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**Testimony Submitted on Behalf of the Government of Québec, Ministry of Energy  
and Natural Resources, Office of Mines**

Submitted by Nathalie Camden, Associate Deputy Minister for Mines  
To the United States Senate Committee on Energy and Natural Resources  
May 17, 2022

Chairman Manchin, Ranking Member Barrasso, and distinguished members of the Committee, thank you for this opportunity to share Québec's perspective on our mining practices. We welcome the chance to showcase how Québec's mineral assets and mining competencies are key to enhancing an already strong relationship with our friends and allies in the U.S.

The U.S. and Québec have a long history of mining collaboration. That foundation of partnership and trust can be leveraged to meet today's challenges of supply chain liabilities, resource dependence, and climate change.

These challenges and opportunities have spurred a renewed commitment by Québec to its mining sector. In recent years, we have launched strategies, strengthened our processes, and developed innovative financing streams. We are committed to developing our mining potential, but not at the expense of our competitiveness, environmental standards, nor the rights of Indigenous peoples.

These plans have all been made with consideration to our deep economic integration with the United States, where 70% of Québec exports go every year. For Québec to succeed in this sector, given the supply chain vulnerabilities and rising demand for minerals, U.S. engagement and partnership is welcomed and essential. It is a matter of mutual strategic interest.

### **History of U.S.-Québec Mining Collaboration**

Canada and the U.S. have been friends, partners, and allies through two World Wars, the Cold War, and beyond. From the 1936 Permanent Joint Board on Defense to the 1993 establishment of the National Technology and Industrial Base, Canada's industrial capacity, and particularly Québec's aluminium industry, have been an integral part of the U.S. Defense Production Program.

Canadian Air Force Base (CFB) Bagotville, the largest in Eastern Canada, was constructed in the early 1940s to protect the nearby Alcan aluminium smelter. This smelter supplied most of the aluminum to Allied forces during the war, thereby making an essential contribution to the "Arsenal of Democracy." During the Cold War, CFB Bagotville played an important role in NATO, and it continues to play an important role in NORAD.



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Right now, thanks in large part to our abundant hydropower resources, Québec's supplies 60% of North American aluminum. Nine of ten Canadian aluminum smelters are in Québec. As such, Québec stands out as a stable and reliable source of high quality, sustainably produced, aluminium. It is used extensively in U.S. defense industries as well as in the civilian automotive industry, aerospace, and in other key value chains.

This history is more important now than ever, in the face of new national security threats that demand similar levels of cross-border collaboration. As Canada is one of the few countries considered a domestic source under the Defense Production Act Title III, Québec stands ready to partner with the United States. Together, we can address strategic vulnerabilities in our current critical resource import structures, while securing the surrounding North American critical infrastructure for processing.

### **Provincial Jurisdiction over Natural Resources: Minerals**

In the Canadian federation, provinces have the ultimate jurisdiction over natural resources, including mineral and metal resources. The Québec Office of Mines' 200 experts collect new data on our geology and resources. This data, which has been accumulated over the last century, is made available through an open-access database and interactive map. The Office's industry-focused team helps companies sustainably develop their projects, in accordance with domestic and global regulations and standards. Finally, the Office of Mines is rounded out by a team of regulatory experts focusing on mining site rehabilitation and permit delivery.

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This provincial jurisdiction and the renewed focus on our resource potential have resulted in a substantial mining footprint. In 2021, the Fraser Institute recognized Québec as the 6<sup>th</sup> most attractive mining jurisdiction in the world. Québec currently has 22 active mines, three mines in care and maintenance, and 33 mining projects. Major world players, such as Rio Tinto, Glencore, ArcelorMittal, Newmont, Agnico Eagle, Allkem, and BHP Billiton, as well as new emerging producers like Sayona Québec, Nemaska Lithium, and Nouveau Monde Graphite, are all active in Québec.

Mining is only expected to expand, as Québec has the most diversified subsoil in Canada, in terms of mineral resources and richness. Here are a few nuggets on what you need to know about mining in Québec. Québec is:

- Home to the largest known lithium (spodumene) reserve in Canada and almost half of Canadian lithium projects;
- The world's second-largest producer of niobium and the only producer in the northern hemisphere;



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- Second in Canada for nickel production and third for copper;
- One of the rare jurisdictions in the world with all the minerals required to manufacture batteries, namely lithium, nickel, cobalt, graphite, and manganese, in addition to many aluminum smelters.

Following the release of the 2018 U.S. Geological Survey list, Québec determined we were a source of no less than 25 out of the 40 minerals deemed critical and strategic by the United States. These findings prompted our government to launch a new strategy to develop our mineral potential. The [Québec Plan for the Development of Critical and Strategic Minerals](#) was thus published in October 2020. It was the first plan of its kind released in Canada, at any level of government. The Plan sets the government's priorities and covers all aspects, from exploration to recycling. It has sparked great interest internationally.

To maximize the economic benefits related to the extraction, processing, and recycling of these minerals, the government has provided funding for this Plan. The Plan includes financial support of CA\$130 million (US\$100 million), with more than CA\$32 million (US\$25 million) already appropriated. There is also an ongoing focus on investments in transportation and communications infrastructure, specifically fiber optics, to both support remote populations and grow the mining ecosystem.

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In addition to this Plan, our government actively engaged with USGS leadership to reaffirm Québec as a strategic supplier of these minerals to the United States. To that end, our Minister of Energy and Natural Resources, Jonatan Julien, came to Washington in September 2019, where he and then-USGS director James Reilly signed a joint letter of intent to strengthen scientific and technical collaboration between Québec and the United States in geological studies, the evaluation of mineral potential, and the dissemination of geological information.

As the demand for these minerals has grown alongside demand for electric vehicles (EVs) and their batteries, Québec developed a complementary battery strategy. This strategy focuses on building a highly efficient and traceable North American supply chain from mine to wheel. Québec's expertise, clean energy, mineral resources, and our proximity to the U.S., best position to support our closest neighbors in this evolving sector.

Now considering the 2022 USGS list, Québec produces or has the potential to develop 46 of the 50 minerals deemed critical and strategic by the United States. Québec will continue to advance collaboration in this sector through the aforementioned agreement with USGS, direct ties with the Government of Canada under the Joint Action Plan on



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Critical Minerals Collaboration, and partnerships with the National Mining Association, SAFE, and the Battery Materials & Technologies Coalition.

## **Provincial Jurisdiction over Natural Resources: Energy**

Provincial jurisdiction also extends to energy resources, which is critical to this conversation considering the energy intensity of mining and different parts of the battery supply chain.

Québec is the fifth largest producer of hydropower in the world. 99.8% of our electricity comes from renewable, clean, and reliable energy sources. In Québec, the cost of electricity is 30% lower than in other G7 countries, with special rates available for the industrial sector. This energy source is immune to the price volatilities creating waves in the United States and Europe following Russia's invasion of Ukraine.

It is worth noting that Québec has been working to export hydroelectricity to the Northeastern U.S. to combat this price volatility, decrease emissions and use our respective resources more efficiently. The New England Clean Energy Connect and the Champlain Hudson Power Express transmission lines are poised to be the largest cross-border clean energy projects constructed following the passage of the Bipartisan Infrastructure Law – with the potential of two-way electron flows and economic savings for consumers. The stronger our grid interconnections, the stronger the foundation laid for our mining and battery sectors.

Whether it is being utilized here in the U.S. or in Québec, this energy infrastructure is essential for developing a mining industry that is profitable, sustainable, and globally competitive. In Québec, hydropower can ensure stability for companies, while also substantially lowering the carbon footprint of their operations. One Québec mining company, Nouveau Monde Graphite, partnered with the U.S. company, Caterpillar, to develop electric mining equipment for the world's first ever fully electric open-pit mine. Québec's electricity grid, which has a current carbon intensity of around 26 grams of CO<sub>2</sub> equivalent per kilowatt-hour, makes that possible.

This is true for the midstream as well. Our government is committed to growing our mining sector to support battery production, but while ensuring it does not undermine our greenhouse gas (GHG) emissions reduction goals. To enable these secure and clean grid interconnections, Québec has been developing the previously mentioned battery cluster in areas with existing industrial power infrastructure, like the town of Bécancour, a mere 90 miles north of Jay Peak, Vermont or 115 miles west of Jackman, Maine.

## **Government Regulation in the Mining Sector**

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Carrying out an investment project in Québec obviously requires permits and authorizations. Our government has prioritized streamlining these processes while increasing social acceptability, environmental protection, and transparency on the front end of project development. The modernization of Québec's Mining Act and the launch of the Permits Coordination Office are two essential strides towards meeting these goals.

Between 2004 and 2019, our government reformed the Mining Act to reduce the cost of administrative formalities on Québec businesses by approximately 31.5%. Furthermore, last year we amended the Mining Act to reduce red tape for companies during the development of their mining projects. Following this passage, nine measures concerning the mining sector were adopted, generating substantial savings for industry.

The Permits Coordination Office was created to ensure better management of administrative delays in the allocation of rights and authorizations. Its mission is to work interdepartmentally and more efficiently without reducing requirements. This Office offers personalized support to optimize the permitting process. In the past year, the Office helped reduce the average time for issuing targeted authorizations by 42% compared to the ministry's previous processing standard in 2019-2020.

## **Social Acceptability and Sustainable Development in Québec**

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Social acceptability and sustainable development are an integral part of natural resources development in Québec. Several tools and environmental regulations are in place to minimize the environmental impact of mining operations, including a strong public consultation process and a requirement to restore mining sites after their active life. Moreover, modernized treaties and new public consultation requirements have resulted in strong and sustained Indigenous engagement in the mining process. These steps have helped Québec secure stronger social acceptance and increased sustainability of the sector.

A key indicator of sustainability is our level of commitment to standards and transparency. In that regard, Québec has developed the world's first sustainable development certification for mineral exploration, called ECOLOGO. Further, 21 of the 22 active mines in Québec have implemented their operations with the Towards Sustainable Mining (TSM) standard, a globally recognized sustainability program developed by the Mining Association of Canada. National mining chambers around the world are adopting this standard to manage risks and increase transparency in mining.

Looking beyond the upstream, Québec contributes to the objectives of the Global Battery Alliance (GBA), an initiative of the World Economic Forum, which seeks to establish a



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digital traceability platform for EVs, batteries, and their value chains. With the GBA and in collaboration with electric mobility stakeholders, Nouveau Monde Graphite, and the Government of Canada, Québec is developing a battery minerals traceability system, to ensure battery components produced in Québec meet the highest sustainable procurement standards.

This focus on environmental standards transcends the full value chain, from extraction to reuse. Québec sees mining innovations through a circular economy lens. One Québec company, Lithion Recycling, has perfected an innovative process to recycle all types of lithium-ion batteries and recover 95% of their components, such as lithium, nickel, cobalt, manganese, and graphite. Last January, Lithion Recycling announced the construction of its recycling plant in Québec, with government support, with a recycling capacity of 20,000 batteries per year.

Québec is fortunate to count on a large Indigenous population with whom it has been able to establish modern treaties and build sustainable partnerships. Two examples are the James Bay and Northern Québec Agreement of 1975 and the Northeastern Québec Agreement of 1978, both of which ensure predictability for the sector. More recently, the Grand Alliance was signed in 2020 with the Cree Nation for natural resource and infrastructure development.

In addition to these modern treaties and agreements, in 2019, our government adopted the Native Community Consultation Policy Specific to the Mining Sector. This policy, developed in concert with our Indigenous communities and mining industry, improves the coordination of government action and clarifies the roles and responsibilities of stakeholders. Above all, it strengthens relations between Indigenous communities, the government, and the mining sector. This new partnership-based approach will both decrease the liability of the mining companies and help them work with communities to have a sounder social license from which to operate.

That being said, we recognize this is an ongoing conversation. As such, we want to keep improving the process, for instance by increasing consultations with Indigenous peoples prior to extensive exploration work that may impact the land. We will carry on government-to-government conversations with our Indigenous peoples to create a stable, inclusive framework that allows our mining industry to thrive.

### **Stronger Together: The Urgency of Collaboration in this Sector**

Beyond sharing our experiences and best practices in the mining sector, the key message of this testimony is the urgent need for Québec and the U.S. to deepen and expand our collaboration to secure these resources. This partnership must be ambitious, ranging from

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the resources to their end uses and the energy used to extract and build them, respectively.

The current situation in Ukraine underscores the energy and resource vulnerabilities of allied countries. Our long-term overreliance on individual countries, including some geopolitical competitors, for upstream inputs and battery processing only further emphasizes the need for action. Across the batteries, minerals, and energy supply chains the message is the same: the U.S. must diversify their sources and Québec is here to help. Not only by providing the raw materials of our hydro and minerals, but also by contributing to a coordinated North American critical minerals value chain supported by a secure, reliable, and highly integrated grid.

Cooperation must begin now. With non-market actors operating in this space, the only way we can be globally competitive is if we take advantage of our existing infrastructure and supply chains to maximize efficiency. When Canada and the U.S. secure offtake agreements and share resources, our dependency on non-allied nations and overall reliance on importing these materials changes for the better. The United States is uniquely positioned to help Canada develop our resources through trading opportunities. Working together, we can guarantee the highest environmental and labor standards and security of supply.

Leveraging Québec's resources, processing capacity, and high standards fits in perfectly with existing logistical value chain; the roadways, railways, seaways, and Great Lakes ports all connect the continent together. We can extract and process minerals in Québec to feed into the vehicle manufacturing lines in Ontario, the Midwest and the Southeast. All of this is highly integrated and tariff-free thanks to the U.S.-Canada-Mexico Agreement authorized by Congress. Québec is also a gateway to secure mineral imports from other trading allies, like Japan, South Korea, and the European Union, with which Canada has free trade agreements.

This vision of a strong North American EV value chain is already beginning to take shape. The U.S. company, General Motors (GM) – in partnership with South Korea's POSCO – as well as German company, BASF, have both announced CAM facility investments in Québec. The GM-POSCO investment is of particular interest: the CAMs will be developed in Québec, thanks to our cheap and abundant hydropower, which will make large-scale EV manufacturing in North America more competitive. The CAMs developed in Québec will power the next mega-factory GM is building in Lansing, Michigan. It will contribute to the development of GM's electric vehicle complex, with factories in Detroit and Hamtramck, Michigan, Lordstown, Ohio and a future factory in Tennessee. McKinsey estimates that battery manufacturing alone can create as many as 3,200 jobs per plant,



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with a similar number of jobs added via suppliers. This project is just one example of the job potential of this burgeoning North American industry.

In short, for EV manufacturing in North America to be economically competitive, it needs to be a truly North American industry. Canada and the U.S. must leverage each other's strengths and come together into a powerful engine of innovation and job creation. Creating these jobs in Québec will help create more EV jobs in the United States, not less, and vice versa. As the current U.S. Ambassador in Ottawa, David Cohen, likes to say, "the pie is growing."

There are ample opportunities for us to develop mining in the U.S. and Canada. Québec's approach is one way we can do this efficiently, sustainably, and with the protection of the human rights and environment in mind, without having to worry about strategic or geopolitical vulnerabilities. Working together, these resources can ensure our competitiveness, security, and environmental stability for generations to come.

We truly look forward to working with you on developing this new, latest frontier in mining and innovation. In the meantime, Québec's Office in Washington is here to act as a liaison between your offices and Québec as we continue this incredibly important discussion and seize the opportunities that await us.

Thank you very much.

**Mme Nathalie Camden**

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Annex I – Map of Strategic and Critical Minerals in Québec

Annex II – Québec in the North American EV Market

Annex III – Québec Plan for the Development of Critical and Strategic Minerals ([online](#))