINES?

CO_2 pipelines have been operating safely in the United States for more than 50 years. Decades of data has helped us understand how CO_2 behaves deep underground, and how to safely transport it through pipelines. Today, millions of metric tons of CO_2 are safely transported across the country through 5,000+ miles of pipeline – including nearly 200 miles in North Dakota.

Pipelines are designed to safely operate under the pressures (between 1200-2200 psi) required for "dense phase" CO_2 transport. Before any CO_2 is transported, pipelines are filled with fresh water or inert gas at a pressure 125% of their maximum operating pressure to ensure structural integrity.

Pipelines and storage sites have stringent regulations, monitoring, and mitigation requirements. North Dakota prioritizes significant planning, research, training, and technology to be prepared for any unexpected scenarios.

CO_2 CAPTURE AND STORAGE IN ND

- **Red Trail Energy Ethanol Plant, Richardton**
  Began operations on June 16, 2022; captures and stores up to 180,000 metric tons of CO_2 annually.
- **Blue Flint Ethanol, Underwood**
  Began operations on October 28, 2023; captures and stores up to 220,000 metric tons of CO_2 annually.
- **Great Plains Synfuels Plant, Beulah**
  Began operations on February 4, 2024; captures and stores up to 2.7 million metric tons of CO_2 annually.

CO_2 PIPELINES

- **Dakota Gas/Souris Valley Pipeline**
  Began operations in 2000. This 205-mile pipeline runs from Beulah, northwest past Tioga, and into Saskatchewan, Canada. It has been transporting up to 2 million metric tons of CO_2 annually for enhanced oil recovery (EOR) for nearly 25 years.
- **Denbury/ExxonMobile Pipeline**
  Began operations in 2022. The final 9 miles of this pipeline, which starts in Wyoming, delivers CO_2 to the Bowman area for enhanced oil recovery (EOR).

DOES CO_2 EXPLODE? WHAT HAPPENS IF THERE IS A LEAK?

Unlike natural gas and liquid petroleum - which are transported through millions of miles of pipelines across the U.S. – CO_2 is not flammable or explosive. In the unlikely occurrence CO_2 escapes from a pipeline or through the surface, it will become dry ice or go back to a gaseous state. While prolonged exposure to high concentrations of CO_2 can cause breathing difficulty, the gas typically quickly evaporates into the air and requires little to no clean-up. In the event of a leak, pipeline systems are designed to automatically shutdown, ceasing all operations until the cause is determined and repaired, and a reporting process through North Dakota's Unified Spill Reporting System is triggered.

What happened in Mississippi?

The 2020 CO_2 pipeline failure in Satartia, Mississippi was a "worst-case scenario," and resulted in several lessons learned.

First, the pipeline operator was cited for violating multiple regulations. When federal pipeline regulations are followed, pipelines outperform the safety standards of both rail and truck transit.

Second, the soil where the pipeline was installed was unstable, and susceptible to movement from high rainfall. The incident followed heavy rains (7.5 to 13.5 inches above average) that resulted in a landslide, rupturing the pipeline as the ground shifted.

Lastly, weather conditions, lack of wind, and the density/volume of CO_2 released slowed its dissipation; the operator models underestimated the potential affected area; the operator did not adequately inform emergency responders; and the pipeline did not contain pure CO_2.

One misconception is that this pipeline "exploded." Rather, the pipeline experienced "explosive decompression." This happens when a pipe that carries gas or liquid breaks very quickly – like blowing up a balloon and popping it with a pin. The material escapes quickly, causing a powerful rush and noise, disturbing the ground immediately around the break point.

WILL STORING CO_2 PREVENT ME FROM HARVESTING OIL OR OTHER MINERALS?

The CO_2 injected deep underground for dedicated permanent storage goes into layers that do not contain harvestable minerals such as oil, and does not co-mingle with oil-bearing layers. Comprehensive state regulations provide for oil and mineral exploration near CO_2 storage zones while keeping the CO_2 securely in place.

HOW DO I BENEFIT FROM A CO_2 PIPELINE EASEMENT ON MY PROPERTY?

In nearly all circumstances, a company requesting land access will ask for an easement – the right to access or use a portion of private property for a specific reason, outlined in an easement agreement. Easements can be temporary (for construction); permanent (for long-term maintenance or access to a pipeline or facility); or both.

When granting an easement, the landowner retains ownership of the land and can continue to use it. Specific terms or limited restrictions can be negotiated and are defined within the agreement. Any company requesting an easement will negotiate directly with property owners for fair and just compensation for any rights being sought. Payments typically meet or exceed market value.

HOW DO I BENEFIT FROM CO_2 STORAGE UNDER MY PROPERTY?

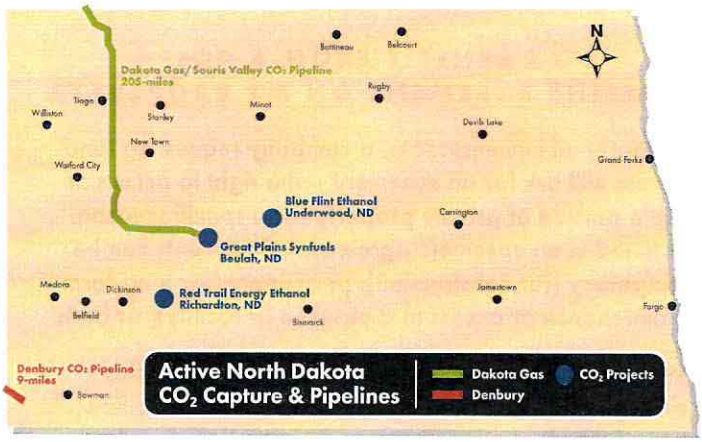
The deep underground pore space where CO_2 is injected also continues to be owned by the surface landowner. Landowners are paid royalties per CO_2 injected into their pore space, similar to oil and gas mineral rights.

HOW ARE LANDOWNER RIGHTS PROTECTED?

The terms "eminent domain" and "amalgamation" have gotten a lot of media attention recently. Eminent domain broadly refers to the government's ability to compensate a property owner to convert a portion of private property to public use.

Amalgamation broadly refers to the government's ability to include underground pore space owned by non-consenting landowners as part of a CO_2 storage facility. This can only happen when consent is given by at least 60% of the pore space owners. Like eminent domain, property owners are equitably compensated. Amalgamation of pore space is similar to the unitization of oil and gas minerals.

When it comes to CO_2, the focus is **voluntary participation** and **fair compensation**. There is no intention or desire to take land ownership. It is important to understand that even if eminent domain or amalgamation were exercised, ownership of the land would still remain with the property owner and would not result in the loss of land. CO_2 efforts only pertain to pipeline easements or underground storage agreements and have very little impact on surface uses.



HOW IS THIS GOOD FOR NORTH DAKOTA? WHY DO IT AT ALL?

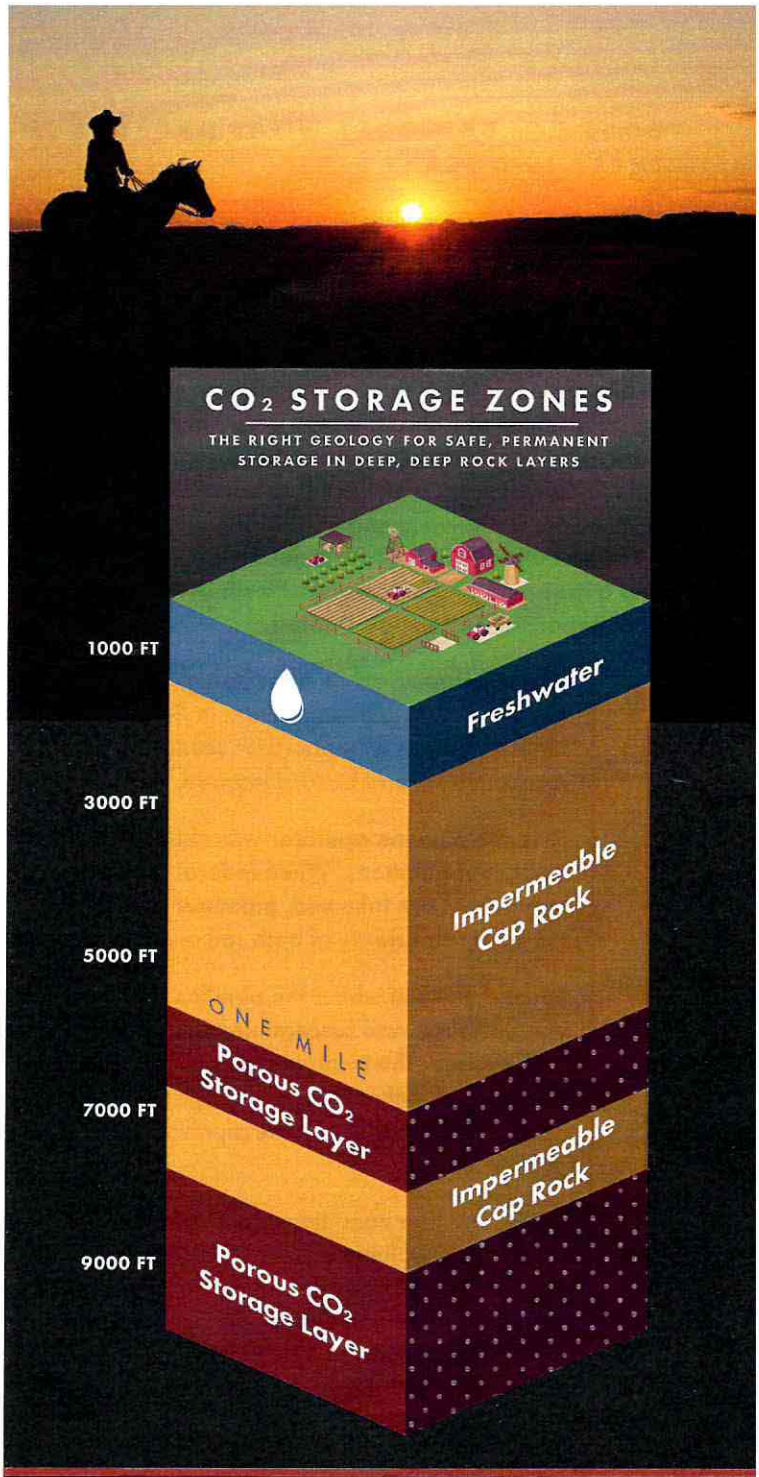
Because of stringent federal regulations, capturing and storing CO_2 benefits our coal and ethanol plants by allowing them to continue operations in a low- or no-carbon market. A developing CO_2 industry also has the potential to benefit corn producers from increased ethanol production, provide tax and economic benefits to the state and can help extend the life of North Dakota oil fields through enhanced oil recovery.

HOW WILL CO_2 PIPELINES OR UNDERGROUND STORAGE AFFECT MY PROPERTY VALUE AND INSURANCE?

Property values are typically influenced by factors such as lot size, yard space, and development potential. This tends to be consistent in new and mature neighborhoods, as well as in both urban and rural settings. Natural gas and liquid petroleum pipelines have existed near or beneath North Dakota homes for decades and have not deterred economic or residential development or values.

There is no precedent for landowners needing additional insurance for pipelines on their property. This is also true for CO_2 pipelines or underground storage. North Dakota law protects landowners from financial responsibility for damage to their property or related environmental impacts, in these instances.

In addition, CO_2 storage facility operators must have the proper financial instruments and ability in place to cover the cost of any necessary corrective action, injection well plugging, post-injection site care/facility closure, and emergency and remedial response before the CO_2 storage facility ever begins injection. These instruments are required to remain in place until the CO_2 storage facility is approved for closure.



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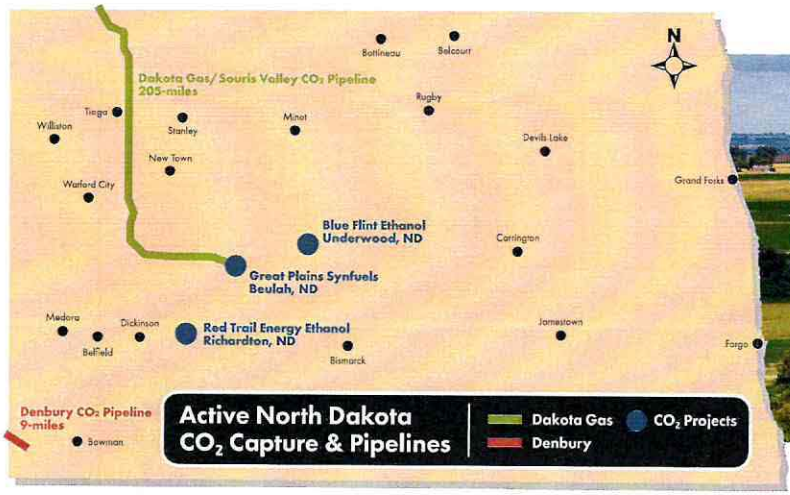
UNDERSTANDING CO_2: NORTH DAKOTA'S ROLE

FREQUENTLY ASKED QUESTIONS

North Dakota is known for, and extremely proud of its agriculture and energy production. As federal regulations continue to impose stricter standards on the oil, gas, biofuel, and coal industries, the state has seen a drastic increase in demand across all energy sectors for capturing, using, and permanently storing carbon dioxide (CO_2) deep underground.

While the impacts of increasing CO_2 levels in the atmosphere are debatable, the reality is that fossil fuel (oil, coal, gas) and ag producers are facing increased legal, regulatory, and economic pressures to produce low- or no- carbon products and energy. It is vital for the state's energy and ag industries to figure out the best way to manage these challenges.



UNDERSTANDING CO_2

WHAT IS CARBON DIOXIDE (CO_2)?

Carbon Dioxide, or CO_2, is a non-flammable, non-explosive, naturally occurring gas. It is exhaled by humans every time you breathe; is used in hundreds of products including soda, dry ice and fire extinguishers; and is a necessary component of plant growth.

CO_2 ***is not*** Carbon Monoxide (CO), a dangerous gas that is produced by burning of fuels in gas appliances, fireplaces, grills, and automobiles.

WHAT DOES CARBON CAPTURE, UTILIZATION, STORAGE, AND/OR SEQUESTRATION MEAN?

Carbon Capture is the act of separating CO_2 molecules from the flue gas of an industrial facility (such as a power plant or ethanol plant), or directly from the atmosphere.

Carbon Storage, or Sequestration, is injecting captured CO_2 deep underground (nearly a mile or more in North Dakota) within porous rock beds, covered by cap rock.

Carbon Utilization is using captured CO_2 for other purposes, including enhanced oil recovery (EOR).

WHY DO WE WANT TO DO THIS, ESPECIALLY HERE IN NORTH DAKOTA?

North Dakota's unique geology is perfectly suited for the permanent, safe storage of CO_2 nearly a mile or more beneath the surface.

In addition to helping our coal and ethanol plants meet the increasing burden of federal regulations, a developing CO_2 industry has the potential to benefit corn producers from increased ethanol production, provide tax and economic benefits to the state and could extend the life of North Dakota oil fields through enhanced oil recovery.

HAS THIS BEEN DONE BEFORE IN NORTH DAKOTA, OR ANYWHERE ELSE?

Underground CO_2 injection first began more than 50 years ago in western Texas. Decades of data has helped us understand how CO_2 behaves deep underground, and how to safely transport it through pipelines.

In the U.S. today, there are multiple operating CO_2 projects and more than 50 CO_2 pipelines spanning over 5,000 miles. North Dakota has three active CO_2 storage projects and nearly 200 miles of operating CO_2 pipeline. (see map above and descriptions below)

CO_2 CAPTURE AND STORAGE

- **Red Trail Energy Ethanol Plant, Richardton**
  Began operations on June 16, 2022, and captures and stores up to 180,000 metric tons of CO_2 annually.
- **Blue Flint Ethanol, Underwood**
  Began operations on October 28, 2023, and captures and stores up to 220,000 metric tons of CO_2 annually.
- **Great Plains Synfuels Plant, Beulah**
  Began operations on February 4, 2024, and captures and stores up to 2.7 million metric tons of CO_2 annually.

CO_2 PIPELINES

- **Dakota Gas/Souris Valley Pipeline**
  Began operations in 2000. This 205-mile pipeline runs from Beulah, northwest past Tioga, and into Saskatchewan, Canada. It has been transporting up to 2 million metric tons of CO_2 annually for enhanced oil recovery (EOR) for nearly 25 years.
- **Denbury/ExxonMobile Pipeline**
  Began operations in 2022. The final 9 miles of this pipeline, which starts in Wyoming, delivers CO_2 to the Bowman area for enhanced oil recovery.

SAFETY CONCERNS

IS IT SAFE TO STORE CO_2 UNDERGROUND?

CO_2 capture, utilization, and storage projects are designed to be safe for people, animals, and the environment. Before a CO_2 storage project ever begins, scientists identify and evaluate acceptable sites to be considered.

Permanent CO_2 storage needs porous (small spaces or holes) rock layers where CO_2 can be injected and stored at pressures low enough to avoid breaking the rock. This porous storage layer must also be capped by an impermeable (or solid) rock where CO_2 can't escape.

DOES UNDERGROUND CO_2 NEGATIVELY IMPACT MY GROUNDWATER, SOIL QUALITY, GRASS, TREES, OR CROPS?

In North Dakota, CO_2 is stored nearly a mile or more below the surface, and thousands of feet below the water table. Similar to how oil reserves deep underground do not have an impact on the surface or water supply, CO_2 will also remain safely beneath an impervious cap rock and will not have an impact on the surface, water, soil, or plants thousands of feet above.

IS IT SAFE TO TRANSPORT CO_2 IN UNDERGROUND PIPELINES?

Pipelines transport millions of metric tons of CO_2 annually across entire regions of the country. They are designed to safely operate under the pressures (between 1200-2200 psi) required for "dense phase" CO_2 transport. Before any CO_2 is transported, pipelines are filled with fresh water or an inert gas at a pressure 125% of their maximum operating pressure to ensure structural integrity.

DOES CO_2 EXPLODE? WHAT HAPPENS IF CO_2 LEAKS?

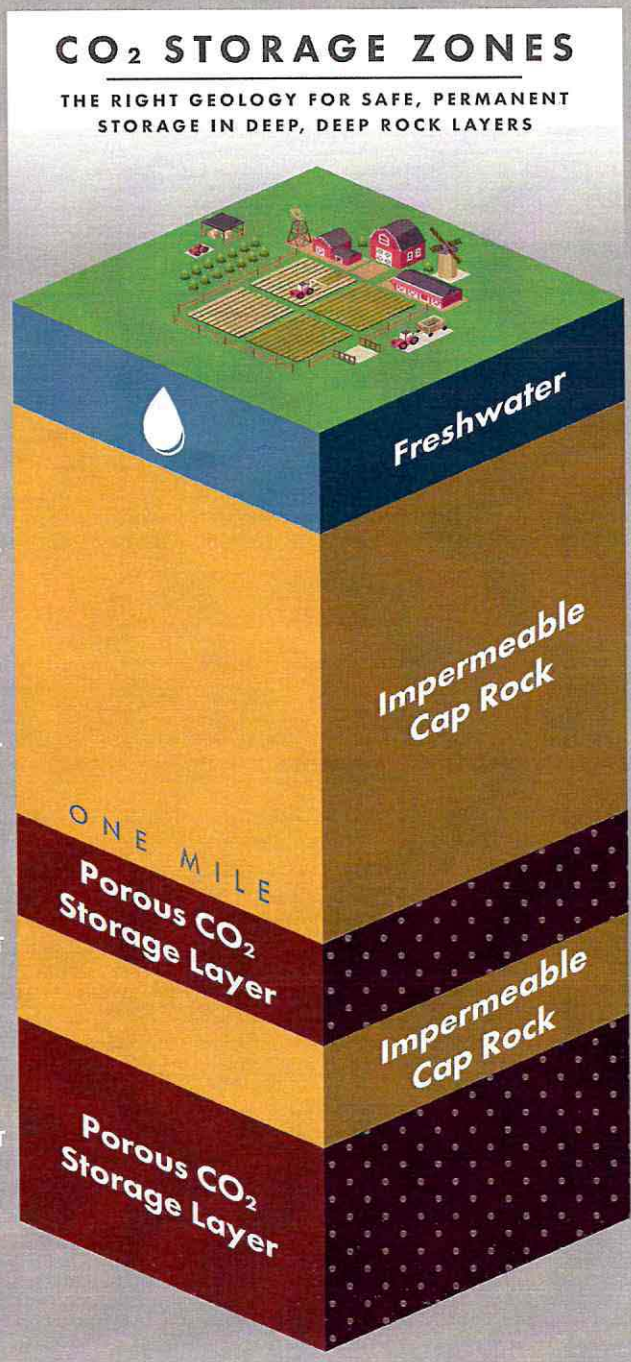
Unlike natural gas and liquid petroleum - which are transported through millions of miles of pipelines across the U.S. – CO_2 is not flammable or explosive.

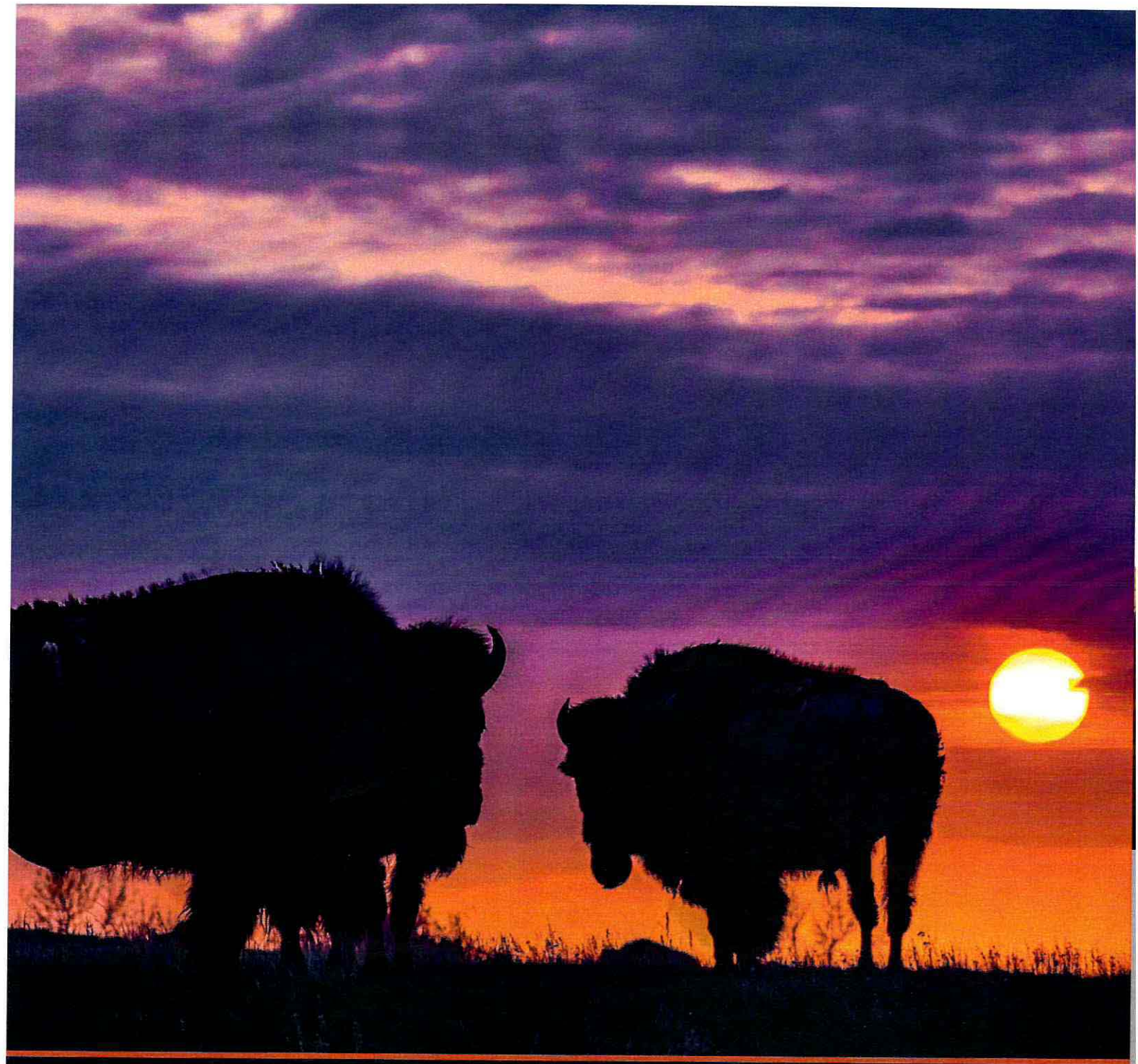
In the unlikely occurrence CO_2 escapes from a pipeline or through the surface, it will become dry ice or go back to a gaseous state. While prolonged exposure to high concentrations of CO_2 can cause breathing difficulty, the gas will quickly evaporate into the air and requires little to no clean-up. In the event of a leak, pipeline systems are designed to automatically shutdown, ceasing all operations until the cause is determined and repaired.

HOW ARE UNDERGROUND CO_2 STORAGE SITES AND PIPELINES MONITORED?

Once injected into the ground, the movement of CO_2 is required to be monitored to ensure it is going where it is supposed to go, and staying where it is supposed to stay. Pipelines also have stringent regulations, monitoring, and mitigation requirements.

North Dakota prioritizes significant planning and research; intentionally planning for the what-ifs and incorporating training and state-of-the-art technology into all aspects to be able to effectively and safely handle any unexpected scenarios.





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UNDERSTANDING CO_2: NORTH DAKOTA'S ROLE

POLICY MAKER FREQUENTLY ASKED QUESTIONS

North Dakota takes great pride in our agricultural and energy heritage—it's a core part of who we are. As federal regulations are imposing stricter standards, our fossil fuel (oil, coal, gas) and ag producers are under increasing pressure to produce low- or no-carbon products and energy to remain viable. While this shift brings legal, regulatory, and economic challenges, it also creates great opportunity for North Dakota with an increase in demand across energy and ag sectors for capturing, using, and storing carbon dioxide (CO_2) deep underground.

WHAT IS CO_2?

Carbon Dioxide, or CO_2, is a non-flammable, non-explosive, naturally occurring gas. It is exhaled by humans every time you breathe; is used in hundreds of products including soda, dry ice and fire extinguishers; and is a necessary component of plant growth.

WHAT IS CARBON CAPTURE?

Carbon Capture is the act of separating CO_2 molecules from the flue gas of an industrial facility (such as a power plant or ethanol plant), or directly from the atmosphere. **Carbon Storage**, or **Sequestration**, is injecting captured CO_2 deep underground within porous rock beds, covered by a solid rock cap.

ECONOMIC OPPORTUNITY

POTENTIAL ECONOMIC BENEFITS OF CO_2 CAPTURE AND STORAGE FOR NORTH DAKOTA

- **Job creation in construction, operation, and maintenance of capture and storage facilities**
- **Additional income for local farmers and landowners through easement and pore space leases**
- **Energy sector sustainability by helping our coal and gas plants meet federal regulations**
- **Attract investment in local infrastructure and technology development**
- **Enhanced market for corn and ethanol producers (Ethanol plants purchase 80% of their corn from North Dakota farmers.*)**
- **Enhanced oil recovery to extend the life of ND oil fields and gross production tax funding**

*Source: North Dakota Ethanol Council, www.ndethanol.org

HOW IS CARBON CAPTURE, STORAGE AND UTILIZATION FUNDED IN NORTH DAKOTA?

Funding for these projects comes from a mix of public and private sources. Federal grants and tax credits, state incentives, and investments from energy companies and other stakeholder contribute to financing CO_2 capture, storage, and utilization initiatives.

WHAT REGULATIONS GOVERN CARBON CAPTURE AND STORAGE IN ND?

In 2018, the U.S. Environmental Protection Agency (EPA) granted North Dakota primacy (regulatory authority) of Class VI (CO_2 storage) injection wells within the state. As a result, North Dakota Industrial Commission's Department of Mineral Resources - Oil & Gas Division has authority over all CO_2 storage injection well activities. The North Dakota Public Service Commission approves the siting of transmission pipelines, including CO_2, and the Pipeline Hazardous Materials Safety Administration (PHMSA) is accountable for safety in design, construction, and operation of CO_2 transmission pipelines.

ARE LANDOWNER RIGHTS PROTECTED?

A company requesting land easements will negotiate directly with property owners for fair and just compensation for any rights being sought. Payments commonly meet or exceed market value, and easements are typically for very limited surface rights. When granting an easement, the landowner retains ownership of the land and is allowed to continue to use it.

In addition, the deep underground pore space where CO_2 is injected continues to be owned by the surface landowner. Landowners are paid royalties per CO_2 injected into their pore space, similar to oil and gas mineral rights.

Mineral owners may still extract oil, gas, and coal reserves. The CO_2 injected deep underground for storage goes into layers that do not contain commercially valuable extractable minerals. Comprehensive state regulations provide for safe oil and mineral exploration near CO_2 storage facilities.

North Dakota law also protects landowners from financial responsibility for damage to their property or related environmental impacts of CO_2 transport or storage, meaning no additional insurance coverage is needed.

HAS THIS BEEN DONE BEFORE?

Underground CO_2 injection first began more than 50 years ago in western Texas. Decades of data has helped us understand how CO_2 behaves deep underground, and how to safely transport it through pipelines. Today, millions of metric tons of CO_2 are safely transported across the country through 5,000+ miles of pipeline – including nearly 200 miles in North Dakota.

CO_2 CAPTURE AND STORAGE IN ND

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IS IT SAFE TO TRANSPORT CO_2 IN UNDERGROUND PIPELINES?

Pipelines are designed to safely operate under the pressures (between 1200-2200 psi) required for "dense phase" CO_2 transport. Before any CO_2 is transported, pipelines are filled with fresh water or inert gas at a pressure 125% of their maximum operating pressure to ensure structural integrity.

Pipelines and storage sites have stringent regulations, monitoring, and mitigation requirements. North Dakota prioritizes significant planning and research, training, and technology into all aspects of pipeline safety to be prepared for any unexpected scenarios.

IS STORING CO_2 UNDERGROUND SAFE? IS IT HARMFUL TO CROPS OR WATER?

CO_2 capture, utilization and storage projects are designed to be safe for people, animals, plants, and the environment. Before a CO_2 storage project begins, scientists carefully identify and evaluate acceptable sites to be considered.

North Dakota's unique geology is perfectly suited for safe storage of CO_2 nearly a mile or more below the surface, and thousands of feet below the water table.

Similar to how oil reserves deep underground do not have an impact on the surface or water supply, CO_2 will also remain safely beneath an impervious cap rock and will not have an impact on the surface, water, soil, or plants. Crops and grass can grow above these areas and animals will be able to safely graze.

DOES CO_2 EXPLODE? WHAT HAPPENS IF THERE IS A LEAK?

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WHAT HAPPENED IN MISSISSIPPI?

The 2020 CO_2 pipeline failure in Satartia, Mississippi was a "worst-case scenario," and resulted in several lessons learned. First, the pipeline operator was cited for violating multiple regulations. When federal pipeline regulations are followed, pipelines outperform the safety standards of both rail and truck transit.

Second, the unstable soil where the pipeline was installed was susceptible to movement from the preceding heavy rains (7.5 to 13.5 inches above average), resulting in a landslide that ruptured the pipeline as the ground shifted.

Lastly, local weather conditions, lack of wind, and the density and volume of CO_2 released slowed its dissipation; the pipeline operator models underestimated the potential affected area; the operator did not adequately inform local emergency responders; and the pipeline did not contain pure CO_2.

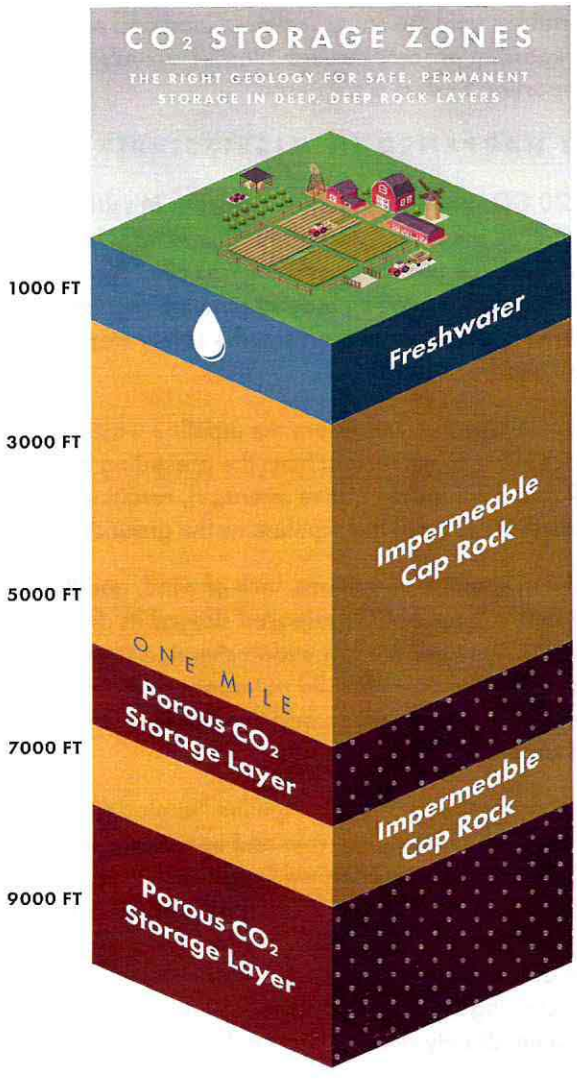
One misconception is that this pipeline "exploded." However, CO_2 is non-flammable and non-explosive. Rather, the pipeline experienced "explosive decompression." This happens when a pipe that carries gas or liquid breaks very quickly – like blowing up a balloon and popping it with a pin. The material escapes quickly, causing a powerful rush and noise, disturbing the ground immediately around the break point.

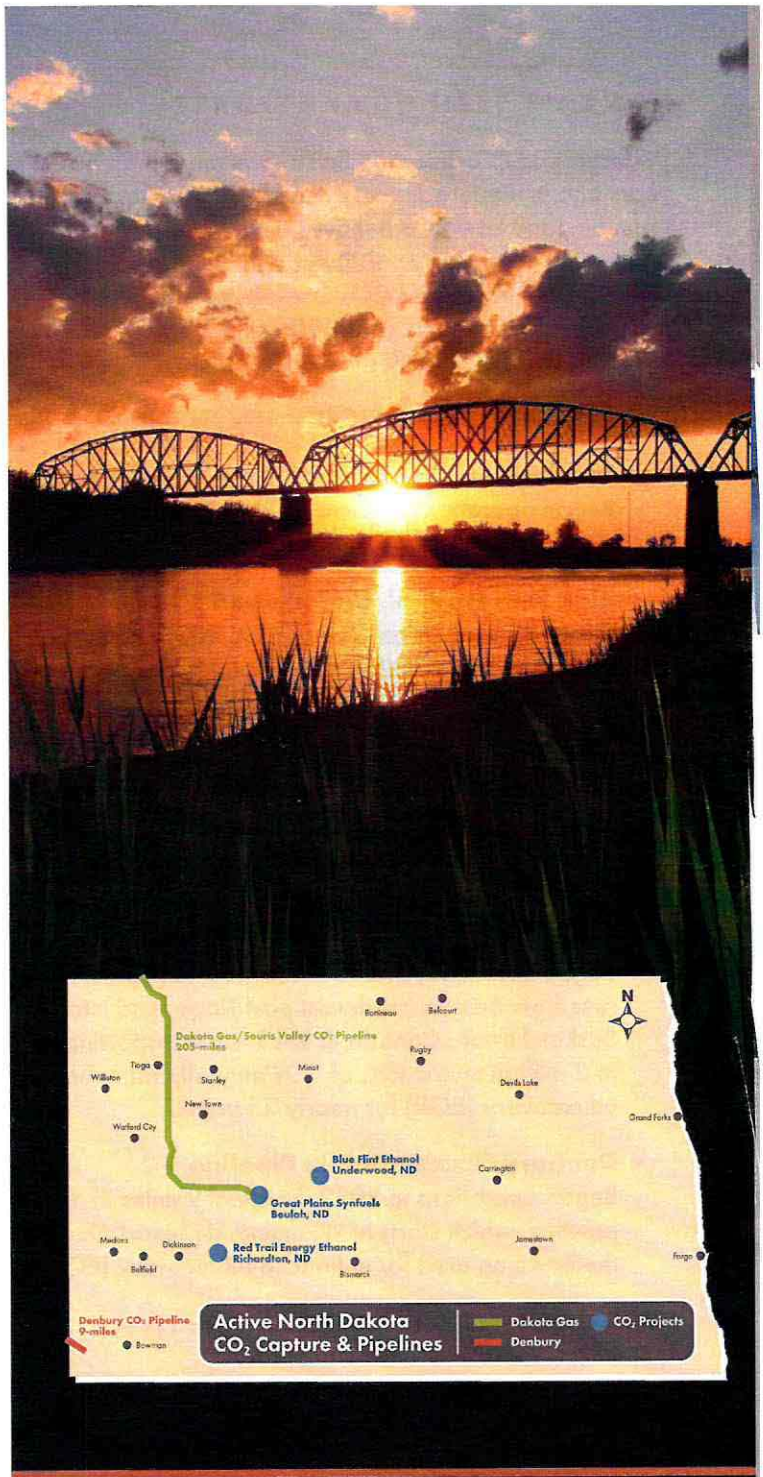
WHAT SAFEGUARDS ARE IN PLACE?

North Dakota requires extensive review and approval of plans to operate pipelines and inject CO_2, including next-level monitoring.

- Class VI well construction with surface casing/corrosion-resistant cementing from the surface to the injection point, protecting water resources
- Multi-layer, multi-protection, multi-action 24/7/365
- Leak detection, alerts and shutoff requirements
- Deep underground and surface monitoring
- Risk assessment and mitigation
- Liability on storage facility owner, not landowner
- Post injection site care and closure monitoring for at least 10 years

CO_2 storage facility operators must have the proper financial instruments and ability in place to cover the cost of any necessary corrective action, injection well plugging, post-injection site care/facility closure, and emergency and remedial response before the CO_2 storage facility ever begins injection. These instruments are required to remain in place until the CO_2 storage facility is approved for closure.





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EMERGENCY MANAGERS FREQUENTLY ASKED QUESTIONS

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Our commitment to safety and responsible practices is, and continues to be, our top priority. As we navigate this shift in significant legal, regulatory, and economic conditions, our priority remains unwavering – ensuring safety and sustainability in every step we take. We are dedicated to finding the best ways to adapt, uphold our values, and continue our way of life while keeping a focus on the health and safety of our communities.

HAS THIS BEEN DONE BEFORE?

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IS STORING CO_2 UNDERGROUND SAFE? IS IT HARMFUL TO CROPS OR WATER?

CO_2 capture, utilization and storage projects are designed to be safe for people, animals, plants, and the environment. Before a CO_2 storage project ever begins, scientists identify and evaluate acceptable sites based on their geological suitability to securely contain CO_2. Ongoing monitoring helps detect and address any potential leaks or issues.

North Dakota's unique geology is perfectly suited for safe storage of CO_2 nearly a mile or more below the surface, and thousands of feet below the water table.

Similar to how oil reserves deep underground do not have an impact on the surface or water supply, CO_2 will also remain safely beneath an impervious cap rock and will not have an impact on the surface, water, soil, or plants thousands of feet above. Crops and grass can grow above these areas, and animals can safely graze.

IS IT SAFE TO TRANSPORT CO_2 IN UNDERGROUND PIPELINES?

When federal pipeline regulations are followed, pipelines outperform the safety standards of both rail and truck transit. Pipelines are designed to safely operate under the pressures (between 1200-2200 psi) required for "dense phase" CO_2 transport. Before any CO_2 is transported, pipelines are filled with fresh water or inert gas at a pressure of 125% of their maximum operating pressure to ensure structural integrity.

Pipelines and storage sites have stringent regulations, monitoring, and mitigation requirements. North Dakota prioritizes significant planning, research, training, and technology to be prepared for any unexpected scenarios.

Local emergency responders play a crucial role in ensuring public safety near CO_2 pipelines. Even though a CO_2 pipeline leak is extremely rare, it is important that first responders have the information they need to prepare for and respond to all potential situations.

Pipeline operators are required to work closely with responders to develop and review emergency response plans and conduct regular training and drills.

HOW DO WE KNOW CO_2 IS INJECTED TO THE RIGHT DEPTH OR ROCK LAYER?

A CO_2 injection well is constructed with a minimum of three layers of steel protection to prevent any underground discharge into the water supply.

The first layer is set below the deepest underground source of drinking water, and cemented back to the surface. The second layer is set into the injection formation nearly a mile or more below the surface, and is cemented in place. The third layer is injection tubing running from the surface to the injection zone. These casings ensure CO_2 only flows to the target formation, and will remain within the porous rock bed layer, covered by a solid cap rock, trapping the CO_2 deep underground.

WHAT SAFEGUARDS ARE IN PLACE TO PREVENT AND IDENTIFY LEAKS?

Safety is ensured through rigorous site selection, extensive monitoring, and regulatory oversight. North Dakota requires extensive review and approval of plans to operate pipeline and storage facilities and inject CO_2. All CO_2 storage projects must include:

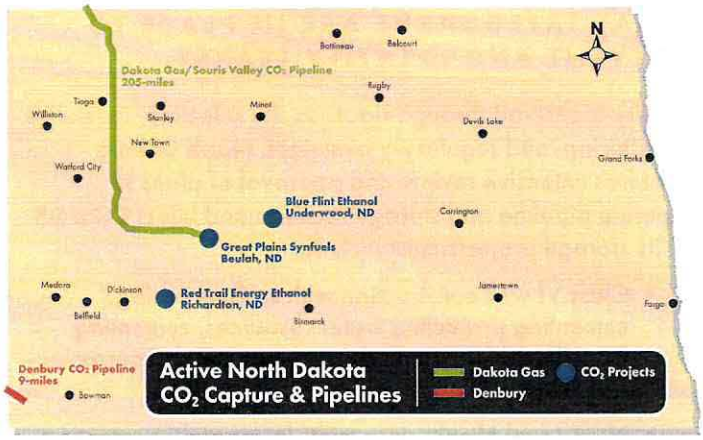
- Class VI well construction with surface casing/cementing protecting water resources, cementing from the surface to the injection point, and corrosion-resistant casing and cement
- Next-Level Monitoring: multi-layer, multi-protection, multi-action 24/7/365
- Operational monitoring for temperature and pressure changes that could indicate early anomalies
- Leak detection and alerts
- Deep underground monitoring to ensure that the CO_2 remains securely in the storage zone
- Surface and near surface monitoring to ensure no environmental effects
- Surface water, groundwater and soil regular testing
- Shutoff requirements
- Risk assessment and mitigation including comprehensive manuals at each site and control center with actions for various scenarios
- Liability on storage facility owner, not landowner
- Post injection site care and closure
- Continuous monitoring after injection ends, until it is demonstrated that the CO_2 stops moving (at least 10 years)

CO_2 storage facility operators must have the proper financial instruments and ability in place to cover the cost of any necessary corrective action, injection well plugging, post-injection site care/facility closure, and emergency and remedial response. These instruments must remain in place until the CO_2 storage facility is approved for closure.

WHAT HAPPENED WITH THE 2020 CO_2 PIPELINE FAILURE IN SATARTIA, MISSISSIPPI?

First, the pipeline operator was cited for violating multiple regulations. Second, the soil where the pipeline was installed was unstable, and susceptible to movement from high rainfall. The incident followed heavy rains (7.5-13.5 inches above average) that resulted in a landslide, rupturing the pipeline as the ground shifted. Lastly, weather conditions, lack of wind, and the density/volume of CO_2 released slowed its dissipation; the operator models underestimated the potential affected area; the operator did not adequately inform emergency responders; and the pipeline did not contain pure CO_2, resulting in this "worst-case" scenario.

One misconception is that this pipeline "exploded." However, CO_2 is non-flammable and non-explosive. Rather, the pipeline experienced "explosive decompression." This happens when a pipe that carries gas or liquid breaks very quickly - like blowing up a balloon and popping it with a pin. The material escapes quickly, causing a powerful rush and noise, disturbing the ground immediately around the break point.



WHAT HAPPENS IF THE CO_2 MIXES WITH WATER (H_2O)?

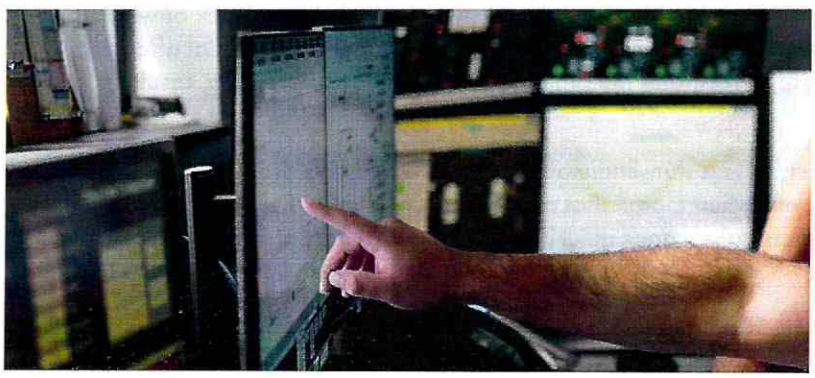
While water and CO_2 combined may be corrosive, systems are designed to incorporate dehydration, so no free water touches the pipeline. Several additional steps are taken to ensure pipeline and equipment integrity through all conditions, including:

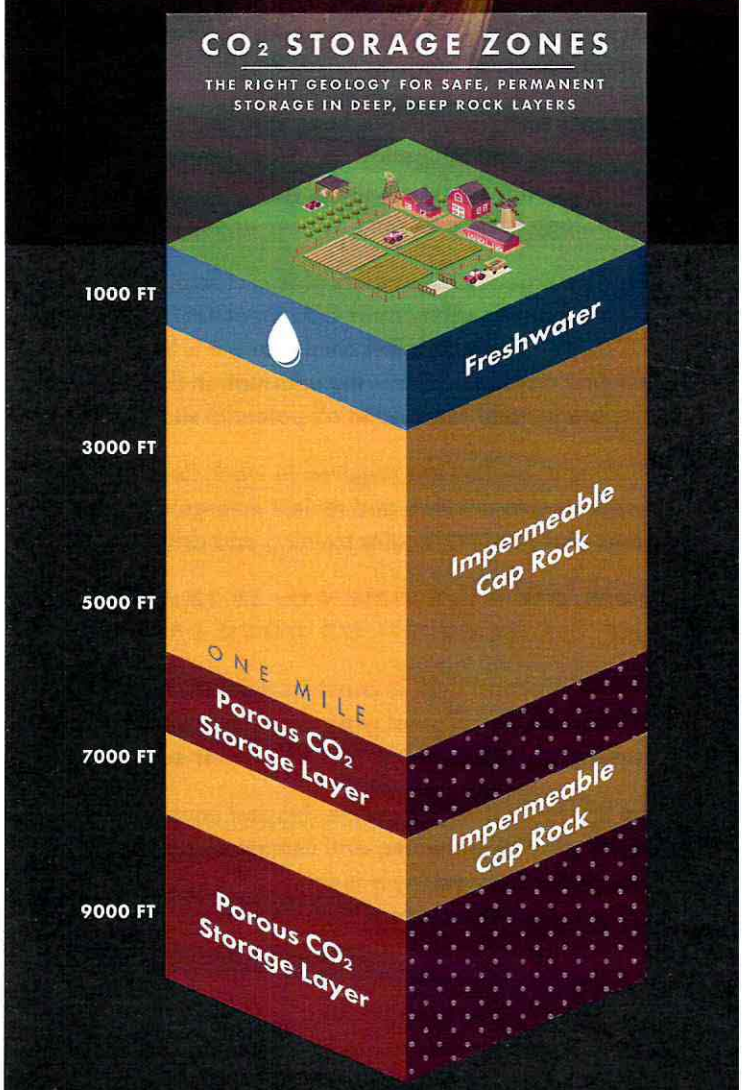
- Using corrosion-resistant materials
- Applying protective coatings or linings
- Using corrosion inhibiting chemicals
- Using cathodic (electrical currents) protection
- Regular monitoring and maintenance

WHAT HAPPENS IF A LEAK IS DETECTED?

Unlike natural gas and liquid petroleum - which are transported through millions of miles of pipelines across the U.S. – CO_2 is not flammable or explosive. In the unlikely occurrence CO_2 escapes from a pipeline or through the surface, it will become dry ice or go back to a gaseous state. While prolonged exposure to high concentrations of CO_2 can cause breathing difficulty, the gas typically quickly evaporates into the air and requires little to no clean-up. In the event of a leak, pipeline systems are designed to automatically shutdown, ceasing all operations until the cause is determined and repaired, and a reporting process through North Dakota's Unified Spill Reporting System is triggered.

Manuals are required at every facility and call center that outline action steps and emergency protocol for any possible leak scenario.





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If you're interested in learning more about CO_2 and North Dakota's role, visit

CarbonND.com

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2025 HOUSE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee
Coteau AB Room, State Capitol

HB 1574
2/13/2025

Relating to the authority of the industrial commission; to provide for application; and to provide an expiration date.

10:44 a.m. Chairman Porter called the hearing to order.

Members Present: Chairman Porter, Vice Chairman Anderson, Vice Chair Novak, Representatives: Dockter, Hagert, Headland, Heinert, Johnson, Marschall, Olson, M. Ruby, Conmy, Foss

Discussion Topics:

- Committee action

10:47 a.m. Vice Chairman D. Anderson moved a Do Not Pass.

10:47 a.m. Representative J. Olson seconded the motion.

Representatives	Vote
Representative Todd Porter	Y
Representative Dick Anderson	Y
Representative Anna Novak	Y
Representative Liz Conmy	Y
Representative Jason Dockter	Y
Representative Austin Foss	Y
Representative Jared c. Hagert	Y
Representative Craig Headland	Y
Representative Pat D. Heinert	Y
Representative Jorin Johnson	Y
Representative Andrew Marschall	Y
Representative Jeremy L. Olson	Y
Representative Matthew Ruby	Y

Motion carried: 13-0-0

Bill carrier: Representative J. Olson

10:48 a.m. Chairman Porter closed the hearing.

Leah Kuball, Committee Clerk

REPORT OF STANDING COMMITTEE
HB 1574 (25.0913.01000)

Energy and Natural Resources Committee (Rep. Porter, Chairman) recommends **DO NOT PASS** (13 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING). HB 1574 was placed on the Eleventh order on the calendar.