

Written Submission for the Pre-Budget Consultations in Advance of the Upcoming 2024 Federal Budget

**Recommendation to enable Canada's
helium explorers and developers to provide
a secure and sustainable helium supply
critical to Canada's medical, research,
technical and industrial sectors.**

**Submitted by the Helium Developers
Association of Canada**



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Recommendation: That the government “levels the playing field” and provides companies exploring for and developing Canada’s helium critical mineral resource those Normal Tax Measures that are provided other mineral resource developers in Canada, specifically Canadian Exploration Expense treatment and the ability to issue flow-through shares.

The Issue: Urgent need to develop a sustainable and secure Canadian helium supply.

Concerns over an uncertain, scarce, and affordable supply of helium have continued to grow worldwide since Canada's helium developers recommended to the Standing Finance Committee in the 2023 Pre-budget Consultation that the federal government take action to enable the exploration and development of this critical mineral in Western Canada. Helium plays a fundamental and irreplaceable role in essential medical applications such as magnetic resonance imaging (MRIs) and nuclear magnetic resonance spectrometers (NMRs). There is no replacement for helium and the concerns have prompted urgent calls from the Canadian medical and scientific communities for the establishment of a domestic sustainable and secure helium supply chain.

Helium is one of 31 federally designated Canadian critical minerals and a critical enabler for the development and application of clean technologies essential to a lower carbon future. Global demand for helium is increasing rapidly. Aside from its key medical and scientific applications, other fundamental and irreplaceable roles for helium are in semi-conductor and fibre optic manufacturing, small modular reactors, quantum computing, industrial welding and manufacturing, leak detection (including for Electric Vehicle batteries), lifting applications and military and space applications.

The majority of the world's helium is produced in the U.S. and the unstable political environments of Russia, Qatar, and Algeria. Much of the world's increased supply of helium was forecast to come from Russia. However, Russia's invasion of the Ukraine has exposed the fragility of the supply chain and forced supply rationing. It has prompted worries of protectionist sentiments, much like what recently occurred with medical isotope shortages, or worse, the potential for some countries to weaponize helium supplies. The urgency of the matter is being raised across the globe. Earlier this year the European Union added helium to its critical materials list in recognition of its economic importance and supply risks. The United States Geologic Survey is progressing a Helium Supply Risk study. Traditionally a large supplier to Canada, the U.S. is expected to become a net importer of helium in the next three to five years as helium use grows while domestic supply and federal reserves drop. In survey responses to the supply risk study, U.S. consumers of helium expressed concerns around reliance on unstable foreign helium supplies, conveying their protectionist sentiments and calling for prioritization of domestic helium supply for American consumption.

Concerns are widespread over everything from the repatriated North American chip manufacturing sector's ability to support critical defence and electric vehicle production, to restrictions to scientific research being conducted at Canadian universities and the delivery of essential medical services to Canadians. As just one example, in a May 2023 Position Statement, the Canadian Helium Users Group (CHUG), Canadian Association of Medical Radiation Technologists (CAMRT) and Canadian Association of Radiologists (CAR) came together to appeal for the establishment of "a national helium supply chain, which will mitigate the risk of ongoing and future global supply chain challenges and price fluctuations for Canadian helium users."

"We should not be waiting for the time when MRI scanners are shut down due to a shortage of helium. Acting now...will ensure the continuity of MRI imaging, so critical to the care of millions of people in Canada every year," - Megan Brydon, President, CAMRT.

"Canada needs to invest in a sustainable national helium supply chain," - Dr. Ania Kielar, President, CAR.

The Opportunity for Canada

Canadian helium resources are estimated to be the 5th largest in the world, however, Canada currently accounts for only 2% of global helium supply. With the U.S. moving towards becoming a net importer and Russia, Qatar and Algeria collectively poised to deliver about two-thirds of global supply in the future, urgent development of a helium industry represents an important and essential growth opportunity for Canada. To become self-sufficient, it is estimated Canada will need to increase its current production two to three-fold. Much of Canada's helium resources are in southeastern Alberta and southwestern Saskatchewan and co-produced with nitrogen, unlike alongside the production of natural gas or LNG elsewhere in the world. Using homegrown well-established responsible development practices, this opportunity uniquely positions Canada with a sustainable, long-term helium supply as the world transitions away from hydrocarbons. The development of an upstream helium industry aligns with both the Alberta and Saskatchewan governments' strategic priorities to grow and diversify their economies in an environmentally sustainable manner and this recommendation is fully supported by both governments. With the right programs in place, Saskatchewan alone through its helium growth plan, sees the opportunity to produce some 10% of the world's helium supply, supporting thousands of jobs and generating annual exports worth \$500 million. The increased activity will provide both short and long-term economic benefits to rural and Indigenous communities while providing employment opportunities for Canada's displaced oil and gas workers.

The first step in a pathway to helium self-reliance and a national supply chain is enabling the exploration and development of Canada's helium resource through fair and equal tax measures currently provided to companies exploring and developing other critical mineral resources in Canada. Canada currently relies on the U.S. for liquefaction facilities to liquefy its helium for key applications. Once Canada's helium production has reached critical mass (anticipated in three to five years after the tax measures are in place), regional liquefaction facilities will be justifiable, and construction of this infrastructure will further solidify Canada's helium supply chain while providing additional economic benefits to Indigenous and rural communities.

What needs to be done by the Government of Canada to drive this Opportunity?

The following recommendation is a necessary first step to develop an industry that will address Canada's helium security of supply concerns.

To enable development of a sustainable and secure Canadian helium supply that will facilitate the delivery of essential medical services, research, and the green and digital economy, the government "levels the playing field" and provides companies exploring for and developing Canada's helium critical mineral resource those Normal Tax Measures that are provided other mineral resource developers, specifically Canadian Exploration Expense treatment and the ability to issue flow-through shares.

Spending on helium exploration and development sourced from the Western Canadian Sedimentary Basin (WCSB) does not receive equal treatment of tax measures provided other Canadian mineral developers, namely the Canadian Exploration Expense (CEE) or the Canadian Development Expense (CDE). This is due to a clause in the Income Tax Act which inadvertently precludes minerals sourced from sedimentary deposits in Canada (including the WCSB) from receiving CEE and CDE deduction treatment. With exemptions from this clause the government has provided to other mineral developers - including the exemption provided to Lithium from Brine producers in Budget 2023 - helium now remains the only critical mineral being actively pursued in Canada that does not receive fair and equal treatment of CDE and CEE tax measures. The unfair tax treatment results in unintended economic consequences, as it substantially impairs project economics, creates significant uncertainty in the tax handling of capital expenditures and restricts emerging, cash strapped helium companies from accessing the financing they require for exploration through the issuance of flow-through shares, an important and uniquely Canadian fiscal innovation used to finance over 80% of mineral exploration in Canada.

The rationale for this inadvertent tax treatment is based on the assumption that sourcing minerals from sedimentary deposits is a relatively low risk venture as compared with hard-rock mineral exploration. However, industry analysis shows that risk associated with helium exploration is equal to, or greater than, the exploration risk associated with hard-rock mineral development in Canada.

Finding economic supplies of helium is complex and the geologic and capital risks involved in pursuing helium development are substantial, given the deep helium bearing zones in the WCSB have remained largely unexplored because they were not previously viewed as prospective for hydrocarbons. Industry is actively working to understand and characterize the helium resource, including determining where the economic accumulations of helium are in the basin – a challenge given helium’s ability to migrate and escape from the subsurface. The capital risks associated are significant due to the high cost of deep drilling and localized processing facilities required due to a lack of processing infrastructure. Further, geopolitical driven uncertainty on future supplies (and the impact on future commodity prices) is adding material financial risk to Western Canadian helium development. With the cumulative effect of these risks and the inability to access flow-through share at-risk financing, Canadian helium producers are struggling to raise capital at reasonable terms from risk-adverse investors who are also grappling with high interest rates. Year to date, there has been no helium exploration activity in Canada supported by financing from the Canadian financial markets, with the limited exploration activity carried out being funded by U.S. private equity. Canadian helium producers are redeploying investment to the U.S. where tax treatment and investor sentiment are more favourable. Application of Normal Tax Measures to helium exploration and production is consistent with the Government of Canada’s commitment to support the global transition to cleaner forms of energy and will enable an otherwise uneconomic activity to generate returns to government.

Summary

Critical minerals are the building blocks for Canada's future. Helium is a federally designated critical mineral and has a fundamental and irreplaceable role in essential medical applications, scientific research, technical and industrial applications that rely on helium to function - activities that are being threatened in Canada. There is no replacement for helium and uncertainty and scarcity of affordable helium supplies, increasingly being sourced from politically unstable countries in the world, has led to urgent calls for the establishment of a sustainable and secure national helium supply from Canada's medical and scientific communities.

Canada's helium resource potential is significant. It is uniquely positioned to provide a sustainable, long-term helium supply that aligns with the Government of Canada's commitment to the transition to cleaner forms of energy. Establishing a sustainable and secure Canadian helium supply starts with an increase in exploration but in Canada that entails helium developers shouldering significant risks - geologic, capital and commodity price risks. Given both the risks and an absence of fair and equal tax treatment as offered to other Canadian mineral explorers with similar (or less) risk profile, Canada's helium companies are not able to raise at-risk capital from financial markets. Providing these companies with Normal Tax Measures (including CEE and CDE, along with the ability to issue flow-through shares) is both necessary and urgent for activity to proceed at the scale and pace necessary to develop a much needed sustainable and secure national helium supply for Canada.

"Canadian consumers are vulnerable to (helium) supply disruptions. Canada can establish a 'Made in Canada' helium solution...this would ensure a secure supply for healthcare, research, and industry. It would position Canada as a global leader in helium utilization, foster job creation, and technological innovation" - Bob Berno Ph.D., Canadian Helium Users Group, and Nuclear Magnetic Resonance Facility Manager at McMaster University.

About Us

The Helium Developers Association of Canada represents companies exploring, producing and developing helium in Canada. Our mandate includes working to align industry and government actions to enable a strong and secure domestic helium supply.