Enclosure

Government Response to the Fourth Report of the Standing Committee on Industry and Technology (INDU) for its Report, Entitled *Positioning Canada as a Leader in the Supply and Processing of Critical Minerals*

The Standing Committee on Industry and Technology undertook a study on critical minerals supply and processing in Canada. The study was motivated by the accelerating shift towards the energy transition, electric vehicles and significant changes to supply chains globally. Growing Canada's supply of critical minerals and the products they make possible, presents a generational opportunity that will be increasingly important for the country's long-term economic growth and prosperity. To fully seize this opportunity, we must address the entire supply chain, including exploration, mining, processing, manufacturing, and recycling, and ensure value is added at each stage.

The Government of Canada concurs with the Committee's overall assessment of the opportunities and factors influencing the development of Canada's critical minerals production capacity and associated value-added products in sectors such as electric vehicles, clean technologies, defense and advanced manufacturing in Canada. The Government of Canada is supportive of the report as a whole and concurs with, or supports the intent of, the majority of the ten (10) recommendations.

The government response addresses the Committee's recommendations below, grouped in four themes:

Canada's Critical Minerals Strategy and related initiatives (Recommendations 1, 4, 5, and 10):

The Government of Canada supports these recommendations as they are aligned with the Minister of Natural Resources and Minister of Innovation, Science and Industry's mandate letter commitment to develop and launch a Canadian Critical Minerals Strategy to position Canada at the forefront of critical mineral exploration, extraction, processing and manufacturing, improve critical minerals supply chain resiliency, and position Canada as a leading mining nation.

Canada has a strong base of critical minerals that are in high demand globally. Advancing strategic infrastructure investments to enable development of critical minerals resources will help foster sustained growth and the establishment of supply chains, while securing Canada's place in the growing global critical minerals industry. The Canadian Critical Minerals Strategy will also help secure critical mineral supply chains within the geopolitical context.

The Government of Canada has undertaken initiatives and engagements that are shaping the development of a strategic vision for Canada's critical mineral industry. In March 2021, the Government of Canada announced a list of 31 minerals considered critical for the sustainable economic success of Canada and our allies. The List was developed using a criteria-based approach and in consultation with other federal government departments, provinces and territories, the exploration, mining, and manufacturing industries and associations. The List provides greater certainty and predictability to industry, investors, provinces and territories, and Canada's international partners on Canada's mineral priorities; and enables policymakers to target and address key points in supply chains.

Further, Budget 2021 announced funding of $57.2 million over three years on a cash basis, starting in 2021-22, for Natural Resources Canada (NRCan) to create a Critical Minerals Center of Excellence (CMCE), referenced as the Critical Battery Minerals Centre of Excellence in Budget 2021 and in the Report, before it was established in 2022, and to support targeted research and development (R&D) for upstream critical minerals processing and battery precursors and related materials engineering.

Budget 2022 proposed up to $3.8 billion in support over eight years on a cash basis, starting in 2022-23, to implement Canada's first Critical Minerals Strategy to grow the production of critical minerals for Canada's industrial base, supply our allies to support international mineral security and support the transition to a green and digital economy. The Government of Canada has released a public discussion paper to seek feedback on the development of the Strategy, framed around six focus areas for investment:

1. Drive research, innovation, and exploration;
2. Accelerate project development;
3. Build sustainable infrastructure;
4. Advance Indigenous reconciliation;
5. Grow a diverse workforce and prosperous communities; and
6. Strengthen global leadership and security.

Building on the success of Canada's Mines to Mobility approach—which has attracted major investments in the manufacturing of zero-emission vehicles—the Strategy plans to pursue an Exploration to Recycling approach to critical minerals. This goes beyond the foundation established from Mines to Mobility, to building capacity at each stage of the value chain, from exploration to recycling, and everything in between. By focusing on the entire value chain, Canada can ensure maximum economic benefits for Canadians, while mitigating supply chain risks, and will also further advance Canada's circular economy.

Through its first pillar, and in response to Recommendation 5, the Government recognizes that geoscience research is crucial to meet the rapidly increasing global demand for critical minerals. The Geological Survey of Canada (GSC) manages national-scale geoscience research initiatives that support critical mineral exploration including the Geo-Mapping for Energy and Minerals (GEM)-GeoNorth program and the Targeted Geoscience Initiative (TGI). While GEM-GeoNorth is focused on the new frontiers of underexplored areas in Canada's North, the TGI provides geological knowledge for more effective targeting of buried mineral deposits. Both programs are carried out in collaboration with provinces, territories and research institutions in Canada and abroad, as well as Northern and Indigenous institutions and organizations.

Through the Canadian Minerals and Metals Plan, an ambitious generational initiative to drive a competitive, sustainable and responsible minerals and metals industry, the GSC has worked closely with provinces and territories on a Pan-Canadian Geoscience Strategy, released in February 2022 with five priority areas: to produce better data to find the mines of tomorrow, lower exploration risk, boost competitiveness, support land-use decisions, and enhance public safety by reducing risks from natural hazards and resource development.

NRCan delivers additional national-scale critical minerals geoscience research via the following programs:

- Critical Minerals Mapping Initiative (CMMI): a collaboration between Canada, Australia and the U.S. to secure supply for critical minerals resources and reduce mineral supply dependence on nations that may pose geopolitical, environmental or human rights risks. It is working to improve scientific ability to predict the type, location and quantity of critical minerals occurrences, as well as understand the geological, technological and logistical factors that affect the risks associated with mine development; and
- GSC Environmental Geoscience Program: understanding the environmental impacts and human health risks associated with critical minerals.

Recent investments of $135 million over seven years in GEM-GeoNorth and TGI, starting in 2020-21, provide industry with valuable knowledge to identify and develop future mines across the country, while supporting Northern, remote and Indigenous communities and organizations in decision-making on land-use planning. The renewed programs include a

focus on critical minerals, such as battery metals, that are key to Canada achieving net-zero emissions by 2050. Budget 2022 proposed to provide $79.2 million over five years on a cash basis, starting in 2022-23, for NRCan to provide public access to integrated data sets to inform critical mineral exploration and development.

To further facilitate exploration, the Government of Canada has supported the recommendation to expand the scope of financial and tax measures. The 2018 Fall Economic Statement announced a five-year extension of the Mineral Exploration Tax Credit, an initiative that has been renewed numerous times since its introduction in 2000. This extension provides greater long-term certainty for investors and helps junior exploration companies raise the capital needed to undertake the search for new mineral resources, helping secure the future prosperity of Canada's minerals industry. Per Budget 2022, the Government of Canada will propose to introduce a new 30 per cent Critical Mineral Exploration Tax Credit for specified critical minerals: nickel, lithium, cobalt, graphite, copper, rare earths elements, vanadium, tellurium, gallium, scandium, titanium, magnesium, zinc, platinum group metals and uranium.

The Government acknowledges that most mining and industrial development projects require large investments with high risk and slow return. For example, it can take 5 to 25 years for a mining project to become operational, with no revenue until production starts. Domestic projects are also subject to rigorous regulatory assessments to meet Canada's reputable environmental, social and governance (ESG) credentials standards. Therefore, to advance our transition to a net-zero economy, the federal government is providing financial and administrative support to accelerate the development of strategic projects in critical mineral mining, processing, manufacturing, and recycling.

This includes leveraging the resources and expertise of our trade and national business development organizations such as the Business Development Bank of Canada, Export Development Canada, and the Canadian Commercial Corporation. It also means capitalizing on existing programs such as the Strategic Innovation Fund (SIF), which is already making significant investments in the electric vehicle market. We will also ensure alignment with provincial and territorial partners, while respecting the environment and Indigenous rights, which will allow these projects to develop in a more robust and sustainable manner.

To accelerate project developments, the federal government will also build upon private sector investment to advance technological innovation and environmental performance in Canada's critical minerals sector and associated industries.

These core endowments in critical minerals value chains will reinforce and strengthen existing programs that seek to create new job opportunities and attract foreign direct investment in Canada's critical minerals sector and associated industries. Per Budget 2022, $1.5 billion ($1 billion in new funding, $500 million from existing funds) over six years, starting in 2024–25, will be provided for the Strategic Innovation Fund to support critical minerals projects, with prioritization given to manufacturing, processing, and recycling applications.

The federal government is also supporting the development of Canada's critical minerals sector through investments in sustainable energy and transportation infrastructure to support the supply chains that are needed to get critical mineral products to market. These investments will support Canadian trade and economic development by addressing gaps in enabling infrastructure to unlock priority mineral deposits, while considering potential multi-user benefits and Canada's goals related to environmental protection, climate adaptation, and Indigenous reconciliation. This includes:

- The Canada Infrastructure Bank's alternative finance tools, for example their $5 billion clean power and $5 billion trade and transportation priority investment

areas seeking to attract private and institutional investors for revenue-generating infrastructure projects in the public interest; and

- Budget 2022 proposes up to $1.5 billion for infrastructure development for critical mineral supply chains, with a focus on priority deposits.

The report also suggests that the Government of Canada introduce incentives to the energy transition of its economy to use clean technologies. Budget 2021 provided $36.8 million over three years, starting in 2021-22, with $10.9 million in remaining amortization, to NRCan for supporting targeted R&D for upstream critical minerals processing and production of battery precursors together with related materials engineering. For example, R&D funding is targeting circularity by developing pathways to economically produce viable minerals from waste streams in Canada, such as mine tailings and end-of-life (EOL) electric vehicle (EV) batteries, which can be reintegrated into value chains. Budget 2021 provided $700 million over three years, for the Jobs and Growth Fund (JGF), a federal program to support regional job creation and position local economies for long-term growth. With the fund, regional development agencies may, among many other activities, support the green transition, including green energy.

Additionally, the report recommends that a critical minerals strategy should secure critical mineral supply chains within the context of national security. Last June, Public Safety received the mandate to coordinate the development of a National Economic Security List (NESL) within the following 12 months, which will consist of assets important to Canada's national security, including critical minerals. The NESL will provide an agreed list of high value, strategic assets that need protection from acquisition, control or access by hostile foreign actors. It will aid in harmonizing approaches across programs with respect to assets covered, including research security, the Investment Canada Act, and additions to the Export Control List. Under the area of focus of global leadership and security, the Critical Minerals Strategy will look at tools to ensure that Canada's critical minerals and their associated value chains are protected from threat in a national security context, while ensuring continued access to important and required foreign direct investments.

To develop its Strategy, the Government is continuing its engagement with provinces and territories and Indigenous groups to develop its vision on critical minerals and ensure alignment with provincial strategies. A Federal-Provincial-Territorial (FPT) Task Team on Critical Minerals and Battery Value Chains was created in 2020 to ensure transparency and coordinated engagement on domestic and international initiatives. Several jurisdictions have developed critical minerals strategies and are directly investing in the sector while some others are developing strategic approaches. The Government of Canada is working towards further engagement with province and territories, and Indigenous groups, to advance critical minerals projects and related value chains in Canada, as a pan-Canadian strategy. This is complemented by engagement through the NRCan-led Regional Energy and Resource Tables, an initiative to work closely with provinces, territories and other key partners to position each region to advance emerging growth opportunities that arise from the shift to net-zero, including critical minerals. The Regional Tables are proceeding using a phased approach, with the first phase beginning with British Columbia, Newfoundland and Labrador, and Manitoba.

The Government of Canada has started the work to develop and implement the Critical Minerals Strategy. With regards to the request for quarterly INDU reports on critical minerals investments under Recommendation 10, we appreciate the intent and will ensure that departments with critical minerals-related investments will continue to follow usual program implementation and existing robust reporting practices, including annual reporting through Departmental Reports, to avoid duplication and reduce reporting burden. Additionally, as part of the implementation of the Critical Minerals Strategy, a horizontal reporting framework is being developed and this could be an additional avenue to report on performance of investments made under this Strategy. This framework will be formalized through upcoming Treasury Board submissions.

The Critical Minerals Centre of Excellence and the Targeted Regulatory Review process for supply chains, including critical minerals (Recommendations 2 and 3):

Budget 2021 provided $9.6 million over three years, starting in 2021-22, to NRCan to create the Critical Minerals Centre of Excellence (CMCE). The CMCE's objective is to stimulate the development of Canadian critical mineral value chains by coordinating federal policy and programs, and working with provincial and territorial governments, Canadian industry, allied foreign governments and with Indigenous Peoples. In addition, the CMCE is overseeing the targeted R&D for upstream critical minerals processing and battery precursors and related materials engineering, led by NRCan's laboratory, CanmetMINING. Key activities include:

a. Leading the development of a Canadian Critical Minerals Strategy;
b. Analyzing Canada's policy, program and regulatory frameworks touching the upstream and midstream components of Canada's critical mineral value chain (mining, processing, refining, precursor production) to identify federal policy and program measures (e.g. regulatory amendments, new G&Cs programs, etc.) to address gaps and challenges;
c. Partnering with other countries to support investment attraction in Canada and help to diversify global supply chains by increasing Canada's capacity to produce, refine and develop critical minerals and their associated value chains;
d. Facilitating industry access to federal programmatic support for critical minerals projects that are strategically important to building the three identified value chains; and
e. Coordinating with provinces, territories, Indigenous groups, and industry to ensure a Canada-wide approach to developing Canadian critical mineral value chains.

Companies seeking to invest look for a balanced and predictable regulatory environment and a collaborative approach between different orders of government. Recommendation 2 suggested that the government establishes an interdepartmental regulatory committee to support mining companies, while considering provincial jurisdiction and reducing bureaucracy. This will be addressed through existing and upcoming initiatives. Budget 2022 proposes to provide an additional $10.6 million over three years, starting in 2024-25, to NRCan to renew the CMCE. In addition to existing activities, the CMCE will provide direct assistance to help industry navigate regulatory processes and existing support measures. Interdepartmental governance of the Canadian Critical Minerals Strategy will address regulatory issues.

To ensure an efficient and effective impact assessment regime, the federal government will consider the funding requirements for the Impact Assessment Agency of Canada and other relevant departments in the context of the fall 2022 economic and fiscal update. This will help support the assessment of major projects, such as critical mineral mines. Budget 2022 also proposed to provide up to $40 million over eight years, starting in 2022-23, to Crown-Indigenous Relations and Northern Affairs Canada to support northern regulatory processes.

In addition, the Targeted Regulatory Reviews, established in Budget 2018 and led by Treasury Board Secretariat, are intended to identify regulatory bottlenecks to economic growth and innovation, with the goal of making the Canadian regulatory system more agile, transparent, and responsive. There is an opportunity to harness the mechanisms and processes being proposed by the Supply Chain Regulatory Review to help support interdepartmental cooperation efforts regarding critical minerals regulatory policy. Establishing a committee at this point could increase the risk of duplicative efforts and resources. The Impact Assessment Agency of Canada (IAAC) is also working with other relevant federal departments and agencies to examine the federal regulatory system, including the implementation of the *Impact Assessment Act* (IAA), with the aim of improving the regulatory environment, including for projects in the critical minerals sector.

In response to Recommendation 3, given the mandate of the CMCE, the CMCE will not be relocated to be near academia or mining locations across Canada and will remain under NRCan, in the national capital region, given its federal responsibility, including coordination with various Canadian stakeholders and foreign governments. Nevertheless, funding under the forthcoming Critical Minerals Strategy intends to increase the research and development capacity of the sector, including partnering with industry, through CanmetMINING, CanmetMATERIALS, the Geological Survey of Canada, and the National Research Council.

Indigenous economic reconciliation and infrastructure development in rural, and Northern communities (Recommendations 6 and 9):

The Government of Canada concurs with the Committee's recommendations to introduce initiatives to encourage Indigenous Peoples to fully participate in developing the critical minerals value chain. The Strategy's fourth area of focus is on advancing Indigenous reconciliation, and recognizes that Indigenous Peoples are the stewards, rights holders, and in many cases, title-holders to the land upon which natural resources are located. The success of Canadian critical mineral development must be based on respect for Indigenous and treaty rights, and meaningful engagement, partnership, collaboration and inclusion of First Nations, the Métis Nation, and Inuit.

Although mining is currently the largest private sector employer of Indigenous Peoples, engagement on the CMMP highlighted that Indigenous Peoples experience significant systemic barriers that limit their meaningful participation in the industry, including capacity, governance, financing, and training opportunities. Employment and Social Development Canada (ESDC) has a long history of partnership and collaboration through its Indigenous labour market programs. Following extensive engagement and co-development with Indigenous Peoples, the Indigenous Skills and Employment Training Program, was launched in 2019, and funded at $2 billion over five years and $408.2 million ongoing. This distinctions-based program supports a network of over 110 Indigenous service providers with over 650 points of service across the country that determine their own skills and training priorities based on the specific needs of their communities. Launched in 2010 and funded at $50 million per year ongoing, the Skills and Partnership Fund (SPF) is a project-based program that funds partnerships between Indigenous organizations and industry employers to provide skills training for Indigenous Peoples linked to economic opportunities at the local, regional and national level. Historically, a significant number of SPF projects have been in the mining sector, including 22 projects since 2010.

The Final Report of the *National Inquiry into Missing and Murdered Indigenous Women and Girls* also found that there are higher levels of violence and harassment by transient workers toward Indigenous Peoples and women, and that Indigenous women face significant barriers to participating in the extractive economy. To reduce gaps and advance community participation in natural resource sectors, engagement and partnership-building must be early and ongoing and must respect and reflect diverse Indigenous interests.

Implementation of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and recent jurisprudence have increased recognition of Indigenous rights and the need to support early, continuous and meaningful participation in resource development to ensure efficient and timely approval of projects. The Government of Canada has committed to renewing relationships with Indigenous Peoples based on the recognition of rights, respect, cooperation, and partnership, and advancing reconciliation will be done within the context of the implementation of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) Act, which continues to pursue stakeholder engagement across numerous government departments.

The Government of Canada will continue to support meaningful consultations and partnerships with Indigenous communities in developing critical mineral projects. In 2019,

the Impact Assessment Agency of Canada announced $18.3 million over five years for the Indigenous Capacity Support Program, which provides funding to Indigenous communities and organizations to promote meaningful engagement and leadership of Indigenous Peoples in consultations on assessments. Similarly, created in 2018, Crown-Indigenous Relations and Northern Affairs Canada's (CIRNAC) Northern Participant Funding Program, with funding of $10.3 million over five years, supports Indigenous governments and organizations, and northerners, to participate meaningfully in environmental and socio-economic impact assessments of major infrastructure and resource extraction projects in the territories under the treaty-based co-management regimes. Furthermore, Budget 2022 proposes to provide up to $40 million over eight years, starting in 2022-23, for CIRNAC to support northern regulatory processes.

In the December 2021 Mandate Letter to the Minister of Natural Resources, the Government renewed its commitment to develop a new National Benefits-Sharing Framework to ensure that First Nations, Inuit and Métis Nation communities directly benefit from major resource projects in their territories. Work is underway to engage with Indigenous partners and industry on the development of this Framework. Budget 2022 proposes to provide $103.4 million over five years, starting 2022-23, to NRCan for the development of a National Benefits-Sharing Framework for natural resources and the expansion of the Indigenous Partnership Office and the Indigenous Natural Resource Partnerships program. At least $25 million of this amount will be dedicated to early engagement and Indigenous communities' capacity building to support their participation in the Critical Minerals Strategy. These investments will increase Indigenous capacity to benefit from all types of natural resources projects, including critical minerals.

The North contains an abundance of undeveloped critical minerals deposits as well as Cheetah Resources' Nechalacho Rare Earths Demonstration project, the first project in Canada to produce rare earth elements. CanNor has invested $1.26 million toward greener extraction technologies for this project. Nechalacho is a proof-of-concept initiative, and an example of reconciliation, as it is the first mineral project in Canada for which ground operations have been entirely contracted out to the First Nation on whose traditional territory the project lies. CanNor has supported the development of infrastructure in the North, including roads, digital connectivity, and electricity generation. Investments in the pre-construction readiness of major projects have included:

- $1.16 million to advance planning for the road that will connect the NWT's Slave Geological Province to the Kitikmeot region of Nunavut;
- More than $1.2 million toward an all-season Mackenzie Valley Highway.
- $480,000 to support the planning of the proposed Taltson Hydroelectric Expansion project; and
- $3 million to support a Tłı̨c hǫ Government project, together with the GNWT and ISED, to improve internet access for the community of Whatì, through engineering, construction, and commissioning of a fibre-optic cable.

In parts of Canada's Territories, where the Impact Assessment Act does not apply, CanNor's Northern Projects Management Office supports timely and transparent impact assessment processes for resource and infrastructure development proposals and coordinates federal input into the territorial environmental assessment processes, monitors and assesses the Crown's duty to consult, and plays a convening role to assist industry in understanding and navigating the northern regulatory systems.

The Government of Canada also supports the recommendation to invest in remote and Northern regions infrastructure, and is exploring options to advance projects recognizing that these infrastructure gaps hamper mineral development at the exploration, development and operating stages. Budget 2021 provided $1.9 billion over four years, to recapitalize the National Trade Corridors Fund (NTCF), led by Transport Canada. This funding could attract approximately $2.7 billion from private and other public sector partners, resulting in total investments of $4.6 billion, and spurring investments in roads, rail, and shipping

routes. In addition, Budget 2022 proposes to provide $450 million over five years, starting in 2022-23, to support priority supply chain transportation projects through the NTCF.

Under the NTCF, the Arctic and Northern stream built on Budget 2019's investment of $400 million by adding another $285 million in Budget 2021 for transportation infrastructure projects in Canada's Arctic and northern regions, which will support enabling transportation networks for the mining and mineral exploration industries. Since the program's creation in 2017, the Government of Canada has invested $4.6 billion in the NTCF.

The report notes that there is a gap in high-speed internet access for Canadians and Canadian businesses in some rural and remote communities, and this creates a barrier to equal participation in the economy. Building on the $1.75 billion the federal government had made available through the Universal Broadband Fund (UBF), Budget 2021 provided an additional $1 billion over six years, to the UBF to support a more rapid rollout of broadband projects in collaboration with provinces and territories and other partners. This would mean thousands more Canadians and small businesses will have faster, more reliable internet connections.

Budget 2021 provided $11.7 million over five years to renew the Standards to Support Resilience in Infrastructure Program, so that the Standards Council of Canada can continue updating standards and guidance in priority areas such as flood mapping and building in the North. This will help communities to plan and build roads, buildings, and other infrastructure that is durable and resilient to a changing climate.

The report also indicated a need for electricity infrastructure in these regions, which will ensure long-term prosperity for these regions. Through Budget 2021, the Government of Canada invested $40.4 million over three years, to support feasibility and planning of hydroelectricity and grid interconnection projects in the North. This funding will provide clean power to Northern communities and help reduce emissions from mining projects and will also support enabling infrastructure. Budget 2022 proposes to provide $600 million over seven years, starting in 2022-23, to NRCan for the Smart Renewables and Electrification Pathways Program to support additional renewable electricity and grid modernization projects.

Given that the mining sector is the economic backbone of many Northern communities, investments to support transportation, power and broadband in the North will facilitate mineral exploration and can help improving socio-economic opportunities in Northern and Indigenous communities.

International collaboration and priority value chains (Recommendations 7 and 8):

International collaboration with Canada's trusted partners supplements Canada's own efforts to build critical mineral and battery value chains in Canada and improve overall resiliency in critical minerals. The Canada-US Joint Action Plan on Critical Minerals Collaboration has been advancing our shared interest in securing supply chains for the critical minerals needed for important manufacturing sectors, including communication technology, aerospace and defense, and clean technology. In February 2021, Prime Minister Trudeau and President Biden released a roadmap for a renewed US-Canada Partnership. It includes a commitment to build the necessary supply chains to make Canada and the U.S. global leaders in all aspects of battery development and production. The leaders agreed to strengthen the Joint Action Plan to target a net-zero industrial transformation, batteries for zero-emission vehicles, and renewable energy storage. They also agreed to strengthen collaboration on multilateral efforts to improve mining sector governance abroad, including through the US-led Energy Resource Governance initiative (ERGI).

The Government of Canada is also working closely with other key international partners to improve minerals and metals supply chain resiliency through bilateral and multilateral

engagements. In June 2021, at the Leader's Summit between Canada and the EU, the Canada-EU Strategic Partnership on Raw Materials ("Strategic Partnership") was announced. The Strategic Partnership will see Canada and the EU work collaboratively to reduce supply chain risks for the minerals and metals that are critical to the transition to a climate-neutral and digital economy. This partnership is established within the mandate of the Canada-EU Comprehensive Economic and Trade Agreement, notably the bilateral dialogue on raw materials (Art. 25.4).

The Trade Commissioner Service (TCS), through its global network of 44 investment officers, along with Invest in Canada, will continue to work with NRCan and ISED to develop and build Canada's critical mineral supply chain and support the development of key industries across the country, by continuing to promote investment into key segments of critical mineral value chains here in Canada. Critical minerals play a large role within Canada's Foreign Direct Investment Attraction Strategy (FDIAS). The FDIAS identified a number of subsectors for the Government of Canada to focus on over the next 3 years, including EV battery and vehicle manufacturing, energy storage systems and mineral extraction, development and processing with critical minerals being a fundamental part of each of these.

Interest in pursuing collective action on critical minerals to support the global clean energy transition is growing within several key multilateral organizations, including at the: OECD; G7/G20, International Energy Agency (IEA); World Bank; International Renewable Energy Agency (IRENA); Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF); Energy Resource and Governance Initiative (ERGI), and the newly established Minerals Security Partnership (MSP). This growing attention on critical minerals in multilateral fora provides an opportunity for Canada to build responsible collaboration among trusted partners and Canada is looking into options to support increased collective action within these key organizations.

In terms of priority value chains for Canada and its allies, Canada has identified three priority value chains with significant opportunity to grow and connect domestically mined and processed minerals to Canadian manufacturing:

- Clean technologies—energy transmission systems, permanent magnets, wind turbines, panels, advanced batteries, hydrogen fuel cells, and small modular reactors
- Semiconductors and information and communication technologies
- Advanced manufacturing inputs and materials—ceramics, high value-added metals, electronic materials, composites, polymers, and biomaterials.

Through the SIF, the Government helps businesses invest, grow, and innovate in Canada, including in its priority value chains. Budget 2021 provided the SIF Net Zero Accelerator (NZA) with $5 billion in new SIF funds, building on the $3 billion provided in the December 2020 *Strengthened Climate Plan, A Healthy Environment and a Healthy Economy*, for a total of $8 billion over seven years to support projects that will help reduce domestic greenhouse gas emissions across the Canadian economy. It is expected that NZA investments in innovation and development of clean technologies, including its support for innovative projects in the automotive, transportation and aerospace sectors, could incite demand for critical minerals.

In addition, Budget 2022 proposes to provide $1 billion over six years on a cash basis, beginning in 2024-25, to ISED for the SIF. Combined with $500 million drawn from existing program funding, this will provide $1.5 billion in targeted support towards critical minerals projects, with prioritization given to manufacturing, processing, and recycling applications. The government will also explore potential opportunities to support the growth of the solar panel industry through this envelope.

The federal government, alongside provincial and territorial partners, have also increased

their support for Canadian industries positioning themselves in critical mineral supply chains. For example, the Government of Canada and Government of Ontario announced joint funding of $10 million in December 2020 for First Cobalt (now Electra) to accelerate domestic production of battery-grade cobalt sulfate through recommissioning its refinery in Ontario. Also in March 2022, the federal government and Ontario jointly announced support for Canada's first lithium-ion electric vehicle (EV) battery manufacturing plant in Windsor, Ontario.

The federal government has also invested significantly to stimulate domestic manufacturing of EVs that will supply both domestic and global demand, and to build mineral processing capacity in Canada, as well as other key priority supply chains. This includes:

- A $295 million investment in EV production at Ford's Oakville plant;
- A $50 million investment in a battery pack assembly plant for Lion Electric;
- A $5 million investment to recommission and expand Electra Battery Minerals cobalt refinery in Northern Ontario;
- $4.1 million in funding for Polar Sapphire to improve the quality and purity of its high-purity alumina being produced for use in lithium-ion batteries; and
- Federal investment in LG Energy Solutions and Stellantis' new EV battery plant in Windsor, Ontario.

In terms of policy signals, the Government is committed to developing a light duty ZEV sales mandate under the Canadian Environmental Protection Act, 1999, which will set annual targets towards achieving 100% ZEV sales by 2035, including interim targets of at least 20% by 2026 and at least 60% by 2030. This target is complemented by federal investments to increase domestic demand for EVs, including $2.75 billion over five years, starting in 2021, through the Zero Emission Transit Fund to support public transit and school bus operator's plans for electrification, support the purchase of 5,000 zero emission buses and build supporting infrastructure, including charging infrastructure and facility upgrades. These will require increased amounts of critical minerals and materials.

Budget 2021 provided $56.1 million over five years and $13 million per year ongoing, to Measurement Canada to develop and implement, in coordination with international partners, a set of codes and standards for retail zero-emission vehicles (ZEV) charging and fuelling stations. This includes accreditation and inspection frameworks needed to ensure the standards are adhered to at Canada's network of charging and refuelling stations. This will provide the regulatory certainty to facilitate the development of the charging network and give Canadians more confidence to purchase and drive ZEVs. This initiative contributes to supporting an environment in which a battery ecosystem and EV manufacturing can prosper in Canada.

In February 2022, the federal government also announced $150 million, through the SIF, to make targeted investments and build on Canada's domestic strengths associated with the development and supply of semiconductors. This was in addition to $90 million allocated in Budget 2021 to retool and modernize the National Research Council's Canadian Photonics Fabrication Centre (NRC – CPFC). Budget 2022 proposes an additional $45 million over four years, starting in 2022-23 on a cash basis, for Innovation, Science and Economic Development Canada to engage with stakeholders, conduct market analysis, and support projects that will strengthen Canada's semiconductor industry.

Finally, Budget 2022 proposes $15 billion for the creation of a Canada Growth Fund to support private capital investments that advance national economic policy goals such as to diversify our economy and bolster our exports by investing in the growth of low-carbon industries, new technologies and restructuring critical supply chains in areas important to Canada's future prosperity, including natural resources sectors.

Conclusion

The Government of Canada extends its gratitude to the members of the Standing Committee for their work to identify ways to address challenges and opportunities facing the Canadian critical minerals sector.

The report's recommendations align with the Government of Canada's vision on critical minerals: to support the development of the critical minerals industry and its associated value chains, and to ensure Canada is positioned to benefit from economic opportunities as global demand for these minerals grows. Critical minerals are the essential building blocks for the green transition, and the Government of Canada will continue to assess ways to develop a value-added critical minerals strategy for Canada; support the development of intermediate processing capacity; focus on industries that help reduce greenhouse gas emissions; and build expertise and train a skilled and inclusive workforce to ensure those objectives are met.