



CANADA'S  
NET-ZERO  
INDUSTRIAL  
STRATEGY  
SUMMIT

# LESSONS FOR CANADA FROM THE 2022 NET-ZERO INDUSTRIAL STRATEGY SUMMIT

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## What Is Industrial Policy?

“**Industrial policy**” refers to a set of measures that governments use to redirect economic activity or shape industries to solve urgent social problems that traditional market forces will not address (e.g., building technologies and firms needed to accelerate decarbonization of the Canadian economy). These measures can be embedded in regulations, tax codes, or targeted investments that encourage firms to take risks and engage in collaborations that otherwise would not have been possible.

All nations have engaged in some form of industrial policy. Traditionally, governments have established industries through a combination of measures including trade protectionism and attracting foreign direct investments. The aim was to grow the industry until local producers learned to be competitive. Canada’s major export industries — automotive, oil & gas, mining, and forestry — have been built, protected, and maintained through these types of industrial policies.

Modern-day strategic industrial policies are different from the traditional protectionist policies, as the Summit keynote highlighted. Historically, the nature of the technology, the regulations governing the use of the goods, and conditions of trade were known and assumed not to change significantly. However, these assumptions can no longer be taken for granted. The transition to a low-carbon economy will require co-innovation in production and processes and changes in regulations and trade.

During the low-carbon or net-zero economic transition, production, processes, trade and regulations will need to continuously change. As a result, modern industrial policy begins with the premise that any strategy must be smart and flexible, designed to be changed and updated over time. This strategy needs close collaboration between different economic actors (i.e., governments, private sector, finance and civil society).

The collaboration will need to achieve outcomes in the face of continued uncertainty, and stakeholders need to learn quickly and adjust through monitoring and evaluation. This is possible through enacting regulations to force the adoption of new technologies (getting actors to push limits towards goals), imposing penalty defaults (to get actors to pursue best course of action or be penalized) and building capacity (through research and development services) — three distinguishing features of modern industrial policy.

## How Can Canada Take a Strategic Approach?

Canada’s major trading partners and competitors are making decisions under uncertain conditions with their own tailored versions of industrial policies. To keep up, Canada needs its own strategic approach to industrial policies to help achieve its own decarbonization and

economic transition goals. Failure to do so will mean Canada will be left behind in the face of rapidly forming global value chains.

This leads to the question: how can Canada take a strategic approach to industrial policy? Successful industrial strategies in other jurisdictions have four key elements that support the process of strategizing, deploying, and learning in key sectors or opportunity areas:

1. Bold and clear goals and targets in priority opportunity areas.
2. Strategic collaborations to bring together Indigenous Peoples, labour, universities, governments, industry, finance, and civil society.
3. Ongoing deliberations to create sectoral strategies, set and revise targets, and identify smart investments to grow and scale Canadian firms.
4. Goals to guide policy and focus both public and private investment.

These four elements need to be institutionalized via *sector tables, government, and research hubs*. These institutions will play different roles in the collaboration process and need a few iterations to get the right configuration. It will also be important for tables and research hubs to be endowed with sufficient resources through funding, regulations, and other support for continued institutional stability so that they are able to make necessary adjustments based on progress.

This institutional approach will be helpful for key industries such as steel, which is a linchpin for decarbonizing other sectors of the Canadian economy. The decarbonization of steel production and processing is dependent on development of clean grids, low-carbon hydrogen, and carbon capture and storage. On top of that, the Canadian steel industry faces different headwinds ranging from global competition from high-carbon steel to domestic regulatory constraints.

Therefore, a sectoral strategy for the steel industry based on collaboration across different stakeholders, guided by research expertise and specific targets across the value chain and aligned with different government policies and public-private investments, is critical for the Canadian economy. Canada's future place in the global economy depends on developing sectoral strategies for critical sectors that will enable development of low-carbon industries.

## What Are the Sectoral Opportunities in Canada?

Canada has opportunities in the low-carbon transition across different sectors and regions. To take advantage of these opportunities, it is important to recognize that the vision of Canada's future in a low-carbon world must be grounded in the perspectives of a *small open economy*. "Small" suggests that Canada cannot directly compete with larger countries that have more capital and capacity to achieve larger economies of scale from production. "Open" suggests that Canada is dependent on exports and hence lower-cost competitors can and will enter domestic markets. As a small open economy, Canada should not try to replicate all parts of the value chain. Rather, the aim should be to build competitive niches in key value-added areas.

Some of the factors that might help identify sectoral opportunities include: *role of the technology in net-zero pathways; existing readiness level of the technology; existing resources or inputs* that are available in Canada that provide long-term structural cost advantages; *competitive advantage in innovation* in a given space that Canada has based on our current expertise, intellectual property and entrepreneurship; and downstream factors influencing the *market potential*, including export potential.

Analysis conducted by different organizations using distinct methodologies (ranging from energy-economy modeling to investment flow analysis to expert consensus surveys) have reached consensus on four high-priority sectoral/value chain opportunity areas in Canada: *electric vehicles and battery supply chain; carbon capture utilization and storage; biofuels, especially sustainable aviation fuels; and hydrogen*. Other opportunity areas include *alternative proteins; mass timber and forestry products; and agricultural clean technologies*.

It should be noted that other opportunity areas may evolve over time. Nonetheless, these existing options present possibilities to transform some of Canada's legacy industries — automotive manufacturing, mining, oil & gas, agriculture, forestry, and others — into world-leading climate solutions ecosystems. It is also important to note that these opportunity areas must be supplemented through development of other key sectors such as *clean electricity generation, critical minerals, and biomass feedstock*. In addition, Canada is well positioned to achieve emission reductions and employment gains by investing in decarbonization in sectors that function as upstream inputs to multiple sectors, such as steel and aluminum.

## How Are Sectors Approaching Industrial Strategy?

One of the Summit's most significant contributions was to connect the theoretical aspects of industrial policy with concrete, real-world examples from the Canadian economy. Illustrative examples from the zero-emissions vehicle sector were provided, which show that non-governmental organizations, the private sector and the government are working together to strategically position Canadian firms as leaders in emerging net-zero mobility supply chains.

**Propulsion Québec** has about 260 members collaborating in the creation of a domestic industry in smart vehicles, electric vehicles, mobility software, batteries, and charging points. The public-private organization was created in 2017 with about \$100,000 in seed funding by the Québec government with the goal of making Québec a world leader in smart and electric mobility. Additional funding was later added from third-party groups, such as the Ivey Foundation. Members include firms across the supply chain, research & development (R&D) centres, universities, investors, buyers of smart mobility systems (transit authorities), and others. *Propulsion Québec* established working groups assigned to the approximately 225 action items (with associated timelines) identified in their 2018-2030 roadmap. These are designed to identify technological, supply-chain, and policy solutions for specific supply chain problems, such as infrastructure policy, collaborative R&D opportunities, charging station deployment, data governance, talent attraction, investment attraction, regulations, and

procurement. One third of the action items were assigned to initiative coordinators within *Propulsion Québec*'s own staff, and the rest were assigned to volunteer third-party expert members. Buy-in from external initiative coordinator organizations is solidified via written commitments of financial and human resources, and a commitment to report to *Propulsion Québec*'s steering committee on implementation progress. The strategic committee is composed of 20 experts, meeting twice a year to monitor progress on the action items.

**Accelerate**, Canada's Zero Emission Vehicle Supply Chain Alliance, is a five-year national initiative bringing together key players across Canada, from mining to mobility, from R&D to commercialization, and from vehicle assembly to infrastructure. Formed in 2021, *Accelerate* established a forum for members to collaborate, strategize, and advocate for priorities that will support the accelerated development of a Zero Emission Vehicle (ZEV) supply chain in Canada. Originally funded by the Ivey Foundation, *Accelerate* currently has approximately 38 members. As a national organization, *Accelerate* is dedicated to forming a National ZEV Supply Chain Roadmap that will create the focus, alignment, and project pipeline necessary to secure Canada's future in the global automotive sector. This process involves a steering committee to establish task forces, roundtables, research and analysis, and synthesis to define the opportunity, set targets (e.g., market share, adoption) for specific segments of the supply chain, and lay out the private and public sector actions needed to achieve success.

Several common characteristics of successful sectoral industrial policy came to the fore throughout the Net-Zero Industrial Strategy Summit.

1. Independent intermediaries can be a great asset. They can provide well-informed analysis and get high-quality information from industry. Tables convened by independent organizations have added nimbleness and legitimacy (as representatives of industry perspectives) compared to government-run tables. Nonetheless, it is crucial to maintain open dialogue, support, and active collaboration with the government.
2. Independent clusters/sector tables can serve as a mechanism to coordinate the policy mix to strategically address sector needs. For example, the table can harness its expertise to support strategic deployment of incentives by foreign direct investment attraction agencies by identifying gaps in the supply chain.
3. The hallmark of a successful industrial strategy is whether the sectoral table in charge of developing and implementing it has set up actual working groups tasked with delivering specific action items within a set timeframe.
4. Collaboration does not just happen. As a panelist highlighted, "it needs to be coordinated, it needs follow-up, needs to be celebrated when it goes well, corrected when it doesn't... because it is a continuous learning process".
5. Sector tables need access to flexible, ongoing funding to seed projects as working groups identify them as part of their iterative, learning-by-doing process. Establishing specific working groups can facilitate nimble allocation of additional public resources on a project-by-project basis, as there is a clear plan for deploying the additional funds.

## What Are Different Stakeholder Perspectives?

A common theme throughout the Summit was that a fundamental foundation for successful net-zero industrial strategy is the creation of sector strategy tables. While these can take different forms, the main requirement is that the tables serve as a forum for government and industry cooperation in identifying and solving real problems plaguing sectoral supply chains. Involving a variety of actors from both sides is key. On the industry side, involving actors from different parts of the supply chain will provide different technological expertise. On the government side, involving civil servants from various ministries and levels of government will provide expertise on achieving alignment of the many different policy levers needed for a coordinated policy mix for the sector's growth. Panelists also stressed that sector tables should actively work towards achieving bipartisan support for industrial policy to insulate these initiatives from disruption in the event of a change of government.

Tables should be permanent collaboration spaces that are conducive to ongoing experimentation and learning among different actors as they develop both big picture roadmaps and concrete solutions to specific problems. Achieving this means avoiding tables that lack sectoral specificity, have overly broad and non-technical-level discussions, and whose lifespan is dictated by the end goal of producing a report. Indeed, all panelists agreed that the urgency of the climate crisis and capturing a share of rapidly evolving global supply chains for net-zero industries means that Canada has no more time for industry-state collaborations that merely produce "blah blah blah recommendations and reports".

Inclusion of Indigenous Peoples in the crafting and implementation of industrial policy is not only a moral imperative to advance reconciliation but also a central component of any successful pathway towards a prosperous transition to a net-zero economy. It is essential that Canada does not repeat the exclusionary industrial policy approaches that were a central feature of generations of economic development initiatives comprising the Canadian project of colonialism. Panelists cited recent examples of partnerships between Enbridge and Suncor and various First Nations communities to illustrate how partnerships can strengthen projects through enabling communities to have real ownership.

Canada's financial community is well-positioned to play a pivotal role in the creation of meaningful net-zero industrial strategies. The transition to net-zero will need to be policy-driven, particularly in de-risking projects that are technologically feasible but not currently economically viable. For example, this de-risking can take the form of guarantees of energy transition lending. Identifying these priority areas requires active collaboration between the government and the financial sector. This work is being done through bodies such as the Sustainable Finance Action Council, an arms-length organization advising the Government of Canada on critical market infrastructure needed to attract and scale sustainable finance in Canada and allocate capital to reach net-zero emissions by 2050.

Finally, organized labour must be empowered actors at the table as sector-specific strategies are devised. Because organized labour represents workers across various supply chains, it is in a unique position to provide the formal and tacit knowledge and skills needed to identify areas for product improvement and supply chain alignment. Furthermore, as illustrated by the United States' Inflation Reduction Act, tying clean technology investment incentives to prevailing wage and apprenticeship requirements is a promising way to ensure workers benefit from the transition to net-zero.

## What Are the Paths Forward?

Canada has taken significant steps towards a net-zero industrial strategy in various key sectors. Examples of recent strategic initiatives include the mines-to-mobility EV supply chain, the Hydrogen Strategy, and Regional Energy and Resource Tables. Furthermore, important investment programs have been put in place to fund net-zero innovations, such as Sustainable Development Technology Canada, Business Development Bank of Canada, Strategic Innovation Fund, Critical Minerals Fund, and the recently announced Canada Growth Fund.

However, Canada's current suite of programs are passive, its strategies don't have clear goals, and accompanying mechanisms for industry-state collaboration are underdeveloped. Failing to act with sufficient strategic purpose and urgency in crafting new forms of collaboration to build low-carbon industries threatens the economic and environmental well-being of the next generation of Canadians. It is crucial that Canada meet the moment's urgency with a commitment to crafting and implementing sector-specific net-zero industrial policy strategies.

In particular, seizing this opportunity requires immediate action on the following four initiatives:

- 1. Set net-zero competitiveness goals**  
Clear and bold targets can focus and activate society.
  - **“Net-zero”**: indexed to government mandates or net-zero targets.
  - **“Competitiveness”**: benchmarked to a vision of Canada's place in the global supply chains of 2030 and 2050.
  - **“Goals”**: quantitative economic targets that refer to physical actions: improvement, production, and deployment of technologies.
- 2. Build strategic collaborations**  
Government, industry, Indigenous communities, labour, finance, and civil society must work together to create strategies and goals.
  - Good information flows between government and society are the foundation of coordinated action.
  - Independent advice can play a critical role in taking the long view and making smart investments.
- 3. Create sector strategies**  
Identify the critical actions and investments needed to achieve the goals.

- Build strategic niches in supply chains that scale home-grown firms, add economic value, and generate export opportunities.
- Take a whole value chain approach, aligning supply and demand.
- Use international best practices to structure ongoing deliberations amongst all the parties.

**4. Use goals to align investment and guide policy**

- Goals can underwrite a more active approach to investment and policy.
- Create small funds that the sectors can autonomously deploy.
- Mandate larger funds to lead private capital and drive sector strategies.
- Ensure that the mix of policies operating in each sector is aligned with net-zero competitiveness goals.

Bentley Allan (Transition Accelerator) ended the Summit on a note of optimism, stressing how Canada has a unique opportunity to secure its future place in the global economy as supply chains for net-zero industries of the future are being built in real time. Pandemic supply-chain disruptions and other emerging geopolitical tensions have induced policymakers in leading western countries to adopt a “friend-shoring” approach to building these supply chains in collaboration with stable, democratic allies like Canada.

Seizing this opportunity requires establishing permanent sector-level working groups to serve as deliberative forums where stakeholders can work together to forge and implement supply chain strategies. These strategies must consist of concrete goals attached to priority actions and specific timelines, working groups to solve real-world problems, and learning processes to identify opportunities to align public & private investments and supportive policies.

The time for embarking on these strategic collaborations is now. Luckily, as the Summit participants can attest to first-hand, the collaborative spirit needed for successful net-zero industrial strategy is alive and well in Canada.