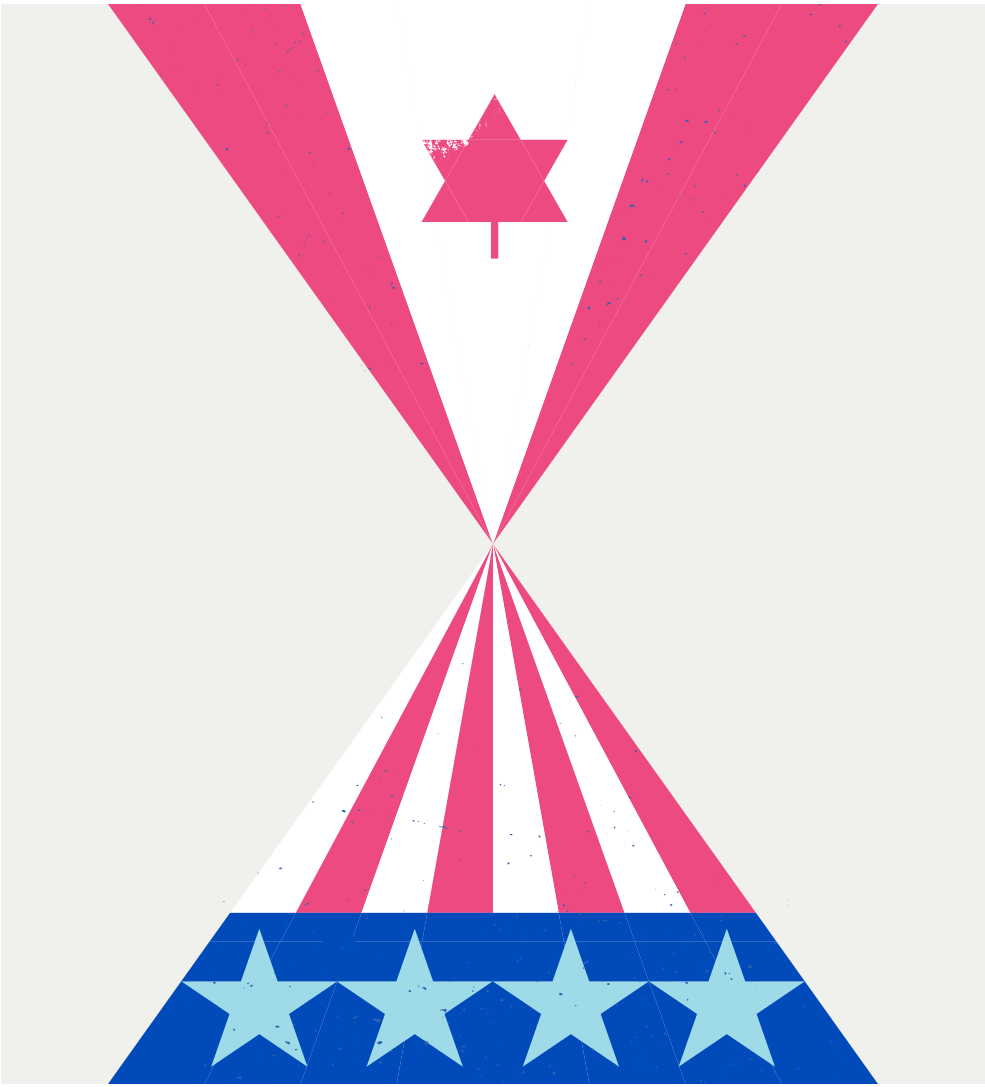
PUBLIC POLICY FORUM

Matter More

A Canadian strategy for a changing United States

BY EDWARD GREENSPON | JANICE STEIN | DREW FAGAN



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Edward Greenspon is President & CEO of the Public Policy Forum.

He was a journalist for many years with The Globe and Mail, Bloomberg News and newspapers in Western Canada, working as a business and economics reporter and editor, a foreign correspondent an Ottawa bureau chief and Editor-in-Chief of The Globe. He has reported from 10 provinces, two territories and more than 20 countries.

Ed is also the author of two books on Canadian politics and society and a number of major articles and reports on geopolitics, trade, energy, the economy and the changing news and information landscape. He won the Hyman Solomon Award for Excellence in Public Policy Journalism in 2002, the Douglas Purvis Prize for economic policy writing, and is a member of the Order of Ontario. He holds a degree in journalism and political science from Carleton University and an M.Sc. (Econ) from the London School of Economics, where he was a Commonwealth Scholar.

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Janice is also an Honorary Foreign Member of the American Academy of Arts and Sciences and a Senior Fellow of the Henry A. Kissinger Center for Global Affairs at Johns Hopkins SAIS. Her current research focuses on technology and public policy in the context of great power competition.

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Drew was also Deputy Minister of Tourism, Culture and Sport, with responsibility for the 2015 Pan/Parapan American Games. Drew joined the Ontario Public Service from Ottawa, where he was Assistant Deputy Minister for strategic policy and planning at the Department of Foreign Affairs and International Trade (now Global Affairs Canada). Before becoming a public servant, he worked at The Globe and Mail, including as Parliamentary Bureau Chief, Editorial Page Editor, Associate Editor of Report on Business and Washington correspondent.

Report At-a-Glance

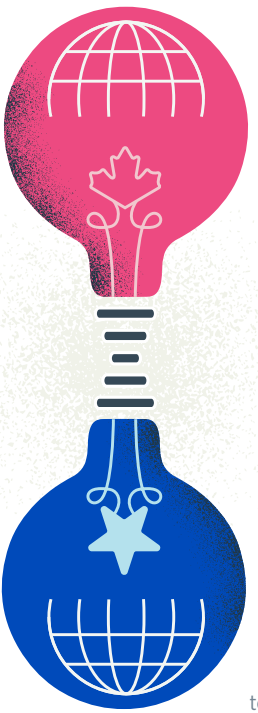
The strategy to **"Matter More"** that is presented in this paper aims to reinforce Canada's role both on the continent and in the global arena.

100+

participants consulted online and in person on both sides of the border.

They want more Canada

Practically everyone is telling us they need our uranium, potash and food, and want us to invest more in the advancement of such areas as AI, cleantech and health sciences.



We've heard in our roundtables + interviews:

Including from Americans, much respect for Canada's leading AI researchers, who are at the front end of the AI value chain.

Thinking longer-term

Canada's leaders were more likely to pursue "grand bargain" strategies that linked issues across domains, generally with an eye to improving access to the U.S. market and reducing uncertainty about that access.

Executive Summary

A school of thought has arisen that Canada has never been more alone in the world.

We respectfully disagree.

The world abounds with new challenges, to be sure, but also new opportunities that play to Canada's strengths. To make the most of these opportunities, we need to align our national interests with those of our closest partners, especially the United States, and turn key advantages into strategic assets. As things stand, we see a Canada that is too often transactional and reactive.

The strategy to "Matter More" that is presented in this paper aims to reinforce Canada's role both on the continent and in the global arena through a handful of high-impact sectoral initiatives that focus on economics and security — what we call Auto Pact 2.0s. These will enable Canada to better protect and project our national interests alongside our partners in a more divided and dangerous world and a more polarized United States.

The four key areas for policy action are:

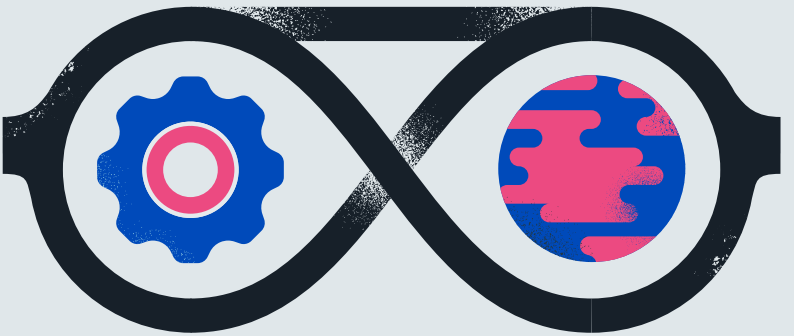
+ **Arctic security**
Enhancing collaboration on Arctic defence by leveraging Canada's strategic geographical position and advanced surveillance technologies;

+ **Critical minerals**
Strengthening continental efforts in the production and processing of minerals that are central to energy and military applications, allowing Canada and the United States to reduce reliance on less-trusted countries, particularly China, and support our allies;

+ **Energy and environment**
Promoting joint independence and security through increased continental co-operation on the environment and energy, and sharing North America's extraordinary energy strengths with our partners; and

+ **Technology**
Investing in advanced digital and life sciences technologies such as artificial intelligence and quantum computing with an emphasis on our value-adds in global supply chains.

A focus on these four areas will deepen co-ordination with the United States and broaden co-operation with other select global partners. But it will not happen if Canada does not also accelerate our building and procurement in the real time of geopolitical competition.



Our Matter More strategy is designed to be adaptive and responsive to today's rapidly evolving geopolitical landscape, and to the straight line that connects North America and the world's other market-based democracies. When Canada deepens its co-operation with the United States, we Matter More to the rest of the world. And when Canada is relevant to the rest of the world, we Matter More to the U.S.

Simply put, we envisage arrangements that pool our resources and capacities to the mutual benefit of Canada and the United States.

Simply put, we envisage arrangements that pool our resources and capacities to the mutual benefit of Canada and the United States. Wherever possible, this 'continentalizing' strategy would be mutually extended to our closest allies in the rest of the world. We have been co-operating through special bilateral structures since the International Joint Commission in 1909, which remains responsible to this day for the sensitive management of cross-boundary waters. Many more such arrangements have been created since, including the original Canada-U.S. Auto Pact, the North American Aerospace Defense Command (NORAD) and the Canada-United States-Mexico Agreement (CUSMA), as well as its two predecessor trade agreements.

What we propose in this report builds on this tradition of joint institution-building in areas fit for today's purposes.

With current geopolitical challenges in mind, the Public Policy Forum and the Munk School of Global Affairs & Public Policy formed a partnership last year to explore and explain how Canada can manage the risks emerging from these divisive times.

We began work on this Matter More strategy with a foresight (or scenario planning) exercise. These are most useful in eras of rapid change, when norms and institutions are stressed and established assumptions challenged. The foresight team set up four quadrants — two assumed that Washington after the November election would either look largely like today or that a more "Fortress America" approach would take hold. The other two quadrants made the same distinction for geopolitical pressures; they stay the same or get worse.

The key point to which the exercise kept returning, regardless of scenario, was that Canada must not wait to see how things develop; it needs to get ahead of the curve. The question was always: "What can we do now for Canada to Matter More?"

The PPF-Munk team held seven roundtables with more than 100 participants online and in person, including in Washington, and dozens of one-on-one interviews on both sides of the border. We consulted with senior Canadian and U.S. government officials, and academics and business leaders from sectors such as energy, defence, manufacturing and finance. As well, the team undertook an exhaustive document review and attended conferences and seminars.

This report marks the most important step yet in our Matter More project.

The PPF-Munk team consulted with:

7

roundtables

100+

participants online and in person

one-on-one

interviews on both sides of the border

multiple

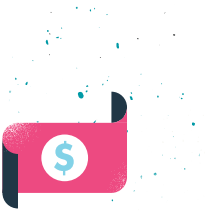
senior Canadian and U.S. government officials, and academics and business leaders from sectors such as energy, defence, manufacturing and finance

Chapter 1:

Challenges + Opportunities = Strategic Need

It has long been one of our great conceits as a nation that the world needs more Canada.

Chapters-Indigo turned the boast into a corporate slogan. Bono made it his rallying cry at a global health conference in Montreal. And in June 2016, U.S. President Barack Obama told a packed House of Commons: "If I can borrow a phrase, the world needs more Canada." Leaping to its feet, the appreciative audience didn't seem to notice that the invocation came at the end of a passage about the need for Canada to finally contribute its full share to defence. "NATO needs more Canada," Obama added.[1]



Canada definitely needs more of the world for trade, security and people, the inevitable fate of any country with ambitions greater than its bulk.

Canada definitely needs more of the world for trade, security and people, the inevitable fate of any country with ambitions greater than its bulk. Changing circumstances in energy and resources, technology, and especially geopolitics are forcing countries to re-evaluate and re-calibrate their relationships. Which camp will they be in? Can they pick and choose on different issues? How will security impinge on economics, and at what cost? How much engagement? How much disengagement?

History, geography, culture and values place us alongside the market-based democracies, still led by the United States despite its isolationist tendencies. Our friends and allies have expectations of us. Asian and European allies anxious to blunt geo-economic pressure from China and Russia have encouraged Canada to help relieve their concerns about energy security by developing more liquified natural gas (LNG) and hydrogen for export. Leaders of Germany, Japan, South Korea and Greece have, unusually, all come to Canada to impart this message directly.

Meanwhile, the U.S. wants us to produce and process critical minerals to reduce western dependence on China.

As German Chancellor Olaf Scholz remarked during a 2022 visit: “Canada has similarly rich mineral resources to those of Russia — with the difference that it is a reliable democracy.”

Practically everyone is telling us they need our uranium, potash and food, and want us to invest more in the advancement of such areas as AI, cleantech and health sciences. They want more Canada.

No major western country is as dependent as Canada on a single partner — or as advantaged by it. Obviously, who is president makes a difference in terms of U.S. appetite for partnership. But, regardless, we need a new strategy for changed circumstances.

It is paradoxical that geopolitical divisions draw us ever more deeply into the U.S. orbit just as U.S. domestic polarization makes that orbit less stable. We can lament the dilemma this creates, but the task at hand is to manage it successfully. We understand that many Canadians are particularly anxious about a possible Donald Trump return to the White House after the chaos and unpredictability of his last term.

Trump has **threatened to impose** a 10 percent across-the-board tariff on imports into the United States.[2] Scotiabank calculates this would result in a recessionary **3.6 percent fall** in Canadian GDP.[3] For their part, the Democrats prefer discriminatory subsidies that woo away investment. They have called us out on defence spending. The consequences of a Trump or Kamala Harris presidency are very different, but in both cases the **share of our exports** going to the United States stands at 78 percent and the political pressures on the next president and Congress will still be protectionist.[4]

First, we need to clear away the comforting yet distracting illusions that speak to the world we wish we had, rather than the world we do have. Recent controversies around immigration demonstrate that we are not going to grow our population fast enough to build a more autonomous “Fortress Canada” economy. Nor can we count on other parts of the world — not Europe, not Latin America, not a buoyant Asia — to provide the kind of economic and geo-strategic benefits the United States does. We have chased this chimera in the past to little effect. John Diefenbaker pursued a Commonwealth preference, Pierre Trudeau a third option. Neither moved the needle materially. While Canada likes to boast of its 15 **free trade**

agreements, CUSMA alone is five times bigger than the other 14 combined.[5] Canada's annual exports to our second-largest market, China, remain less than what we ship to the United States every 19 days.[6]

Meanwhile, our vocation in security has changed. We are no longer the country that can send peacekeepers around the world at the drop of a beret nor take on tough "coalition of the willing" assignments such as Kandahar. Canada's military leaders tell us they are challenged to equip and field even half a brigade. Our allies, who are also our most important trading partners, are becoming more vocal about our failure to meet NATO expectations, or even our existing commitments, on defence spending. Some academics and policy leaders argue Canada has never been more alone in the world. While true in some respects and self-imposed in others, this "Canada alone" narrative leads to a policy dead-end. What is a lonely country to do, other than renew old friendships and become more relevant and helpful to its closest friends — in other words, to Matter More?

Canada is not, in any case, nearly as alone as that narrative suggests. Global dynamics are creating new opportunities for the country. Take the Arctic as an example. As the world grows warmer and the North increasingly accessible, it is becoming more hotly contested territory. Russia is the strongest Arctic power and is investing massively in infrastructure. China covets Arctic resources and navigational potential.

Our allies now look at this neglected region with interest and concern. The U.S. views the Arctic through a lens of homeland security in which Canada can serve as a genuine partner, much like in NORAD. Advances in underwater and space-based surveillance technologies — Canada has for decades invested heavily in space — and the progress of AI and quantum computing offer new, nimble ways of making a difference in defence. Overall, the Arctic presents Canada with a golden opportunity to address those pressures on defence spending at home, where it now matters most.

Practically everyone is telling us they need our uranium, potash and food, and want us to invest more in the advancement of such areas as AI, cleantech and health sciences. They want more Canada.

With the recent expansion of NATO to include Sweden and Finland, for the first time all five members of the Nordic Council belong to the same military alliance as we do. Canada, with more land mass than the rest combined, can address its defence spending deficit by assuming a leadership position on northern security. This would certainly enhance our credibility in Washington and with our allies, especially since the U.S. views its own security capacity in the Arctic as inadequate and respects our capabilities to operate seamlessly with U.S. forces.

Deepening geopolitical tensions are also casting a new security lens on the global economy.

Canada possesses three great strategic assets, what we call our Holy Trinity of national advantage: geography, geology and ingenuity.

While hardly welcome, this does play to Canada's strengths as the resource powerhouse of NATO and the G7. Countries looking to buy potash fertilizer or uranium fuel, for instance, essentially have a choice between Canada or Russia and a few former Soviet states.

Canada possesses three great strategic assets, what we call our Holy Trinity of national advantage: geography, geology and ingenuity. The first two are not easily replicable, a key factor of any successful strategy. The third plays to a well-established political culture expressed through decades of public policies and investment in everything from education to immigration to research.

Geography is our best friend, beginning with our proximity to the United States on our only land border and our access to oceans to the west, east and north. The economic and security value of living cheek-by-jowl with the most dynamic nation on Earth — and one that has not threatened our territorial integrity since the 19th century — can perhaps only be appreciated by contrasting our situation to those with the misfortune to live next to Russia or China.

Our three oceans heighten our security and connect us commercially to markets around the globe. They confer shipping advantages to fast-growing Asian markets. Our rivers have enabled us to become a Top 3 hydroelectric producer.[7] Unlike almost every other nation on Earth, our northern location provides the benefit of a growing arable footprint amid climate change.

Geology is our second great friend. Canada was built on trade in resources, beginning with cod and furs and extending into timber, minerals and energy. We are the world's largest producer of potash and the second biggest producer of uranium. We benefit from some of the world's great deposits of petroleum in the Athabasca oil sands and of natural gas in the Montney Formation of northern British Columbia and Alberta. About half of the 50 minerals listed by the U.S. Geological Survey as "critical to the U.S. economy and national security" are found in Canada.[8]

These natural endowments and the infrastructure we have built to connect them to domestic and global markets are made-to-measure for an era in which our friends in "friend-shoring" — the name for relocating production into trusted hands — are desperate for reliable suppliers of the goods they lack.

Ingenuity is an asset we have developed over decades of fruitful investments in education, research and immigration. Despite recent missteps, there remains a relatively high degree of social licence for immigration, particularly the highly skilled newcomers who build a modern economy. Our ingenuity has delivered national proficiency in areas ranging from space technologies and satellite surveillance to front-end research in artificial intelligence, quantum physics, stem cells and small modular reactors (SMRs), to name only a few.

We are in a moment of incredible opportunity for Canada; not alone at all. Our allies recognize we have valuable assets to offer. But we need a clear-eyed strategy that analyzes effectively how our national interests and those of our partners fit together — and how to maximize them for shared advantage. A Matter More strategy holds out the promise of making us more relevant to our closest neighbour and our common allies — and, in the process, more successful at home.

The next chapter describes how we can do so.

Chapter 2:

A Sectoral Matter More Strategy

Management of the Canada-U.S. relationship has always loomed large in our politics.

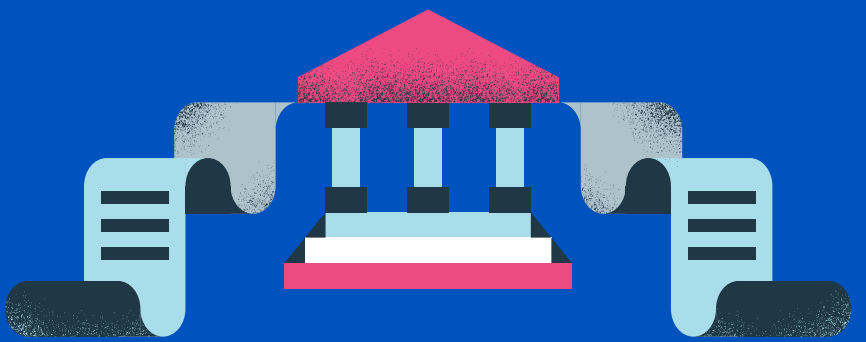
The Reciprocity Treaty of 1854 granted Canada duty-free status on shipments of what were called natural goods (timber, wheat, minerals) and ignited a profound economic boom north of the border. When Congress abrogated the treaty in 1866, any final doubts about Confederation were cast aside. Again in 1903, Prime Minister Wilfrid Laurier faced American unilateralism in the Alaska boundary dispute as President Teddy Roosevelt threatened to upturn negotiations by deploying troops. Laurier lamented to the House of Commons that Canada was living beside a neighbour "very grasping in their national acts."

Thinking longer-term, Canada's leaders were more likely to pursue "grand bargain" strategies that linked issues across domains, generally with an eye to improving access to the U.S. market and reducing uncertainty about that access.

It has been a staple of Canadian politics since Macdonald and Laurier that management of the Canada-U.S. relationship (alongside national unity) is always a principal responsibility of the prime minister.

How prime ministers have managed the relationship has differed with the times and circumstances. At one end of the continuum, Canada has sought small, one-off deals with the United States that avoided complex webs of linkages and trade-offs. The hope was that such deliberate "benign neglect" and "below the radar" arrangements would allow the necessary political space to form for both sides. These measures have tended to be specific and functional. There have been dozens of such deals in the fields of water, energy and environment since 1900, and many in defence from the 1930s on.

At the other end of the continuum, the juxtaposition of periods of low geopolitical tensions with major economic challenges created greater space for more ambitious undertakings. Thinking longer-term, Canada's leaders were more likely to pursue "grand bargain" strategies that linked



issues across domains, generally with an eye to improving access to the U.S. market and reducing uncertainty about that access. The most noteworthy post-Confederation "grand bargain" was, of course, the comprehensive 1989 Canada-U.S. Free Trade Agreement (FTA), which begat the North American Free Trade Agreement and CUSMA. At its core, the original agreement offered energy security to the United States in exchange for guaranteed market access for Canadian goods and services, as well as a dispute settlement process designed to blunt the effects on trade of the power imbalance between the two countries.

The Matter More strategy we propose is situated between these two classic approaches. It is neither something small nor something so large that it would be laden with multiple linkages and sensitive trade-offs. It contemplates a limited number of high-leverage sectoral trade and security arrangements that are not linked across issues but *within* issues.

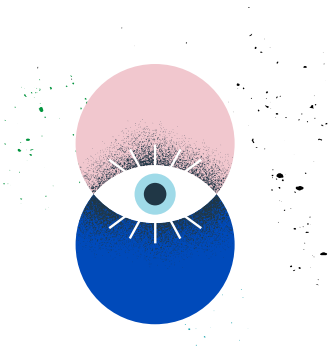
We call them Auto Pact 2.0s because the 1965 Canada-U.S. Auto Pact built deeper integration among the two countries on a critical sector for both countries. The comparison between then and now is not exact. The Auto Pact included terms favourable to Canada that we'd be unlikely to secure in this environment of U.S. protectionism. But it is the closest historical comparison to what we are proposing.

We are choosing not to put all our eggs into the CUSMA basket. The trilateral agreement will be subject to review beginning in 2026. If a deliberate decision is not made to extend it, the pact will expire in 2036. It would be imprudent to look to it as the platform upon which to forge greater co-operation now. Even in the best of times, "grand bargains" attract many interested parties and require a great deal of horse trading. Our Matter More strategy is additive, not substitutive; it is meant to augment CUSMA, and perhaps create conditions where we enter the 2026 review with momentum.

These proposed pacts are deeper arrangements than free trade in the sense that the sectors would essentially be 'continentalized,' which involves co-production, co-investment, co-procurement — more akin to NORAD's joint command than a rules-based trade and investment agreement. The point wouldn't be just to eliminate tariffs — which are largely gone at present — but to co-ordinate key aspects of production, including everything from what critical minerals to prioritize and how to jointly subsidize connecting infrastructure, to which "friends" to work

with outside North America in secure supply chains. And a deepening of continental defence, with a particular emphasis on the north. These are "economic security" arrangements fit for the new era of geopolitical tension that is as much about one as the other.

The concept of sectoral agreements is not new. It first rose to prominence with the Auto Pact in 1965. In the early 1980s, before any hints of an FTA, Canada and the United States set out to investigate the merits of further sectoral trade possibilities in steel, farm inputs, computer services and urban transit. The initiative was quickly overtaken, however, by a change of government in Canada and the launching of free trade talks.



We contemplate a limited number of high-leverage sectoral trade and security arrangements that are not linked across issues but *within* issues.

Now we are talking about Arctic security, critical minerals, energy and environment, and technology. They all carry disproportionate weight in the Canada-U.S. relationship. They all also matter greatly to the U.S.-led group of democracies with market economies, Canada included. Canada can make a material difference in all these areas.

The operational principles of an Auto Pact 2.0 strategy are:

a. Focus on a manageable number of sectoral agreements with the United States. To Matter More requires making choices.

b. Extend these agreements by mutual consent to the bloc of market-based democracies (the so-called "friends") and other like-minded nations wishing to play by the same set of rules. Deepening and broadening go together.

c. Be proactive. Canada has always been better served as a policy innovator and initiator, finding the sweet spots where Canadian and U.S. interests align. We need to put ourselves on the agenda early, regardless of who wins the presidency and who controls Congress in November.

In the next chapter, we elaborate on our Auto Pact 2.0s — in critical minerals, energy and climate change, defence and security, and leading-edge technologies.

Chapter 3:

A Quartet of Canada-U.S. Auto Pact 2.0s

To successfully execute a Matter More strategy requires attention to three necessary and interrelated components: deepening, broadening and accelerating.

By deepening, we mean increased co-operation on Canada-U.S. priorities and collaboration in leveraging our mutual advantages for greater global impact. In what areas does Canada enjoy advantage, even leverage, in the way we did with oil in the 1989 FTA? Importantly, our sectoral agreements would privilege the bilateral relationship first and foremost, and then extend to our friends or allies.

By accelerating, we mean building more of everything that matters most — from mines and electricity grids to ports and border crossings — and doing it more quickly.

By broadening, we mean how can Canada and the U.S. co-operate to help our allies with their economic and security challenges. It is time to dispense with the long-standing notion that trade diversification necessarily represents a counterbalancing policy away from the United States. In the context of a world increasingly made up of competing camps with many in-betweeners, deepening and broadening become complementary.

Helping Japan or Germany reduce reliance on Russia or China is an example of diversifying and deepening working together. The months after the invasion of Ukraine presented a textbook case of how Canada and the United States can collaborate for maximum strategic advantage amid geopolitical division. As Europe attempted to quickly wean itself off Russian energy, U.S. officials asked Canada to increase Western Canadian gas production to enable the Gulf Coast LNG industrial complex to ramp up emergency cargoes to vulnerable EU nations.

By accelerating, we mean building more of everything that matters most — from

mines and electricity grids to ports and border crossings — and doing it more quickly. Procurement, regulation, permitting and commercialization need to move at pace to attract investment and expansion. Critical minerals are of no help to anyone if we can't get them out of the ground on a timely basis. To Matter More, we must accelerate development.

Here are the four avenues we believe will help Canada to Matter More.

3a. Mattering More through an Auto Pact 2.0 of Sectoral Defence

Throughout our consultations, one perspective was ever-present: The global security situation has become considerably darker over the past decade and likely will get more challenging still, given China's global ambitions and Russia's serial aggressions. Canada cannot afford to be seen to shirk its responsibilities in Washington, where military leaders in uniform can magically open doors often closed to diplomats and all but the most senior politicians.

The Arctic, by all accounts, is where we need to focus.

The Arctic, by all accounts, is where we need to focus. This was the message in the Department of National Defence's recent policy paper, and it is where Washington wants us to Matter More. This doesn't mean we can avoid strengthening our capabilities elsewhere, including our capacity for deployment abroad as part of NATO defence. But our own territory must be our primary focus. And by securing our Arctic, we can come very close to the goal of two percent spending that is now the NATO standard.

More broadly, global perspectives on the importance of defence and security in Canada's Arctic are changing quickly, driven by climate change and technology. The region includes more than 200,000 residents, most of them Indigenous, and comprises 40 percent of Canada's territory and 75 percent of its coastline.[9] It is warming at three times the global average rate, affecting everything from the land and biodiversity to cultures and traditions. Reductions in sea ice are making the Arctic much more accessible, and not just for Canadians.

Canada's defence co-ordination with the United States began as the Second World War loomed and continued through the Cold War, especially in the defence of Europe through NATO and the defence of the continent through the exclusive NORAD arrangement. Indeed, the modern Canadian consciousness about the North was forged during these years and through these commitments. This included recognition of the dire condition of Canada's Inuit population, although far too little was done then and is still done to improve their lives, and recognition of their role in the future of a developed and defended North.

Canada needs to step up now. In doing so, Canadian leadership must place at the forefront economic and social development in partnership with Indigenous Peoples — the political licence to deepen Canada's security focus runs through their approval. A principle of the federal government's **Arctic and Northern Policy Framework** rings true: "nothing about us, without us."[10]

As part of Canada's renewed military commitment, there is one key government decision made two decades ago that deserves reconsideration given changing circumstances: shunning participation in the U.S. ballistic missile defence (BMD) program. Canada disappointed Washington then, but it caused few waves. Russia was still a part of the G8 and hopes for a peaceful post-Cold War era weren't yet lost. Canada's BMD decision was framed in 2005 as a binary choice: go or no-go. But things are far more complicated now. Canada participates in NORAD's warnings of impending attack, but any response is decided exclusively by U.S. Northern Command, which is not obligated to defend Canada against an incoming missile. Furthermore, Canada has supported BMD in Europe under NATO auspices since 2010.

BMD is now being reviewed and modernized to keep up with a range of threats for which it wasn't designed, including Russian and Chinese long-range cruise missiles, hypersonic weapons and drones. The 2019 U.S. **missile defence review** set out a less rigid and more layered menu of potential responses that might well provide greater flexibility for Canadian involvement, including further investment in early warning systems, radar, sensors, cyber capacity and enhanced situational awareness in space.[11]

Increasingly, the Arctic is viewed as a potential strategic flashpoint in any global confrontation that might follow if Russia succeeds in Ukraine. Russia's military presence in its Arctic **is extensive,** far beyond the northern commitments of Canada, the U.S. and the five European Nordic states combined.[12]

Russia is modernizing the more than 10 military bases and airfields it operates in its north, deploying new coastal and air defence systems, building out its infrastructure and increasing training operations.

China also is **stepping up** its activity.[13] As climate change accelerates, Arctic shipping routes from China and Asia to Europe will become much more attractive. Russia has been investing in both military and port infrastructure in anticipation; China now describes itself as a "near-Arctic state" with interests in critical minerals, scientific research and intelligence gathering.

For Canada, the longer-term potential for shipping through the Northwest Passage has both opportunities and risks. Arctic navigation in the absence of ice is much more challenging. There are more storms, more wind, more floating hazards, bigger waves, freezing fog and icing. The Northwest Passage is not an easy route and is not charted to international standards. But it is in play.

For the protection of North America and to contribute to NATO's intelligence gathering, Canada needs to concentrate its Arctic activities on domain awareness. In real time, Canada must see and know who is on its Arctic land, in the air, on the ocean and under it — as well as what they are doing there.

Today, Canada has virtually no capability to collect or share any of that knowledge with our allies. As just one recent and **embarrassing example**, a Chinese surveillance balloon that **travelled across** Alaska and southwestern Yukon in early 2023 went undetected by the Canadian military. It was first noted over Canada by commercial aircraft flying across southern British Columbia.[14]

A **new policy** released by the Department of National Defence earlier in 2024, called *Our North, Strong and Free: A Renewed Vision for Canada's Defence*, focuses on the Arctic, proposing to spend $8.1 billion over the next five years and $73 billion over the next 20 years on Arctic defence, increasing Canada's overall defence spending to 1.76 percent of GDP by 2030.[15]

This includes enhanced capabilities for military bases, airborne early-warning aircraft, ground and under-sea sensor capability, a satellite ground station, enhanced foreign intelligence capabilities and new tactical helicopters. More details will come in the next defence policy update in 2028, but Canada will certainly need new weapons and massively increased data communications capabilities based on satellite systems integrating artificial intelligence and quantum computing, accurate navigational capacity, the next generation of air-to-air

missiles, ground-to-air defence systems, long-range land-based missiles and artillery, and the capacity to monitor the Arctic from space-based satellites.

The good news is that there is a short window to undertake this modernization. But Canada cannot be complacent. It must conduct effective monitoring and control of its own territory. Doing so would strengthen NATO given that, with Sweden and Finland as members, all Arctic states other than Russia are now inside the alliance. As the largest Arctic nation, we can become the leader of the northern flank of the alliance. The announcement in July that Canada, Finland and the United States will collaborate on icebreakers is an encouraging step forward.[16]

In 2022, Canada committed to spending $4.9 billion over the next six years as its part in the modernization of NORAD. Over the next 20 years, the total planned spend is $38.6 billion, focusing on five areas, including surveillance systems, technology-enabled decision-making, air weapons, infrastructure and support capabilities, and research and development.[17]

These pieces fit together into a northern security strategy that in turn fits within an overall Matter More strategy. The Arctic is our first chosen "Auto Pact 2.0" sector and there are significant advantages for Canada.

In real time, Canada must see and know who is on its Arctic land, in the air, on the ocean and under it — as well as what they are doing there.

First, spending on northern security would move Canada a long way towards reaching the NATO objective of member countries spending a minimum of two percent of GDP on defence-related activities. Currently, Canada falls well short of that at 1.38 percent, which is the sixth lowest in NATO. Second, much of the infrastructure that must be built, expanded or modernized for Arctic security and surveillance also benefits communities in the North. Establishing road access, upgrading seaports and airfields, building high-speed communications and data connectivity, decarbonizing energy sources to minimize diesel generation of electricity, more extensive health and human services for personnel stationed in the North — all these changes would also significantly improve the lives of those living in the North.

Third, Canada already has a significant expertise and presence in space exploration and research in both the public and private sectors. We can build on this strength to implement space-based surveillance capability for the Arctic.

An example is Canada's Sapphire project — our first dedicated military space surveillance satellite that tracks man-made objects orbiting Earth. This year is its 10th anniversary in service, five years longer than its originally planned life and with no anticipated date at which it will become obsolete. We can do better. Sapphire contributes as a deep space sensor to the United States Space Command surveillance network as Canada is the only U.S. ally that owns and operates its own space surveillance satellite tracking system.[18]

In sum, the Arctic should be Canada's defence focus for the future, guiding procurement decisions and building Arctic surveillance expertise to lead and share with its NATO partners. To be a more effective partner with the United States in NORAD, and a northern leader in NATO, we offer the following:

RECOMMENDATIONS

1. Accelerate the Timeline for Arctic Action: Canada must consult with its allies to ensure its priorities are aligned with our Arctic partners. The existing North Warning System and bases in Alert and Eureka in Nunavut are old and badly need modernization. At the same time, Canada should move more quickly to install over-the-horizon radar (OTHR). Canadian defence purchasing and technological research should focus on equipment and activities that can enhance our knowledge and surveillance capabilities in the Arctic, bringing industry into closer co-operation with government.

2. Broaden and Reconsider Canada's Definition of Security: Security now is about much more than conventional physical threats. Foreign interference and access to critical infrastructure related to space capabilities are important to national security. Security in the Arctic must include human security, protection of the environment, the health of residents and the growth of the Arctic economy. In this broader context, security means building year-round roads, expanding seaports, hospitals and military facilities. Infrastructure projects should be viewed through dual-use lenses: defence and civilian use. And Canada, in partnership with

Indigenous self-government organizations and communities, will have to develop a new, more complex, understanding of sovereignty.

3. Deepen and Integrate all Aspects of Canada's Commitment to Space: Space-based surveillance is a key element of future Arctic defence. Canada, with its huge geography and need for communications, has a long history of investment in space research and participation in space exploration. But those activities have too often been split into separate civilian and military compartments. A better model can be found in the federal government's new **$25-million marine research centre** in Dartmouth, N.S., that brings together ocean data from Fisheries and Oceans Canada, Natural Resources Canada and Defence Research and Development Canada and uses drones and remotely operated vehicles to map the seabed and determine who is on and under Canada's waters.[19] Canada should commit more resources to military space surveillance systems, making procurement decisions in conjunction with the United States to ensure inter-operability. Decisions on future space investments also should be made on an integrated basis that brings together government and industry. Canada has leading-edge private sector companies that can be partners on space-related investments and activities.

4. Accelerate the Introduction of Connectivity throughout the Arctic: National security and economic development require the quick and reliable movement of large amounts of data. Assured connectivity is imperative whether it is data from surveillance satellites, from ground or underwater sensors or between command centres and aircraft or drones and their controllers. It is intolerable that a forest fire in northern British Columbia in May 2024 could **knock out internet connection** to the Yukon with no backup system.[20] A planned fibre-optic cable connecting Japan to Europe via the Northwest Passage should be treated as an essential infrastructure element of Arctic security.

A planned fibre-optic cable connecting Japan to Europe via the Northwest Passage should be treated as an essential infrastructure element of Arctic security.

3b. Mattering More through an Auto Pact 2.0 of Critical Minerals

The world is in hot pursuit of categories of minerals vital to the production of clean energy, electric vehicles, consumer electronics and military technologies. These so-called **critical minerals** — including cobalt, lithium, copper, nickel, zinc, graphite and rare earth elements — will help shape the economies and security of nations.[21] Critical minerals are on the front lines of the new global competition between the market-based democracies led by the United States and the authoritarian bloc led by China.

The International Energy Agency forecasts that demand for critical minerals — generally **defined** as strategically important, of limited and concentrated quantity, and without substitutes[22] — could increase by as much as six-fold by 2040 from the global energy transition alone.

Similarly, the **World Bank has found** that, over the next two decades, the world needs to produce as much copper as it has over the last 5,000 years.[23] Demand for the core battery metals of lithium, nickel and cobalt is expected to increase by eight times, two times and 1.8 times, respectively, and the supply of rare earth metals, crucial for electric motors, will need to double. As steelmaking becomes greener, Canada's premium-grade **iron ore** will play an outsized role.[24]

Where 20th-century geopolitics featured battles over access to crude oil, the 21st century might well be defined by a struggle over critical minerals. This is all the more likely given China's success in cornering the market on many of these minerals, particularly their processing — it is the dominant global producer in rare earths and more than 20 critical minerals.

In the case of oil, Canada served as a backstop of sorts for the U.S. against OPEC — a role de facto recognized in our negotiating strategy for the Canada-U.S. Free Trade Agreement. In the case of critical minerals, the situation may be even more challenging as they are more concentrated in authoritarian hands (~80%-100%) than oil was in the 1970s (~40%). The impacts of the 1974 and 1979 oil embargoes were highly consequential for the West; our vulnerability when it comes to critical minerals would be even greater now.

Canada can provide something of an insurance policy again if, that is, we can get the raw materials out of the ground and processed. The United States represents a huge and eager market and other allies are also anxious to diversify their sources of critical

minerals away from China. The 2022 federal budget recognized the urgency to get in the game quickly by allocating $3.8 billion for critical mineral exploration, development and production, as well as the infrastructure needed to move the ore from mines to processing and fabrication.[25]

Critical minerals fall within our deepen-broaden-accelerate framework, but Canada has moved far too slowly to leverage this asset. Northern Ontario's Ring of Fire has been touted as a motherlode for years.[26] Ontario's throne speech in 2010 promoted the remote crescent-shaped area as "the most promising mining opportunity in Canada in a century."[27]

The International Energy Agency forecasts that demand for critical minerals — generally defined as strategically important, of limited and concentrated quantity, and without substitutes — could increase by as much as six-fold by 2040 from the global energy transition alone.

The claim was repeated in throne speeches in 2013, 2016, 2022 and 2023. In June 2024, the province finally signed an initial agreement with four First Nations for road construction and skills training.[28]

At the federal level, more than two years have passed since the government's spending announcement and there are still no details on how the proposed 30 percent critical minerals exploration tax credit will be applied. Building a new mine in Canada on average takes about 15 years from discovery to production. With China accounting for about 60 percent of world critical minerals production and 85 percent of global processing capacity, greater urgency is required[29] to accelerate our processes.

Meanwhile, competitor nations are going full bore. Indonesia has boosted nickel exports to $30 billion annually, thanks to expanded refining capacity facilitated by Chinese investments.[30] Auto maker Stellantis, in the midst of building a $5-billion battery plant in Windsor, Ont., with LG Energy Solution, is in negotiations to invest in an operation by Vale Base Metals to convert low-grade nickel in Indonesia to battery quality, instead of using the nickel deposits at a Vale mine that is only about 500 kilometres away in Sudbury. This speaks volumes about investor confidence in our ability to get things done.

Latin America and Africa are also home to impressive reserves. But they should not be treated as ready alternatives as both are less politically stable than Canada and have borrowed heavily from China to develop their deposits. Even if Canada is late to market, government officials say demand will continue to outrun supply. There will be buyers for what we produce.

One policy tool for integrating Canada into the development of a U.S. critical minerals supply chain already exists. Canada enjoys privileged status under the Title III section of the U.S. Defense Production Act (DPA). In May 2024, the Canadian and U.S. governments used the DPA to provide $16 million to Ontario-based cobalt developer Fortune Minerals Ltd. for a mine in the Northwest Territories and a refinery in Alberta, and $16.3 million to Quebec graphite exploration company Lomiko Metals Inc.[31] These are small sums but encouraging signs.

China will be fierce in defending its advantages. It is using its dominance to flood markets, drive down prices and frustrate investments in new critical minerals production.

U.S. tariff plans for 2024 may provide additional encouragement to Canada. Tariffs on lithium-ion electric vehicle (EV) batteries and parts from China are scheduled to increase to 25 percent from the current 7.5 percent, while tariffs on lithium-ion non-EV batteries will increase by the same amount in 2026.[32] Tariffs on natural graphite and permanent magnets go to 25 percent from zero in 2026. This should create a market advantage for Canadian critical minerals entering the United States through North American free trade provisions.

China will be fierce in defending its advantages. It is using its dominance to flood markets, drive down prices and frustrate investments in new critical minerals production. It is a familiar playbook. In 1986, and again in 2014, OPEC used its power to flood the market with oil and drive down world prices. It wanted to make it more difficult for new and higher-cost competitors in the North Sea and Mexico, and later from U.S. shale fields and Canada's oil sands.

China now is "OPEC'ing" a critical minerals market already suffering from weakening demand for EVs. The resulting softness in commodity prices makes it difficult for mining companies in market-based jurisdictions to persuade shareholders to invest capital

in new mines. Policy must be attentive to this gap between short-term market forces and long-term strategic needs. The smaller mining companies that generally carry out exploration and development of new deposits are particularly dependent on new capital, much of which came from China until recently.

Canada is the only one of the market-based democracies with abundant deposits of cobalt, lithium, graphite and nickel — and we're located right beside the world's biggest and most strategically important market. In the past, the oil sands faced similar technical and financial obstacles to development, but well-funded research by the Alberta government, direct public investment in the Syncrude plant and co-ordinated federal and provincial tax and royalty incentives helped them grow.

Canada, along with the United States and other friendly nations, can craft a new suite of solutions for today's challenges. These might involve co-operating on the raising of capital beyond what the market is prepared to provide and covering risks by locking in long-term prices.

As a participant noted at one of our round-tables: "Canada is in a global battle to protect our mineral market share. In a long-lead-time, capital-intensive industry, we are competing against deep-pocketed, non-market-oriented players whose strategic orientation is about domination, not return-on-capital deployed. We can't play with the same toys we have to date."

What policies, therefore, should we be putting in place now to ensure Canada will Matter More in critical minerals?

RECOMMENDATIONS

1. Design an Auto Pact of Critical Minerals: This would be a joint Canada-U.S. approach to the development, transportation and usage of critical minerals in which we accord one another national treatment up and down the supply chain, including for tax incentives and subsidy programs. Canada would gain some security in the demand needed in order to encourage investment. This might also require long-term pricing or the use of strategic reserves to bolster prices. The U.S. would gain the greater security of supply required to manage geopolitical risk. As part of this pact, Canada would accord critical minerals similar proportionality treatment as crude oil was given in the Canada-U.S. Free Trade Agreement. This Critical Minerals Pact could be extended to like-minded countries at the discretion of both Canada and the United States.

2. Use our G7 Clout: We can use Canada's position as upcoming chair of the G7 to push measures at the 2025 Kananaskis summit in support of the development of critical minerals for the benefit of the G7 nations. These measures would begin by facilitating collaborative investments in critical minerals to accelerate development and to reduce the potential leverage China and others gain from their current dominance. As G7 members work together, they would forge a pathway to "mini-lateralize" a Critical Minerals Pact to other friendly nations.

3. Defend against Chinese Manipulation: We should create policy defences against Chinese manipulation of critical minerals and rare earth markets that are intended to frustrate new mining developments. China is seeking to depress commodity prices and so discourage investment, pitting short-term market signals against longer-term security and economic requirements. Just as in the case of the development of the oil sands, we need to consider how to bring public policy to bear on the long-term geo-economic importance of critical minerals.

4. Work now on Acceleration Measures: These would include domestic and cross-border regulatory reforms and co-ordination in approaches to facilitate free, prior and informed consent with Indigenous communities. This might include joint or Indigenous-led regulatory reviews and Indigenous ownership of resource projects.

3c. Mattering More through an Auto Pact 2.0 Canada-U.S. Energy and Environment Pact

Canada is the fourth-largest oil and fifth-largest natural gas producer in the world.[33] It is an early leader in the development of hydrogen.[34] It is the third-largest producer of hydropower.[35] It is the second-largest producer and exporter of uranium, behind only Kazakhstan.[36] It is the sixth largest producer of nuclear power.[37] Much like the auto industry, energy is constantly flowing back and forth over the Canada-U.S. border through more than 100 pipeline and grid connections — with potential for many more. The high level of integration of energy transportation infrastructure creates the possibility of a binational version of the long-mooted idea of pre-authorized energy corridors.

Whether one considers Canada an energy superpower or not, it is beyond dispute that Canadian and U.S. strengths in the energy sector make us together a superpower

capable of influencing energy independence, affordability and reliability at home, and energy security and decarbonization by our partners abroad. Canada-U.S. complementarity is noteworthy both in how we can backstop one another and in the combined assets we can jointly bring to bear with our partners. The capacity to help our allies with the latter was clearly demonstrated by our co-ordinated policies in 2022 to boost gas production and ensure emergency LNG shipments to a suddenly vulnerable Europe.

The pathways to a net zero energy future invariably point to increased use of non-emitting renewable energy such as: nuclear and wind, including offshore wind; accelerated market penetration for zero-emitting vehicles and heat pumps; decarbonization of existing energy forms through measures such as renewable gas, methane reductions and carbon capture; and development of carbon markets so that emissions abatement occurs with relatively low impacts on present employment.

There is also much to do together on the decarbonization of legacy energy systems. All international agency forecasts show the continued use of oil and gas for some decades. Global coal use is actually **on the rise** at a time when Canada and the U.S. are both awash in lower-carbon natural gas.[38] There are only upsides to innovating and acting together.

An Energy and Environment Pact between the two countries can build on the bilateral energy side letter to the CUSMA (Mexico was excluded from this part of the agreement). It called for "greater integration of North American energy markets based on market principles, including open trade and investment." It would build on the energy chapter of the critical 1989 Free Trade Agreement.

Canada is the:

second-largest
producer and exporter of uranium

third-largest
producer of hydropower

fourth-largest
oil producer

fifth-largest
natural gas producer

sixth-largest
producer of nuclear power

The Energy Side of the Pact

Electricity Grid

U.S. policy analysts tell us they feel particularly vulnerable to electricity interruptions based on demand and supply mismatches, infrastructure failures and cyberattacks. Canada and the U.S. are already backstopping one another in the supply of electricity and can do even more. A greater sharing of electricity benefits both parties, especially in terms of reliability of supply to households and industry.

Canadians tend to think of electricity collaboration as a one-way street, with electrons always flowing north to south. While that tends to be true on a net basis, in February and March 2024, more electricity actually flowed from the U.S. to Canada than vice versa.[39] Both countries are confronting soaring demand and tight supply — a recipe for inflation and supply disruption.

Traditional electricity surplus jurisdictions, such as British Columbia, Manitoba and Quebec, are moving into deficit positions and turning down economic development opportunities — from heavy industries to server farms — because of uncertain supplies. Pooled electricity is one way to be more efficient with our supplies. Co-operation can extend, too, into working together against the kind of NIMBYism that often blocks the movement of energy that would provide greater reliability at more affordable prices.

Nearly 85 percent[40] of Canadian electricity generation comes from low-carbon sources (hydro, nuclear, renewables) versus 40 percent in the U.S. This gives Canada an advantage in attracting clean economy investments such as battery manufacturing. Ultimately, though, we want a level continental marketplace. We could build upon the Inflation Reduction Act's consumer tax credit on EVs, which is open to cars and batteries manufactured in nations that have free trade agreements with the United States.[41] Wherever possible, it is important that Canada and the United States turn their co-tenancy of North America's great geology into mutual recognition on the policy front.

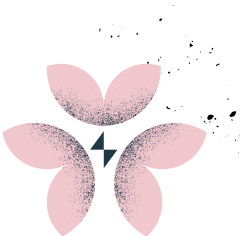
Big Nuclear and Small Modular Reactors

Ontario and New Brunswick alone produce enough nuclear power to make Canada the No. 6 producer in the world. Canada's CANDU reactors are somewhat less geopolitically sensitive because they are less reliant on the enrichment of uranium, a part of the supply chain where Russia dominates.

In the bid for net zero electricity, both provinces are committed to expanding nuclear power, either through refurbishment

of existing facilities or development of small modular reactors (SMRs). Saskatchewan and Alberta are also exploring the possibility of joining the nuclear club through SMRs. The federal government has gone from excluding nuclear from qualifying for green bonds in 2022 to offering nuclear a tax credit in 2023.

The first SMR under development in North America is Ontario Power Generation's 300-megawatt **BWRX-300 project**, which will power 300,000 homes.[42] It is slated to become operational at the Darlington nuclear power station east of Toronto by 2028 and will be the first of four SMRs planned for the site. The U.S. is following this project closely as it, too, investigates SMRs.



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Uranium

The United States is home to the world's **largest fleet** of nuclear reactors at 94[43] and new construction is underway there for the first time in decades. Canada has been shipping uranium to the U.S. since the Second World War Manhattan Project and is its largest supplier today with a 27 percent market share. But even after the invasion of Ukraine, the U.S. remains highly dependent on Kazakhstan, Russia and Uzbekistan for nearly half its uranium, with an even deeper reliance on Russia for enrichment.

The United States is increasingly attentive to the vulnerability this entails. In April 2024, Congress passed the Prohibiting Russian Uranium Imports Act with bipartisan support. It **imposes a ban** on imported enriched uranium unless a waiver is secured by the secretary of energy.[44] This opens the door to closer integration with Canada to build a continental nuclear fuel supply chain for existing and future reactor development and, then, to make this available to friendly nations also eager to lessen reliance on Russia and its neighbours. We have already seen this shift happen in Ukraine. It has weaned itself off Russian enriched uranium in favour of ore originating in northern Saskatchewan mines operated by Saskatoon-based Cameco, with the help of iconic energy

technology company Westinghouse, now owned by Cameco and Toronto's Brookfield Business Partners. Other European nations are also working to liberate themselves from Russian influence.

Crude Oil

The United States has leapfrogged Russia and Saudi Arabia to become **the largest oil producer** in the world. Canada has also added considerable production and is now fourth in size.[45] Incredibly, we together pumped about the same volume of crude in 2023 as Saudi Arabia and Russia combined, an historic achievement that lessens our shared susceptibility to malevolent geopolitical forces and allows us to provide similar protection to friendly nations. The United States exports higher volumes than we do, but these are in large part enabled by Canada's ever-growing crude shipments to south of the border, particularly heavy oil that complements lighter U.S. shale oil grades. Today, Canada accounts for about **50 percent** [46] of U.S. oil imports. The United States has been an offshore oil exporter for nearly a decade and Canada is joining the club with completion of the TMX pipeline from Edmonton to the Pacific. Together, we possess significant tools to reduce Russia's capacity to weaponize energy and can tip the energy security balance in favour of our long-standing allies and partners.

Despite the emissions challenges posed by oil, global demand is growing and is likely to continue doing so at least until EVs reach critical mass. This gives us greater impetus to decarbonize our oil and turn this to our advantage against authoritarian countries that have little commitment to emissions reduction. How can we best do this? By sharing research and development and implementation of new technologies, such as carbon capture and methane reduction. Our integrated energy border makes competition between us on matters like subsidies nonsensical.

Natural Gas and Hydrogen

On natural gas, the complementarity is even more striking, as is the opportunity to use it to promote both global energy security and emissions reduction. Most Canadians have heard of the Athabasca oil sands, but few know the Montney geological formation straddling the British Columbia-Alberta border. It is one of the largest known gas deposits in the world, storing the equivalent of nearly 150 years of Canadian gas consumption.

The Montney Formation has some of the lowest-carbon gas in the world and is situated close to clean power sources. The International Energy Agency

estimates that LNG from B.C. could be some 90 percent less carbon-intensive than competitors. Here, good geography also helps. Canada's relatively cold temperatures mean that liquefaction (a cooling process that converts the gas into a liquid for transportation purposes) requires less energy. And the contours of the Earth translate into fewer shipping days to Asian markets and, again, less energy consumption.

Now Canada needs to move into high gear. LNG Canada in Kitimat, B.C., is set to begin operations in 2025, followed by the Haisla First Nation Cedar LNG project in 2028 — with others lining up behind. But to maximize Canada's clean energy advantage, British Columbia and the federal government, working together, must transmit electricity to remote LNG facilities. Again, deepening and broadening require accelerating.

Canada and the United States have enjoyed a long-standing gas partnership within North America. Now we have an opportunity to work together globally. All U.S. LNG export facilities are situated on the Atlantic, with simple access to Europe. Asia-bound shipments must contend with a Panama Canal hobbled by weather and environment-related obstacles. In contrast, Canada's approved LNG facilities all face Asia. It is a marriage made in strategic heaven.

The Environment Side of the Pact

Carbon Capture and Storage

Carbon capture and storage — the removal of carbon emissions from industrial production by storing them or using them for carbon fibre products — is widely seen as an integral part of net zero pathways. An opportunity exists to move carbon by pipeline from areas where it is produced to sites where it can be buried. Alberta and Saskatchewan boast some of the best carbon sequestration geology in the world. Just as oil and gas flow south from the Prairies to U.S. markets, so could captured carbon be returned to its places of origin. The same pattern can work the other way along the St. Lawrence River and in the Great Lakes industrial belt, where there are few high-quality carbon equestration sites in Canada but a number in the gas-producing regions of Pennsylvania and Ohio.

Together, Canada and the U.S. possess significant tools to reduce Russia's capacity to weaponize energy and can tip the energy security balance in favour of our long-standing allies and partners.

Border Carbon Adjustment Mechanisms

Countries with stringent climate policies are increasingly attentive to the competitive disadvantage those policies impose on their industries relative to nations with weaker climate policies. As a result, jurisdictions such as the European Union have been designing border adjustment mechanisms that essentially amount to import tariffs based on carbon content. Without common rules, these tariffs are subject to abuse and could spark a carbon tariff war. Given the high level of economic integration between Canada and the United States, it would make sense to introduce any border adjustment mechanism together and then make it available to others willing to join our "carbon club."

Carbon Markets

Research shows that the cost of achieving the Paris Agreement emission target reductions could be reduced by some $250 billion per year by 2030 if addressed collectively.

Moreover, as net energy exporters, both countries have an interest in implementation of an arrangement along the lines of Article 6 of the Paris Agreement.

Markets for pricing and exchanging carbon credits are needed.[47] The only market in North America is limited to Quebec and California. A joint Canada-U.S. carbon market would provide greater liquidity and allow for common rules.

Moreover, as net energy exporters, both countries have an interest in implementation of an arrangement along the lines of Article 6 of the Paris Agreement.[48] It was established to ensure that exports, particularly those with a positive impact on global emissions, would not be discriminated against. As an example, consider B.C. gas. If B.C. exports more gas, it would lower global emissions but, in so doing, would raise Canada's emissions. Article 6 is meant to square this unfortunate circle but Article 6 has been stalled for years. Canada and the United States should work together and recruit like-minded nations to push for adoption or an alternative arrangement.

Exporting the Concept of Coal-to-Gas Switching

Decades into the climate crisis, North America's standout success in emissions reduction has come from the switching of electricity generation systems from coal to gas. In the United States, this process was driven by innovation and market forces, namely the shale revolution, which produced cheap and plentiful gas that, in turn,

displaced coal-fired electricity generation. In Canada, overall emissions were 7.7 percent (49 megatonnes) lower in 2022 than in 2005 — primarily because of Alberta and Ontario's success in phasing out coal, which contributed the equivalent of 136 percent (67 megatonnes) of that reduction.[49] With their considerable capabilities to export LNG from the Atlantic and Pacific, Canada and the United States have a tremendous opportunity to reduce global greenhouse gas emissions through the displacement of global coal.

It is just one more example of how the two countries — a combined global energy colossus — can bring their respective and complementary strengths together to enhance both North American energy independence and global energy security. Through a Canada-U.S. Energy and Environment Pact, the two nations can support one another's national interests and "mini-lateralize" with like-minded market democracies greater freedom from the energy extortions of authoritarian states and a more robust response to climate change.

RECOMMENDATIONS

1. An Energy and Environment Auto Pact: Initiate discussion of an Auto Pact 2.0 of Energy and Environment, which would build on the principles of energy independence, security, affordability, clean energy and decarbonization (net zero). The pact would accord national treatment beyond tariffs to include measures like subsidies, on the basis that a common energy space benefits both countries.

2. Resurrect a Proportionality Clause: In the area of nuclear energy, this pact could resurrect the 1989 FTA concept of a proportionality clause, in this case in the supply of Canadian uranium to the United States. It would explore a joint approach to the 'continentalization' of the supply chain, where Canada already has a head start. An enrichment stage must be added.

3. Implement Article 6: Canada and the United States would work together internationally in such areas as implementation of Article 6 of the Paris Agreement.

4. Use gas to displace higher emitting fuels abroad: Canada and the United States would work together in the transitional use of North American gas to displace higher emitting fuels, which will help decarbonize Asian and European electricity grids and reduce global emissions. By 'continentalizing' energy supplies and emissions reduction strategies in the shared interests of climate safety and energy affordability, reliability and security, Canada will create more favourable conditions to secure preferential treatment under the Inflation Reduction Act and create arguments that will serve us well in any CUSMA review. Wherever possible, these benefits will be extended to our mutual partners in the world.

3d. Mattering More through an Auto Pact 2.0 of Advanced Technologies

Technological innovation has driven competitive and military advantage throughout history. Today's strategic rivalry between the United States and China is rooted in technology as much as anything else — the competition is as much as anything about who is more inventive in setting the standards for the next-generation digital infrastructure that everyone will use.

Canada needs to figure out where it can build advantage. Unlike geology and geography, there is nothing automatic in translating ingenuity into strategic assets.

Advances in technologies, particularly the rapid spread of general-purpose technologies such as artificial intelligence, underpin just about everything recommended in the three areas we have explored for Auto Pact 2.0s. Technologies are the enablers, the amplifiers and the platforms upon which the other 'continentalizing' sectoral strategies depend.

Artificial intelligence is increasingly important in the discovery of mineral deposits. Innovation in processes and products continues to play a major role in critical minerals exploration, extraction, processing and use in batteries and other components.

Technologies such as over-the-horizon radar and undersea surveillance systems that leverage artificial intelligence are vitally important in protecting the Arctic from potential incursions underwater, on land and sea, in the air and in space. Advanced green tech is also critical to increasing the efficiency of producing, storing and transporting low-carbon energy and decarbonizing incumbent forms of energy, which will be with us for a while yet. Advanced technologies, in other words, are already part of deepening and accelerating continental sectoral agreements. And they will certainly be part of broadening.

We think of technological innovation and adaptation as horizontal, in that every sector of strategic importance to Canada (and all our previous recommendations) depend on Canada using advanced technologies to take advantage of new opportunities and to meet the challenges we face. Canada needs to be on the cutting edge to remain relevant, let alone to Matter More.

There are also deep and broad technology mainstays, such as next-generation computing, as well as nanotechnologies, stem cell research, synthetic biology, advanced materials and advanced manufacturing. The United States is working hard through its Creating Helpful Incentives to Produce Semiconductors (CHIPS)

Canada needs to figure out where it can build advantage. Unlike geology and geography, there is nothing automatic in translating ingenuity into strategic assets.

Act and Inflation Reduction Act, as well as other measures, to reshore advanced semi-conductor manufacturing centred in Taiwan back to the United States. The semiconductor shortages created by supply chains that became obvious during COVID served as a warning of the chaos created by fragile supply chains overly concentrated in vulnerable or "unfriendly" locations.

Canada needs to assess where it fits into global supply chains — where there are needs and where we have assets that can meet those needs. We have heard a great deal in our consultations about semiconductors. The United States is developing two national manufacturing clusters, one in Arizona and the other in upper New York state. The New York hub will be close to a 52-year-old IBM plant in Bromont, Que., that specializes in what the industry calls "advanced packaging," which integrates many semiconductor components for maximum effect into a single package.[50] The global semiconductor advanced packaging market is expected to more than double in size in the decade to 2028. Growth in the next four years is projected to be valued at more than US$20 billion, according to market research firm Technavio.

Other examples abound: Founded by an ex-RCAF officer, Montreal's CAE Inc. has sold advanced aviation equipment such as flight simulators around the world for decades and expanded in more recent years into training systems for civilian and military clients. CAE now trains some 1,500 U.S. air force, navy and marine pilots and sensor operators a year. Hamilton's WESCAM, which dates to the 1950s, supplies powerful imaging systems to more than 80 countries for use in military equipment, law enforcement and sporting events such as NASCAR races.

Canada has many such hidden assets in plain sight that can support a Matter More continental strategy. In partnership with the United States, the two governments can put in place framework agreements that encourage companies on both sides of the border to procure together, to build supply chains together, and to set standards for next-generation technology together.

We have heard in our roundtables and interviews, including from Americans, much respect for Canada's leading AI researchers, who are at the front end of the AI value chain. Canada is ranked fifth in the world for its AI capacity on a global index that benchmarks nations on their level of investment, innovation and implementation of artificial intelligence.[51] We rank third in the G7 in total funding per capita raised for AI companies, and fourth globally in the number of generative AI companies per capita.[52] In 2023, Canada was home to more than 1,500 AI companies, and some 150 firms raised $2.5 billion in investment. Nevertheless, Canada clearly is lagging in commercialization of its research and in adoption of AI by businesses. The Canadian adoption rate is among the lowest in OECD (Organisation for Economic Co-operation and Development) countries and the second lowest in the G7. And when ranked on AI infrastructure alone, Canada falls to 23rd.[53]

We have heard in our roundtables and interviews, including from Americans, much respect for Canada's leading AI researchers, who are at the front end of the AI value chain.

Success from one end of the spectrum (research) to the other (commercialization and adoption) takes staying power and talent development. Policymakers cannot afford to slow down on public investments in research, or recruitment of "magnet" researchers. Governments have to fund the infrastructure — from computing to labs — that will attract and retain the best talent. They cannot miss the critical step of supporting programs and accelerators that have the best track record in helping scientists commercialize their research. Canada has long been advanced in the clean energy production that today serves as the raw material for computing needs. But even hydro superpower Quebec is turning away economic opportunities as electricity deficits begin to materialize. And generative AI is rapacious in its consumption of energy. This country cannot squander its clean electricity advantage if it is to Matter More.

A country can't prosper if it is only good at research. The world's top-line researchers want to work on the best-in-class solutions. Brains move; Canada must continually replenish our investment in human capital while seeking solutions to the perennial challenge of the application of this knowledge — particularly commercialization. This is as true in life sciences as it is in other technology-dependent sectors.

Much depends on improvements in the innovation adoption capabilities of both the private and public sectors. Adoption is obviously necessary to reap competitive advantage from innovation, but it also produces a virtuous circle where innovation attracts and retains the innovators who, in turn, want to work in top-tier innovative ecosystems. For Canada, a stronger commitment to technological excellence is foundational to Matter More to the United States and to our other allies. The private sector needs to do better in commercializing our innovative research and in adopting leading-edge technologies. And the public sector has to get better at using public procurement to support our innovators, as it once did in helping nurture a research-led, world-competitive telecom industry in Canada. Concerning data suggest that the private sector in Canada is especially slow in investing in R&D and workforce training.

We need to get this right.
No more excuses.

RECOMMENDATIONS

1. The right R&D choices: Two of our sectors for mattering more provide Canada with the opportunity to lead. In critical minerals and energy, Canada has world-beating endowments, but they depend on advanced technology to scale. Canada's influence in both sectors depends on smart choices in the development and use of technology and in the recruitment and development of talent. Canada needs to determine quickly where it can add the most value.

2. Building a North American framework: At the front end, Canada needs to make choices about which next-generation technologies to invest in. Its choices should be based on our comparative advantage and an informed judgment about which technologies will be foundational in other sectors. We must continue to attract world-class researchers but also support those who develop dynamic downstream applications. Canada has to work closely with the United States to create continental strategies that will build integrated supply chains for advanced processes and products. We should devote time, energy and resources to creating shared mechanisms to co-procure advanced technologies that the United States and Canada will collectively need to enhance security.

With leadership in the technologies that are of importance to the sectoral agreements we have identified — technologies that are underpinned by AI, quantum and next-generation computing — we have an opportunity to Matter More. Without it, we can only matter less.

Conclusion

Mattering more begins at home. Canada is the world's ninth biggest economy, smaller than Russia and bigger than Brazil.

It is big enough to be consequential but has slowly been moving down the list. And Canada is a dwindling economy vis-à-vis the United States. The old 10 percent rule doesn't apply anymore; our population may be a record 12 percent as big as the behemoth next door, but GDP is not even eight percent as large. California, Texas and New York have economies as large or larger than Canada's — 20 years ago, the GDP of Texas and Canada were equal; now Texas is 20 percent larger.

We believe this decline is eminently reversible. Canada has a bevy of assets to boost our prosperity and strengthen our place in North America and the world. We have set out in this report a four-part strategy to Matter More through a renewed commitment to defence in the Arctic and a greater focus on key assets and capacities, especially in critical minerals, energy and the environment, and technology.

These are areas where the United States needs Canada, just as Canada needs the United States. Together, the continent becomes stronger, more prosperous and a more effective partner to our friends and allies. But size, rate of growth and productivity all matter.

Negotiations with the United States won't be easy. They never were and they won't be now, in a moment roiled by U.S. protectionism and nationalism. A Democratic Washington offers the first. A Republican Washington offers both.

Another Trump presidency also promises a proclivity for pique and chaos.

Still, what's a country to do when its influence is limited but make the most of it?

This report accepts that geography is mostly destiny in Canada's case. Canada can't escape the gravitational pull of the U.S., nor should it want to. The world is decoupling as the United States competes for predominance with a rising China and a disruptive Russia. We know by instinct and analysis which camp we're in, even as the U.S. orbit becomes increasingly unstable.

We have what our allies need. What were once mostly economic decisions now are geopolitical decisions as well, and a good ally needs to act accordingly. Canada has cards to play; we can Matter More with smart strategies and effective implementation.

We are certainly not alone, nor is there any reason to be adrift. If anything, present circumstances make Canada more important than ever to the United States — and the world.

The world does need more of Canada. The United States does. Our other allies do.

But it is up to us to make it happen.

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