



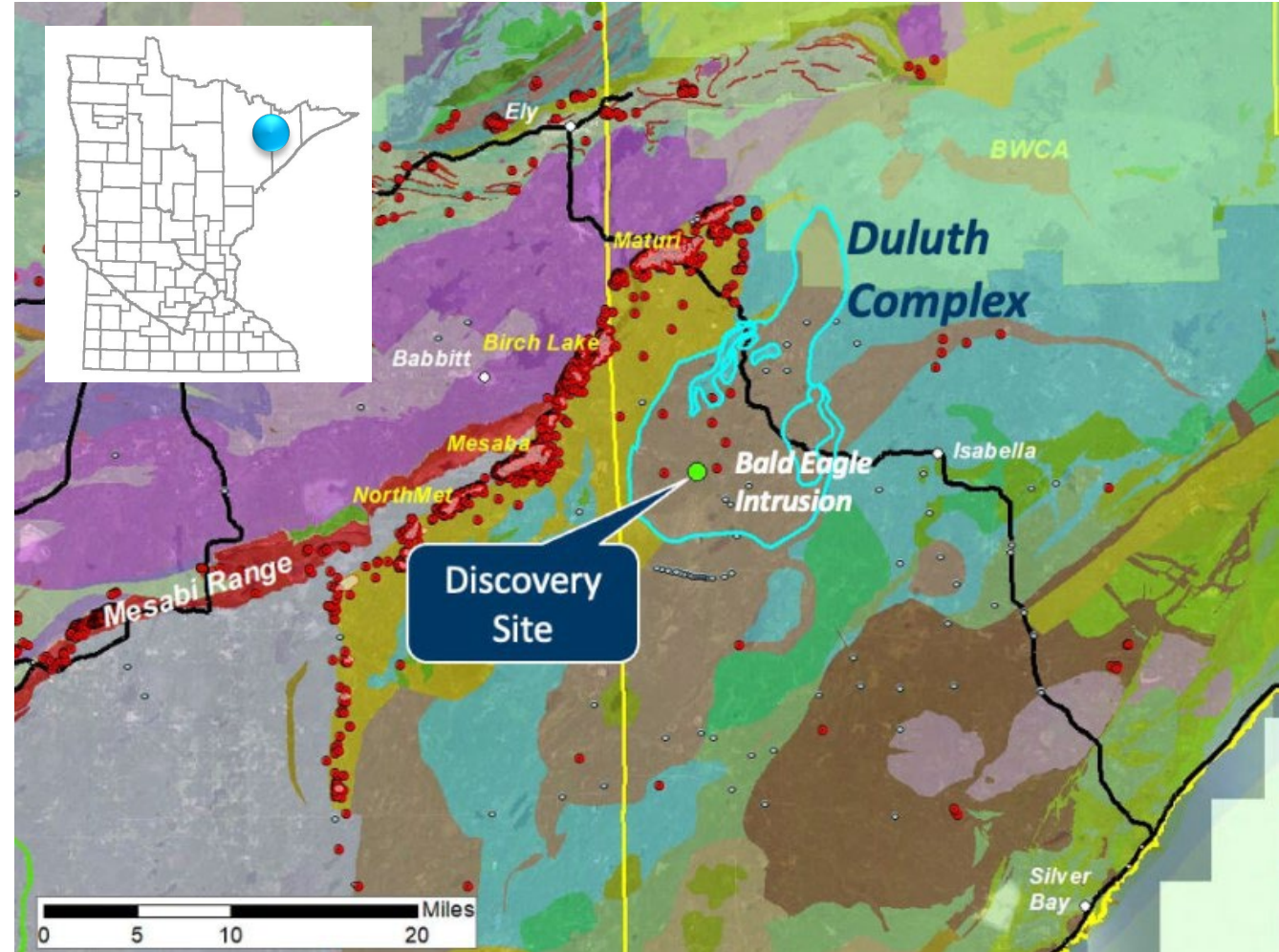
GTAC Recommendations and Draft Language for Regulating Gas Resource Development in Minnesota

Michael Liljegren | Assistant Director, Lands and Minerals Division

- The Gas Resources Technical Advisory Committee (GTAC) has submitted [recommendations and draft legislative language](#) for a temporary regulatory framework for permitting gas production.
- Without legislative action, a [moratorium](#) on permitting oil and gas production holds, and permit applications won't be accepted until rules are adopted for a permanent regulatory framework.



Unexpected helium potential



Helium potential in the news

The potential of helium production in Minnesota

Critical Raw Materials | 26th October 2023



Pulsar Helium Inc: Appraisal drilling programme nears

Critical Raw Materials | 25th October 2023



POTENTIAL WORLD-CLASS DISCOVERY FOUND IN MINNESOTA COULD BRING MILLIONS TO REGION

Brian Zinchuk YouTube

Ken Hayes | Published: December 12, 2023

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Atomic Number: 2
Element Classification: Noble Gas
Name: Helium
Electrons Per Shell: 2

Why Pulsar Helium has game-changing potential for the US helium industry

December 14, 2023 at 04:41 am EST



Issuer: Goldinvest Consulting GmbH / Key word(s): Miscellaneous/Miscellaneous

Why Pulsar Helium has game-changing potential for the US helium industry

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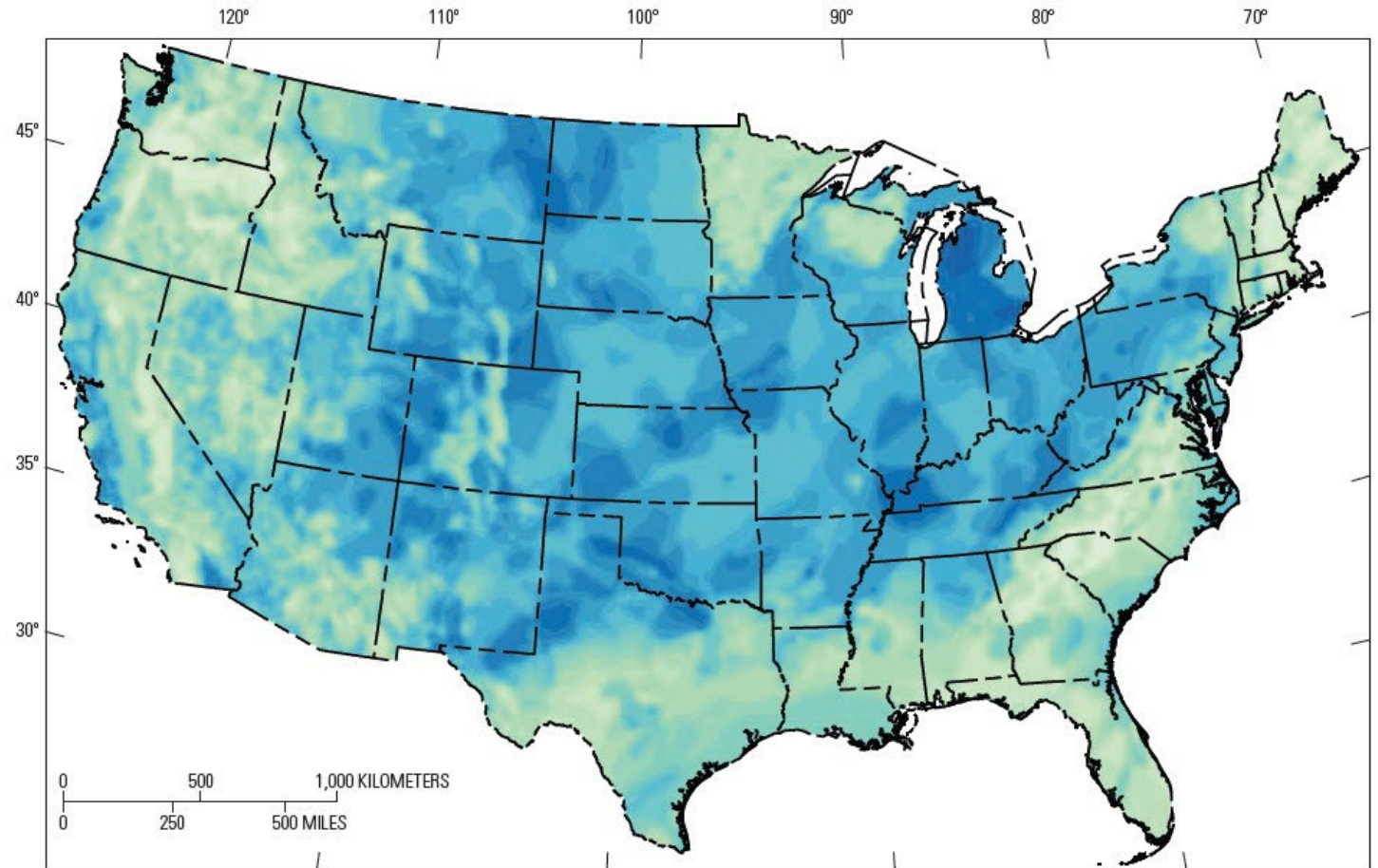
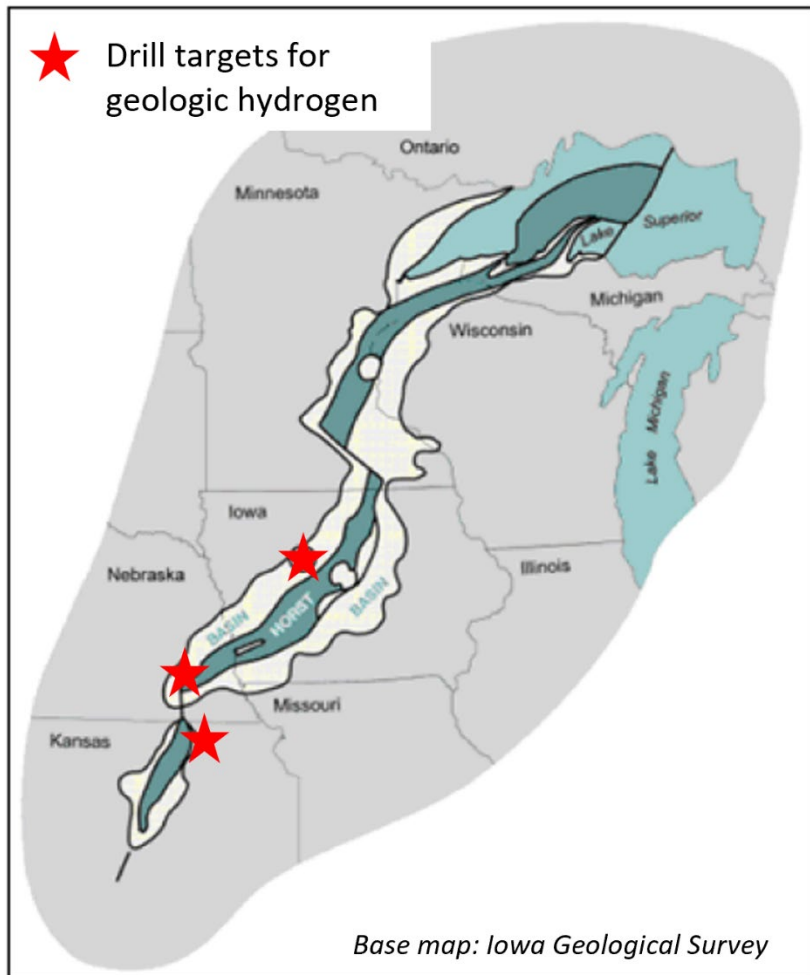
Why Pulsar Helium has game-changing potential for the US helium industry

Timing is extremely important for start-ups. This also applies to the dozen or so helium exploration companies, which - spurred on by sharp price increase in the industrial gas helium - have been working to develop new helium projects around the world for a few years now. Much to the disappointment of many investors, there has been no market-moving success to date. An important incentive for the increased search for helium was the USA's decision to liquidate its national strategic helium reserve, which had been in operation since the Cold War.

On a large scale, helium is produced exclusively as a by-product of natural gas production. As the only dedicated large-scale helium storage and purification facility in the world, the federal helium reserve was able to release stored helium to cushion market shocks, similar to the US strategic oil reserve. The sale of the US reserve system has undoubtedly increased nervousness in the markets and driven up prices. With recent sales of liquid helium exceeding USD \$1,000 per thousand cubic feet whereas natural gas is ~USD \$4. The race of the start-ups is not won by the first, but by the one who presents the market with the solution that really makes a difference. In terms of helium, this means that the company ideally even supplies a new strategic helium reserve that is not indexed to hydrocarbon production. We believe that the latecomer Pulsar Helium Inc (TSXV: PLSR, FRA: Y3K), which only went public in August of this year, is well on its way to providing the market with exactly this answer. (see below)



Geologic hydrogen potential



Base from U.S. Geological Survey, The National Map, 2021
Albers Equal-Area Conic, U.S. Geological Survey contiguous United States projection
North American Datum of 1983

[USGS Geologic Hydrogen Prospectivity Map](#)

Need for a Regulatory Framework

- Helium appraisal well drilled February 2024
- Company stated production could potentially start sometime in 2025



Enacted Legislation

- Prohibition/Moratorium on Gas Production without a permit
- Technical Advisory Committee
- Recommendations on permitting under temporary framework
- Expedited Rule Making (24 months)
- Authorization to Lease

Sec. 23. [93.513] PROHIBITION ON PRODUCTION OF GAS OR OIL WITHOUT PERMIT.

Subdivision 1. Permit required. Except as provided in section 103I.681, a person must not engage in or carry out production of gas or oil from consolidated or unconsolidated formations in the state unless the person has first obtained a permit for the production of gas or oil from the commissioner of natural resources. Any permit under this section must be protective of natural resources and require a demonstration of control of the extraction area through ownership, lease, or agreement. For purposes of this section, "gas" includes both hydrocarbon and nonhydrocarbon gases. For purposes of this section, "production" includes extraction and benefit from gas or oil.

Subd. 2. Moratorium. Until rules are adopted, the production of gas or oil unless the legislature enacts temporary permits.

EFFECTIVE DATE. This section is effective the day following final passage.

Sec. 24. [93.514] GAS AND OIL PRODUCTION.

(a) The following agencies may adopt rules:

(1) the commissioner of the Pollution Control Agency, including stormwater management;

(2) the commissioner of health may adopt rules regarding exploratory boring construction, drilling registration, and appraisal of gas and oil resources;

(3) the Environmental Quality Board may adopt rules regarding environmental review as they pertain to gas and oil production;

(4) the commissioner of natural resources may adopt rules regarding exploratory boring to a production well, post-production reclamation for the production of gas and oil, and other potential hazards from gas and oil production;

(5) the commissioner of labor and industry may adopt rules regarding other potential hazards from gas and oil production.

(b) An agency adopting rules under this subdivision must adopt or amend under this authority a rule that publishes notice of intent to adopt expedited rulemaking.

(c) For purposes of this section, "rule" includes extraction and beneficiation of gas or oil.

(d) Any grant of rulemaking authority under this section does not replace, impair, or interfere with any existing rule.

EFFECTIVE DATE. This section is effective the day following final passage.

Sec. 25. [93.516] GAS AND OIL LEASING.

Subdivision 1. Authority to lease. (c) With the approval of the Executive Council, the commissioner of natural resources may lease state-owned land for the production of gas or oil.

Regulatory Framework for Gas Resource Development in Minnesota
December 2024

Did you know?

In Lake County, the 40-acre parcel of private land where helium was recently discovered is surrounded on three sides by state-managed lands. Without a regulatory framework for gas resource development, the county, local township, and school districts cannot receive revenue from royalty and rental payments tied to nonpetroleum gas production on state managed lands, or benefit from pooling agreements that protect adjacent landowner interests.

The company that drilled a helium appraisal well in northeast Minnesota is planning to deepen that well and drill a second gas well in early 2025. They have also stated that their project could potentially be ready for production by fall 2025.

In February 2024, the U.S. Department of Energy (DOE) announced that 16 projects across 8 states would explore the production of naturally-occurring geologic hydrogen.

Exploration companies have identified drilling targets for geologic hydrogen in Nebraska, Kansas and Iowa, along a geologic formation known as the Midcontinent Rift System. This formation extends northwards into Minnesota, from the Iowa border up to Lake Superior. The United State Geological Survey considers the Midcontinent Rift System to be one of the most prospective regions for geologic hydrogen production in the United States.

Minnesota has potential for both geologic hydrogen and helium resources. With no history of gas production in the state, Minnesota lacks a regulatory framework for these emergent industries that would properly protect natural resources and human health, develop a fair royalty structure on state-managed lands and protect the interests of Minnesota's landowners.

Legislation enacted in May 2024 included amendments to existing statutes and new laws that support the creation of a regulatory framework for gas resource development in Minnesota and allows the Department of Natural Resources (DNR) to lease state-managed lands for gas exploration and production. The DNR was given permitting authority over all such projects in the State, and no production is allowed without a permit. Expedited rulemaking by the DNR and other state agencies must be completed by May 2026.

A Minnesota Gas Resources Technical Advisory Committee (GTAC) was created to develop recommendations that would guide the creation of a temporary regulatory framework that could govern the permitting of gas development projects during the rulemaking process. This multi-agency committee led by DNR is charged with submitting recommendations to the State Legislature by January 15, 2025. GTAC must consider input from the Tribes and interested parties and hold at least one public meeting on the topic prior to finalizing its recommendations. The temporary regulatory framework must be enacted by the legislature.

Gas Resources Technical Advisory Committee

1. Legislature directed formation of GTAC and its membership.
2. Agencies work on recommendations and draft legislative language for their areas of oversight with collaboration from GTAC members.
3. Input on draft GTACT recommendations and legislative language from the Tribes, stakeholders, and public.
4. DNR submitted GTAC's finalized recommendations and draft legislative language to the State Legislature.



GTAC Members



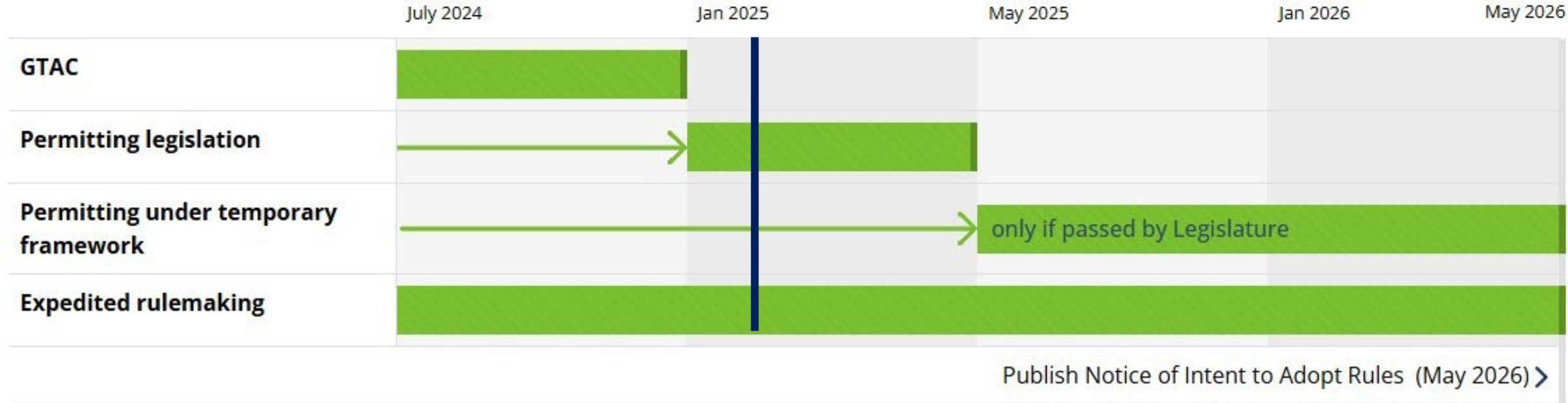
GTAC Timeline

- July 23: Kick-off meeting
- Nov 15: Draft recommendations completed
- Nov 16 – Dec 23: Tribal and Public input period
- Dec 26 – Jan 14: Revisions
- Jan 15: Recommendations and draft legislative language submitted to State Legislature.

Date	Event	Comment
July 13, 2024	GTAC membership announced in an email from Joe Henderson to committee members	
July 23, 1-2:30pm	Kick-off GTAC meeting at DNR building.	
July 30 – Aug 27	Phase 1: Five (5) weekly 90-minute meetings to review and discuss pertinent topics for gas production and creating temporary regulatory framework (one week per represented state agency/department). (Start Phase 1) .	
July 30	GTAC meeting – DNR background topics (1 of 5)	Encourage each agency to write up handouts with their background and research results so that they can be repurposed in draft report
Aug 6	GTAC meeting –background topics (2 of 5)	

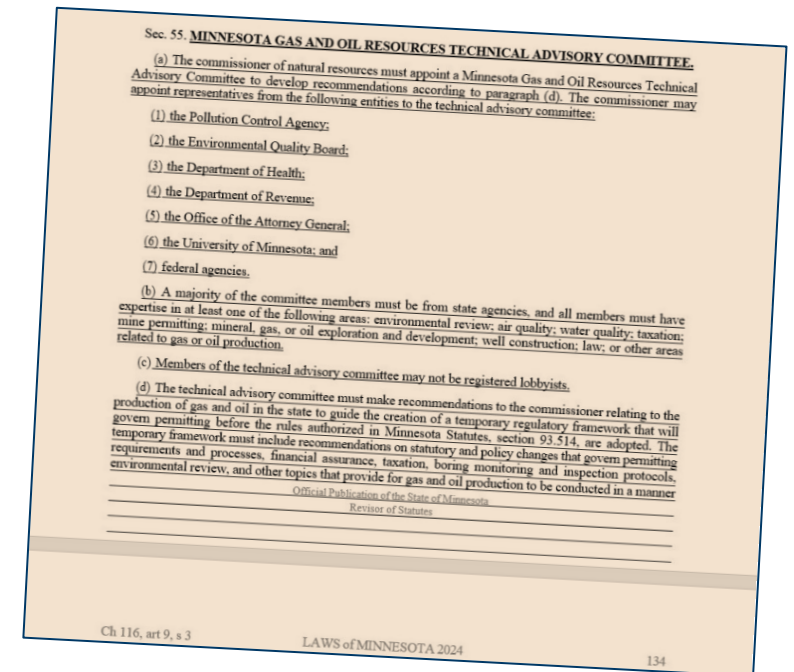
Parallel Timelines

We are here



GTAC's Required Recommendation Topics

- Permitting Requirements and Processes
- Financial Assurance
- Taxation
- Boring Monitoring and Inspection Protocols
- Environmental Review
- “Other topics that provide for gas and oil production to be conducted in a manner that will reduce environmental impacts to the extent practicable, mitigate unavoidable impacts, and ensure that the production area is restored...”



Draft GTAC recommendations

- Permitting Requirements and Processes
- Financial Assurance
- Taxation
- Environmental Review
- **Gas well construction (MDH)**
- **Environmental permits (MPCA)**
- **Pooling and spacing (DNR)**



m MINNESOTA **Regulatory Framework for Developing Gas Resources in Minnesota**

Home Project Background Enacted Legislation **Draft Recommendations** Project Timeline

Draft Recommendations

The Minnesota legislature enacted legislation on May 22, 2024, directing the DNR to form and lead the Gas Resources Technical Advisory Committee (GTAC). The multi-agency committee was charged with developing recommendations on a temporary regulatory framework for regulating gas projects during rulemaking. Specifically, GTAC was required to provide recommendations on the following topics:

Statutory and policy changes that govern permitting requirements and processes:

- Statutory and policy changes that govern permitting requirements and processes
- Financial assurance
- Taxation
- Boring monitoring and inspection protocols
- Environmental review
- Other topics (e.g. well construction)
- Minimizing environmental impacts and reclamation

GTAC is a committee of representatives of five agencies who have worked together to create the draft recommendations. The agencies are:

- Environmental Quality Board (EQB)
- Department of Health (MDH)
- Department of Natural Resources (DNR)
- Pollution Control Agency (MPCA)
- Department of Revenue (DOR)

The committee is charged with delivering recommendations and proposed legislation to the legislature by January 15, 2025. The committee is required to hold one public meeting on this topic and consider testimony from stakeholders and Tribes.

The process for developing the recommendations and legislation has included convening the agencies that formed GTAC, engaging gas exploration consultants, holding committee meetings, developing draft recommendations. Moving forward the process includes engaging Tribes and stakeholders, holding public meetings, and finalizing the draft recommendations.

Draft legislative language

- Amends existing statutes and creates new statutory language.
- Includes permanent statutes and a temporary regulatory framework that expires once rules are promulgated.



The screenshot shows a web page titled "Regulatory Framework for Developing Gas Resources in Minnesota". The page has a navigation bar with links for "Home", "Project Background", "Enacted Legislation", "Draft Recommendations" (which is highlighted with a green underline and a dropdown arrow), and "Project Timeline". Below the navigation bar, the page is titled "Statutory Language" and contains the following text:

Section 1. Section 11A.236 is amended as follows:
ACCOUNT TO INVEST FINANCIAL ASSURANCE MONEY FROM PERMITS TO MINE AND GAS RESOURCE DEVELOPMENT PERMITS.

Subdivision 1. **Establishment; appropriation.** (a) The State Board of Investment, when requested by the commissioner of natural resources, may invest money collected by the commissioner as part of financial assurance provided under a permit to mine or [gas resource development permit](#) issued under chapter 93. The State Board of Investment may establish one or more accounts into which money may be deposited for the purposes of this section, subject to the policies and procedures of the State Board of Investment. Use of any money in the account is restricted to the financial assurance purposes identified in sections 93.46 to 93.518 and rules adopted thereunder and as authorized under any trust fund agreements or other conditions established under a permit to mine or [gas resource development permit](#).

(b) Money in an account established under paragraph (a) is appropriated to the commissioner of natural resources for the purposes for which the account is established under this section.

Subd. 2. **Account maintenance and investment.** (a) The commissioner of natural resources may deposit money in the appropriate account and may withdraw money from the appropriate account for the financial assurance purposes identified in sections 93.46 to 93.518 and rules adopted thereunder and as authorized under any trust fund agreements or other conditions established under the permit to mine or [gas resource development permit](#) for which the financial assurance is provided, subject to the policies and procedures of the State Board of Investment.

(b) Investment strategies related to an account established under this section must be determined jointly by the commissioner of natural resources and the executive director of the State Board of Investment. The authorized investments for an account are the investments authorized under section 11A.24 that are made available for investment by the State Board of Investment.

(c) Investment transactions must be at a time and in a manner determined by the executive director of the State Board of Investment. Decisions to withdraw money from the account must be determined by the commissioner of natural resources, subject to the policies and procedures of the State Board of Investment. Investment earnings must

(d) The commissioner of natural resources may terminate an account at any time, so long as the termination is in accordance with applicable statutes, rules, trust fund agreements, or other conditions established under the permit to mine or [gas resource development permit](#), subject to the policies and procedures of the State Board of Investment.

Input on draft recommendations

- 21-day public input period
- Two public meetings (Biwabik and Eagan)
- Consideration of input from the Tribes and stakeholders (enabling legislation)



Legislative Report

- Recommendations
- Draft legislative language
- Best regulatory practices report
- Compilation of input
- GTAC considerations of themed input



DNR Recommendations

- Permitting procedures;
- Siting and setbacks for gas production locations;
- Financial assurance;
- Reclamation requirements;
- Pooling and spacing; and,
- Appropriation request.



Recommendations

Minnesota Department of Natural Resources
Agency background

The Gas Resources Technical Advisory Committee (GTAC) was directed by its [enabling legislation](#) to make recommendations "...relating to the production of oil and gas in the state to guide the creation of a temporary regulatory framework that will govern permitting before the rules authorized in Minnesota Statutes, section 93.514, are adopted." Recommendations are required by the enabling legislation to address statutory and policy changes for the following:

- Permitting requirements and processes;
- Financial assurance;
- Taxation;
- Boring monitoring and inspection protocols;
- Environmental review; and,
- Other topics that provide for gas and oil production to be conducted in a manner that reduces environmental impacts to the extent practicable, maintains the production area in a condition that ensures that the production area is restored to a condition that minimizes harm and that any ongoing maintenance requirements are provided.

The Department of Natural Resources has recommendations based on its statutory responsibilities that cover most of these required topics. A breakdown of covered topics and the associated DNR recommendations is provided in the following table:



MDH Recommendations

- Exploratory borings that encounter gas;
- Licensing requirements;
- Drill rig registration;
- New rule making authority for construction and sealing of gas wells; and,
- Appropriation request.

Minnesota Department of Health

Agency background

Minnesota Statutes, chapter 103I, authorizes the Commissioner of Health to license persons wanting to explore or prospect for natural gas, receive exploratory borings notifications, and regulate the construction of temporary sealing, and permanent sealing of exploratory borings. Minnesota Rules, chapter 4727, provides requirements under the described authorization for the regulation of exploratory borings and persons conducting regulated work. The Minnesota Department of Health (MDH or Department) collects applicable fees for the described work, which supports the inspection of exploratory borings and the protection of public health and groundwater.

February of 2024, a licensed explorer submitted an exploratory boring notification to MDH under the requirements of Minnesota Statutes, chapter 103I, and Minnesota Rules, chapter 4727, communicating the boring was for exploring and prospecting for helium gas. Minnesota Rules, chapter 4727, has no provisions for production of gas from an exploratory boring, nor for the construction of a gas well for production of gas. It is the Department's understanding that boreholes drilled and cased by the gas development industry are not typically for exploration or prospecting but also for gas production. Currently, Minnesota Statutes, chapter 103I, define that exploratory borings are for exploration and prospecting and not for production of gas.

As a direction of the 2024 Minnesota Legislature, MDH became a member of the Minnesota Gas and Oil Technical Advisory Committee (GTAC) because of the Department's regulatory authority over exploration of natural gas and was provided expansive authority for oversight of exploratory boring construction to Minnesota Rules, chapter 4727.

The following recommendations outline the requirements necessary for the construction and permanent sealing of gas wells providing protection of public health and groundwater. One of the primary recommendations is creating a new rule chapter to regulate gas well construction. The requirements are like those in effect for other types of regulated work.

Recommendation MDH-1: *Modify the exploratory boring definition within Minnesota Statutes, section 103I.005, subdivision 9 and*

Recommendation

Modify the exploratory boring definition within Minnesota Statutes, section 103I.005, subdivision 9 and



EQB Recommendations

- For temporary framework, mandatory EAW for gas resource development project;
- DNR serve as responsible governmental unit (RGU); and,
- Require all environmental review notices to include tribal contacts.

Minnesota Environmental Quality Board

Agency and Program background

A key component of the regulatory framework for gas production projects – whether temporary or permanent - is the need to define when a project is subject to mandatory environmental review.

The function of Minnesota's Environmental Review Program is to provide information about future projects to avoid and minimize damage to Minnesota's environmental resources. The program accomplishes this by requiring certain proposed projects to undergo review, following defined procedures, prior to obtaining needed approvals and permits. Environmental review provides an opportunity for both the public and decision makers to understand the potential for significant environmental effects from a project prior to the project moving forward.

The Minnesota Environmental Policy Act establishes Minnesota's environmental review program, which requires environmental review for any project that has or may have the potential for significant environmental effects.

The Environmental Quality Board, as administrator of the Environmental Review program, identifies in rule certain project types for which environmental review is mandatory. These rules are referred to as the mandatory category rules and define a threshold for when projects of the listed type may or will have the potential for significant environmental effects. If a project is one listed within the mandatory categories and meets or exceeds the thresholds defined by the rules, then environmental review is required.

The mandatory categories can require completion of one of two different processes of review. The Environmental Assessment Worksheet (EAW) process is used to review potential for significant environmental effects. An Environmental Impact Statement (EIS) is required for reviewing a project that does have the potential for significant environmental effects. EIS projects have increased requirements for the level of information provided and an enhanced public participation and interaction required with the public. For example, an EIS must include a public hearing and a public comment period for the proposed project in order to explore methods of reducing adverse impacts. EIS projects also require a public hearing. Mandatory category thresholds are usually based on project size; EAW is triggered by a smaller size project while an EIS is triggered by a larger project.



MPCA Recommendations

- Current rules and regulations are sufficient to regulate gas resource development activities under both temporary and permanent regulatory frameworks; and,
- Timely and meaningful consultation between state and tribal governments.

Minnesota Pollution Control Agency

Agency background

The Minnesota Pollution Control Agency (MPCA) plays a unique role in state government. The MPCA monitors environmental quality, offers technical and financial assistance and enforces environmental regulations. The MPCA finds and cleans up spills or leaks that can affect our health and environment. The MPCA also develops statewide policy, supports environmental education and helps ensure pollution does not have a disproportionate impact on any group of citizens. The MPCA plays a key role in the statewide outcome of “a clean, healthy environment with sustainable uses of natural resources.”

Further, the MPCA issues permits with the goal of limiting pollution and protecting human health. MPCA monitors the conditions of air, land, groundwater, and surface water at more than 2,320 sites. MPCA also inspects and licenses more than 40,000 sites that involve hazardous waste, feedlots, and storage tanks.

As noted throughout this report, gas production is the focus of this writeup. Helium gas production has not previously been regulated at the MPCA. The media and regulations under MPCA’s authority that are pertinent to this industry include, but are not limited to: water quality permits: wastewater, industrial stormwater, and construction stormwater; air quality permitting, storage tank regulation; and solid waste. Environmental review is an information gathering tool that can help inform regulatory processes. Therefore, recommendations that MPCA makes for temporary and permanent regulations are as follows:

Recommendation MPCA-1: Minnesota currently has rule and regulations in place to regulate the proposed gas production industry. Following established rules and regulations will protect the environment and human health. Furthermore, the MPCA will comply with Minnesota Statute Section 10.65 which requires timely and meaningful consultation between matters under MPCA’s authority that may have Tribal implications.

Rationale

Water Quality:

Stormwater

Construction Stormwater: Any project proposer that plans to disturb more than one acre of land needs to apply for a Construction Stormwater National Pollutant Discharge Elimination System/State Disposal



DOR Recommendations

- Incorporate gas and oil into existing tax administration laws for mining;
- Apply same exclusions to gas and oil mining companies as other mining companies;
- Create a new structure to allow for different tax rates for each gas but no specific recommended rate; and,
- Add gas and oil revenue distribution to existing statutes but no specific recommended distribution model.

Minnesota Department of Revenue

Agency background

The Department of Revenue is a named participant on GTAC and is tasked with developing recommendations on the taxation of gas and oil extraction, including helium. Minnesota Statutes already contain tax administration laws covering the assessment of taxes for taconite, other iron bearing materials, and non-ferrous minerals but do not contain provisions for taxing gas or oil extracted in the state.

Two common types of taxes are collected on mining in Minnesota and nationally:

- A severance tax for removing the natural resource from the earth; and
- An income tax on the business of mining

In Minnesota, the severance tax for non-ferrous minerals is known as the Gross Proceeds Tax and the income tax for all mining is known as the Occupation Tax.

The scope of recommendations on taxation includes incorporating gas and oil into existing mining tax laws, aligning the exemptions for the newly created gas and oil provisions with exemptions in place for existing mining businesses, and improving tax administration for taxpayers and Revenue. Rulemaking is not included in the scope of these recommendations because Revenue believes the draft statutory language is sufficient on its own. Revenue has rulemaking authority under Minnesota Statutes, section 270C.06, should it be determined rules are needed later.

Recommendation DOR-1: Incorporate gas and oil into existing Occu

Recommendation

The Occupation Tax currently applies to all mining companies in the definitions were created, and existing statute definitions were modified in the Occupation Tax law.

Draft statutory language

289A.02, subdivision 6; 298.001, subdivision 3a; section 298.001, subdivision 10a; section 298.001,



- Legislative Report
- Input from Tribes, stakeholders, public
- Project background
- 2024 enacted legislation
- Will also be used during expedited rulemaking

m Minnesota
Regulatory Framework for Developing Gas Resources in Minnesota

Home Project Background Enacted Legislation Recommendations Project Timeline

GTAC's final recommendations have been submitted!
[Review the documents](#)

Gas resources in Minnesota?

Minnesota has untapped and unexplored potential for both geologic hydrogen and helium resources. With no history of gas production in the state, Minnesota needs a framework that would regulate these emergent industries to properly protect natural resources and human health, develop a fair royalty structure on state-managed lands and ensure the conservation of the state's natural resources.

What is GTAC?

In May 2024 the Minnesota Legislature directed the formation of a Gas Resources Technical Advisory Committee (GTAC). Representatives from the following state agencies are part of the Advisory Committee

- Minnesota Department of Natural Resources (DNR)
- Minnesota Department of Health (MDH)
- Environmental Quality Board (EQB)
- Minnesota Pollution Control Agency (MPCA)
- Minnesota Department of Revenue (DOR)

GTAC focuses on developing a framework for consideration of permit applications for development of gas resources.

What are we doing now?

GTAC conducted a public input period on draft recommendations and draft statutory language during December 2 - 23, including two public in-person meetings. GTAC considered all public input as well as input from Tribal Governments and finalized the recommendations and draft legislative language in a report submitted to the legislature on January 15, 2025.

Summary

- The Gas Resources Technical Advisory Committee (GTAC) has submitted [recommendations and draft legislative language](#) for a temporary regulatory framework for permitting gas production.
- Without legislative action, a [moratorium](#) on permitting oil and gas production holds, and permit applications won't be accepted until rules are adopted for a permanent regulatory framework.



Thank You!

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