Canada’s Clean Energy Growth Economy

Cross-Country Views on Issues and Actions: Summary of CEGE’s Regional Input Tour
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Key findings

A clean energy growth economy sustains our environment, creates wealth, and enhances our standard of living. Transitioning Canada to this long-term, sustainable model requires tracking progress in an evidence-based manner. This includes engaging key stakeholders across the country to help inform the development of the best-suited, data-driven metrics, but also to identify region-specific opportunities and challenges in this transition. This initiative clearly showed that there are country-wide common issues as well.

Key actions required

**Economy**

- We need to improve and strengthen cross-jurisdictional collaboration if we hope to reduce policy and regulatory uncertainty and complexity. The current environment discourages investment and stifles innovation.
- Investing more in human capital would ensure that we have a workforce ready to participate in a clean energy growth economy.
- Infrastructure investment should focus on building critical infrastructure—in remote regions, Canada-wide and international trade corridors, and urban public transit—that maximizes economic, environmental, and community benefits.

**Environment**

- Governments and businesses should tap into the domestic and export potential that comes with Canada’s expertise on clean energy resources and technologies, its environmental services, and its stringent regulatory know-how.
- We need to maximize the capacity of Canada’s natural capital (forests, soil, oceans, etc.) to reduce global environmental impacts and provide economic and social benefits across the country.
- Long-term policies that provide regulatory certainty, clarity, and efficiency without being driven by politics are needed to provide a healthy environment for technology and infrastructure investment.

**Society**

- To ensure environmental protection and community well-being while maximizing economic opportunities and eliminating social disparities, governments and businesses must work with Indigenous peoples and integrate their knowledge into the process of transitioning to a clean energy growth economy.
- Examining the challenges through a “sustainability lens” will help to ensure that the impacts and benefits of the transition include health, communities, fairness, and inclusiveness.
- Consumers have the capacity to drive the transition to a clean energy growth economy. They have to understand what is at stake and what they can do.
Gauging Canada's clean energy growth economy

A clean energy growth economy sustains the environment, creates wealth, and enhances our standard of living.

Moving to a clean energy growth economy in Canada requires a long-term transformation that balances the need for environmental protection, economic growth, and social prosperity. The mandate of The Conference Board of Canada’s Centre for a Clean Energy Growth Economy (CEGE) is to support the research and dialogue required to make this transition in Canada.

A key multi-year initiative of the centre is the creation of an “indicator platform” for Canada. These metrics measure the country’s progress in moving to a clean energy growth economy in a data-driven and quantifiable manner. Indicators are grouped across the three pillars of sustainability: economy, environment, and society. This analytical scheme is consistent with the United Nations’ Sustainable Development Goals framework.1 Together these indicators will monitor progress toward a set of strategic goals. (See Table 1.)

Table 1
Indicators track Canada’s transition, strategic goals provide direction

<table>
<thead>
<tr>
<th>Strategic goal</th>
<th>Economy</th>
<th>Environment</th>
<th>Society</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximize the long-term economic potential of Canada’s peoples, regions, and sectors, while ensuring Canadian businesses thrive in a globally competitive environment.</td>
<td>Reduce the impacts of human activities on the environment and use natural resources in a sustainable and efficient manner.</td>
<td>Ensure that Canadians’ standard of living continues to improve</td>
<td></td>
</tr>
<tr>
<td>Sample indicators</td>
<td>Value added</td>
<td>Greenhouse gas emissions</td>
<td>Opportunity</td>
</tr>
<tr>
<td></td>
<td>Investments in capacity</td>
<td>Air pollutant emissions</td>
<td>Compensation</td>
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<td></td>
<td>Global reach</td>
<td>Deforestation</td>
<td>Contribution to society</td>
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<td></td>
<td>Operating environment</td>
<td>Water use</td>
<td>Affordability</td>
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<td></td>
<td>Growth prospects</td>
<td>Energy use</td>
<td></td>
</tr>
<tr>
<td>Relevant UN Sustainable Development Goals (SDGs)</td>
<td>SDG #8: decent work and economic growth</td>
<td>SDG #6: clean water and sanitation</td>
<td>SDG #7: affordable and clean energy</td>
</tr>
<tr>
<td></td>
<td>SDG #9: industry, innovation, and infrastructure</td>
<td>SDG #7: affordable and clean energy</td>
<td>SDG #8: decent work and economic growth</td>
</tr>
<tr>
<td></td>
<td>SDG #12: responsible production and consumption</td>
<td>SDG #11: sustainable cities and communities</td>
<td>SDG #11: sustainable cities and communities</td>
</tr>
<tr>
<td></td>
<td>SDG #13: climate action</td>
<td>SDG #12: responsible consumption and production</td>
<td>SDG #12: responsible consumption and production</td>
</tr>
<tr>
<td></td>
<td>SDG #15: life on land</td>
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Sources: The Conference Board of Canada; United Nations (UN)

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1 United Nations, “About the Sustainable Development Goals.”
United Nations’ Sustainable Development Goals and their relevance to Canada

- The goals are defined as a “blueprint for a better and more sustainable future for all,” and were adopted by 193 UN member countries in 2015 under the 2030 Agenda for Sustainable Development.

- The program provides the framework for 17 measurable and time-bound goals (including 169 targets and 244 indicators) covering social, economic, and environmental factors (i.e., sustainability), as well as peace, governance, and justice elements.

- The UN goals were adopted by the Government of Canada as part of its Sustainable Development Strategy. The federal government has also created a data hub to keep track of Canada’s progress toward meeting these goals.

Sources: Environment and Climate Change Canada; Statistics Canada; United Nations.

Initial analysis will be completed at the national level. The indicators will highlight the impacts and contributions of energy production and use, within the context of historical trends, recent changes, and a realistic view of the future. The aim is to identify where Canada is improving and where more attention is needed in the long-term transition to a clean energy growth economy. Expanding the indicators framework at the regional, sector, international, or firm level is possible in the future.

The reason behind CEGE’s Regional Input Tour

Quantitative metrics are just one part of the story, and national-level indicators can blur the particular circumstances that various regions face in this transition. (See “Snapshot of Canada.”) Engaging stakeholders is essential to understanding both the distinct and the common issues that different regions face as they move toward this new economy.

This is why The Conference Board of Canada’s Centre for a Clean Energy Growth Economy (CEGE) engaged stakeholders across the country. The main purpose of the tour was to gather “on the ground” intelligence and insights into the region-specific opportunities and challenges of achieving the strategic goals in the transition to a clean energy growth economy. Seven region-specific summaries for executives, produced as part of this research, highlight the many...
challenges and opportunities across Canada. A brief discussion of the opportunities and challenges of a clean energy growth economy transition for Canada’s North is included in this report.

This impact paper also presents a summary of the most common issues identified across all regions in November 2019, providing concrete examples whenever possible. The list of actionable insights, presented as “key findings,” is meant to provide a road map for capitalizing on the opportunities and meeting the challenges that were identified during this national tour. Finally, we also offer a brief take on how the stakeholder engagement findings could impact the suite of quantitative indicators, and we look at the areas that are worth exploring further in the context of a clean energy growth economy in Canada.
Economy
Canada has the world’s 17th largest economy, accounting for 1.4 per cent of global GDP in 2018.

Canada’s economy is services-oriented and diversified. The goods-producing industries’ share of the economy is 30 per cent—the third highest across the G7. The three largest sectors are real estate, manufacturing, and mining/oil and gas.

Environment
Canada was the world’s 10th biggest emitter of energy-related greenhouse gases emissions in 2018, accounting for 1.6 per cent of the global total.

The largest Canadian emitters of greenhouse gases (GHG) in 2017 were:
• oil and gas (27 per cent)
• passenger and freight transport (24 per cent)
• heavy industry (10 per cent)

Society
Canada had the 25th highest GDP per capita in 2018, but the levels varied widely across the country.

A 2018 survey found that 58 per cent of Canadians agreed that the transition to a clean energy growth economy provides an opportunity to create jobs and wealth. Regional responses ranged from as low as 38 per cent in Newfoundland and Labrador to as high as 75 per cent in P.E.I.
What we heard across Canada

Economy

Strategic goal: Maximize the long-term economic potential of Canada’s people, regions, and sectors while ensuring that Canadian businesses can thrive in a globally competitive environment.

Cross-jurisdictional cooperation and consistency on policy and regulation

Better cross-jurisdictional cooperation and consistency on policy and regulation was one of the most discussed issues on the entire tour. Participants identified it mainly as an economic challenge, but also as an environmental one.

The lack of coordination across levels of government (municipal, provincial, and federal), regions (provinces and territories), and departments (e.g., energy vs. environment) is hampering the transition. Participants noted that cross-jurisdictional disagreements and inconsistencies result in unnecessary complexity and uncertainty. This environment, they said, is already discouraging investment and innovation in Canada and, by extension, hampering the long-term economic potential of its people, sectors, and regions.

Unintentionally, this also hurts the cost efficiency and outcomes for environmental protection efforts, such as the efforts to curb greenhouse gas emissions. The cross-cutting nature of this problem highlights the impacts of unintended consequences and the need for policy-makers and regulators to carefully consider their actions in the context of a clean energy growth economy for Canada.

Examples:

• Road-weight restrictions in Quebec result in goods shipped from Atlantic Canadian requiring more trucking trips than would be necessary without the restrictions. This increases operating costs, fuel usage, and GHG emissions levels, and also has an impact on long-term investment decisions.

• In the Prairie provinces, multiple and inconsistent regulations and policies at the provincial and federal levels make decisions on investment in infrastructure and technology difficult. This limits the positive economic, environmental, and social impacts of such investments.

• Many federal funding programs for research and development use thresholds that limit access to capital for small and medium-sized enterprises (SMEs) in Atlantic Canada. SMEs in Atlantic Canada tend to be smaller than in other
regions. This illustrates the need for flexible and tailored approaches, rather than a one-size-fits-all approach.

Availability, cost, opportunity, and quality of labour
Labour-related issues were consistently brought up, and were more likely to be seen as a challenge rather than an opportunity.

Examples:
• Declining labour productivity and high labour costs are having a negative impact on current operations and limiting growth in British Columbia and Ontario.
• Labour shortages are a problem in Quebec and Atlantic Canada for different reasons. In Quebec, shortages tend to be due to the rapid growth in specific sectors; in Atlantic Canada, they are often the result of underemployment and emigration. But in both regions, these shortages are hurting economic growth.

The appropriate education and skills required for the labour force in a clean energy growth economy was a frequent issue in all the regions—as a limiting factor, but also as an emerging opportunity. Ensuring a fair transition for workers in industries that might be hurt by the move away from fossil fuels was another widely discussed challenge.

Infrastructure investments
Infrastructure was frequently cited as both an economic opportunity and a challenge. This was true under both the environment and society themes. Participants agreed that there are only so many investment dollars available for infrastructure and that governments must balance competing spending priorities. In some instances, this means that urban cores are prioritized while other regions are neglected. Participants were unequivocal in saying that without adequate infrastructure investment in, for example, critical infrastructure in remote regions or urban public transit, the transition to a clean energy growth economy becomes more challenging and standards of living could suffer.

Examples:
• Investing in critical infrastructure (such as electricity transmission, rail and roads, and telecommunications) can spur economic development in remote rural, Indigenous, and Northern communities.
• Developing currently inaccessible natural resources that are needed in a clean energy growth economy, such as renewable (e.g., hydro and wind) and non-renewable energy sources and minerals (e.g., rare earth minerals)
and uranium), would benefit the economy, communities, and emissions-reduction efforts. This requires appropriate investment in infrastructure.

- Developing cross-Canada and international trade corridors, such as east–west electricity transmission grids, and capitalizing on access to emerging shipping routes in the North can provide economic, environmental, and societal benefits.

**Environment**

**Strategic goal:** Reduce the impacts of human activities on the natural environment and use natural resources in sustainable and efficient manner.

**Canada’s clean advantage**

Canada’s clean energy resources, technologies, environmental services, and regulatory know-how were widely seen as the top opportunity for reducing environmental impacts in Canada and globally.

**Examples:**

- Canada has a long history of responsible natural resource development in agriculture, forestry, mining, and oil and gas extraction. It could export this knowledge of environmental best practices—as well as technologies—and encourage global resource leaders to follow Canada’s lead.
- Developing large-scale renewable resources, such as hydro power in Manitoba, Quebec, and Atlantic Canada, would help to decarbonize energy supplies in Canada and create cost-effective opportunities for end-use electrification. Baseload hydro availability also supports development of intermittent and distributed renewable resources (e.g., solar, wind). In turn, this could attract investment to Canada as a low-carbon and low-energy-cost jurisdiction, as well as increase electricity exports to the United States.
- Cross-sector collaboration can lead to commercial development and adoption of alternative energy solutions, such as biomass, hydrogen, liquefied natural gas (LNG), and battery storage. This helps to reduce GHG emissions, develop new supply chains, improve energy security, and provide price stability for households and businesses.

**Canada’s natural capital advantage**

Canada’s natural capital assets have the potential to reduce global environmental threats—such as GHG emissions.

**Examples:**

- Increasing Canada’s global market share for natural resources production—whether oil and gas, minerals, or clean electricity—can reduce global GHG emissions. Canada has a comparative carbon advantage for some products relative to other jurisdictions. Exporting Western Canada’s natural gas as LNG to displace coal in Asian markets or developing Prairie rare earth elements and uranium deposits for clean fuels and technologies were two examples raised by tour participants.
- Canada’s natural resource industries are already leaders in environmental sustainability (beyond GHG emissions reductions), providing economic and community benefits across the country. We need to recognize that fact.
- Agricultural land, forests, and marine environments can act as carbon sinks. They can
Indigenous knowledge includes critical lessons on the importance of environmental stewardship and community well-being.
help lock in global GHG emissions and provide economic opportunities.

• Canada’s vast natural capital already provides ecosystem services beyond resource production that bring with them environmental and community benefits. The economic value of these services should also be recognized in a clean energy growth economy.

Regulation and depoliticization

The need for long-term policy and regulatory certainty, clarity, and efficiency was one clear challenge that was raised at all the stops on the tour, as was the depoliticization of regulatory oversight.

For example, long-term inconsistencies in environmental policy and regulations detract from the certainty needed for investment to flourish. When policies change with the government of the day, incentives and time frames become misaligned, discouraging investment in long-lived assets.

Participants agreed that the cost and availability of the technology required for reducing GHG emissions are competitive today. But they also noted that this is not necessarily true across the entire country. (See the section “A clean energy growth economy in Canada’s North.”) The main challenge lies in having long-term and consistent policy implementation that leads to widespread adoption of these technologies. This requires the right mix of incentives, programs, and regulations.

Cost efficiency and outcome effectiveness should be the best criteria for choosing a policy package—but politics and ideologies can get in the way. This is particularly true for efforts to reduce GHG emissions. The current politicization of the transition to a greener economy has created a “winner and loser” narrative that leads to rifts among regions and sectors of society. Differing social philosophies and views of political leaders have also made it difficult to come up with effective policy approaches that address the issues of diversity, equity, and inclusion in the transition process. While these issues may be social in nature, they do have a strong impact on environmental outcomes.

Society

**Strategic goal: Ensure that Canadians’ standard of living continues to improve.**

**Indigenous peoples and knowledge inclusion**

Inclusion of Indigenous communities and knowledge was front and centre in all discussions, primarily as a social opportunity, but also as environmental and economic issues.

Indigenous reconciliation needs to include economic considerations to ensure that the transition to a clean energy growth economy brings prosperity for all. Indigenous communities are one of the fastest-growing segments of Canada’s population and, as a key source of labour, they can become a driver of economic development opportunities across the country.

But partnerships, collaboration, and knowledge-sharing with Indigenous communities provide more than simply economic benefits. Indigenous knowledge includes critical lessons on the importance of environmental stewardship and community well-being. Integrating Indigenous knowledge of the natural environment and approaches to community into all aspects of the
transition to a clean energy growth economy can mean better sustainable outcomes for all.

**Sustainability can measure transition progress and impact**

The importance of employing a sustainability lens when measuring transition progress and impacts on individuals and communities was a clear message during the tour. The transition provides a social and environmental opportunity. Using a sustainability lens can mean looking at the impacts of transition on individual prosperity as an all-encompassing measure of financial, health, and social well-being.

**Example:**

- Reducing GHG and air pollutant emissions has positive impacts on public health. Accounting for these benefits would strengthen the value proposition of infrastructure and technology investments in a clean energy growth economy.
- “Energy poverty” is defined in Canada as a household having to spend more than 6 per cent of its after-tax income on energy services.\(^4\) This is an issue across Canada, but it is particularly prevalent in remote regions, such as the North. Reducing energy poverty improves a host of health and social outcomes. It also demonstrates why investing in projects such as energy efficiency has impacts beyond environmental and economic benefits.

Participants recognized that the transition to a new economy will create opportunities. But they also know that this transition can create hardships for certain population segments and regions. Access to emerging opportunities must be inclusive and equitable, and individuals and communities facing hardships resulting from the transition must be given the financial, health, and social supports they need to adapt.

**Consumers play a critical transition role**

Participants debated the important role of consumers in the transition. Consumers can drive change, but it can also be a challenging to get through to them and ensure that they understand what is involved in the transition process. Consumers were discussed primarily as a social issue, but their behaviour has an impact on the environment and the economy as well.

Consumer choices play an important role in moving from a linear to a circular economic model. This impacts economic opportunities, environmental outcomes, and society. Our individual-centric culture and mindset is a clear

\(^4\) [Canadian Urban Sustainability Practitioners, “The Many Faces.”](#)
challenge when it comes to solving a collective-action problem such as climate change. Nor is it conducive to re-engineering an economic system.

Government policies and programs need to be tailored and targeted to reward and educate consumers. This must be done in a way that raises consumers’ awareness of the impacts of their personal choices on the economy, environment, and society, while also promoting responsible actions.

The accounting and mitigation of GHG emissions tends to focus on production processes, rather than end-uses and consumption. This places the onus on resource extraction and manufacturing industries—and not on the consumer actions that drive activity across industries. Shifting the paradigm to account for the supply-chain impacts of consumption could change consumer behaviour and give consumers greater power to drive economic, environmental, and social change. Education, awareness, and changes in policy frameworks are needed for such change to take hold, further illustrating the complexity of the transition to a clean energy growth economy.

A clean energy growth economy in Canada’s North

Canada’s North includes the Northwest Territories, Nunavut, and Yukon, and is an essential part of the country’s identity. The region has economic, environmental, and societal circumstances that are unique to the North. That means it also faces unique issues in a transition to a clean energy growth economy.
Snapshot of the North

Economy

• Combined, Canada’s three Northern territories account for less than 1 per cent of the country’s economy. A look at the region’s economic performance from 2003 to 2018 shows that overall growth has been slightly below the national average. However, we have also seen periods of rapid growth—easily double the national level—in Nunavut and Yukon.
• Mining is the region’s largest sector, accounting for a quarter of its economy. Public administration and engineering construction (mostly on mines) are the next largest sectors in the region and have together accounted for close to one-half of the North’s economic growth over that 15-year period.  

Environment

• The North produces less than 1 per cent of Canada’s greenhouse gas emissions. Total emission levels in the region have decreased slightly since 2003, due largely to declining oil and gas production in the Northwest Territories and Yukon.
• The transportation sector is the largest source of emissions in the North, accounting for two-thirds of the region’s total GHG emissions.

Society

• GDP per capita in the North is the highest in Canada, surpassing $85,000 per person, or 60 per cent above the national average. This, however, does not mean higher living standards in the region. Rather, it reflects the small size of its population (less than 1 per cent of Canada’s total) and its high proportion of capital-intensive industries (mostly mining and engineering construction).
• The North has experienced some of the fastest rates of population growth in Canada since 2003, well above the national average and behind only Alberta and British Columbia (which are home to some of the country’s fastest-growing population centres).

5 Statistics Canada, Table 36-10-0402-01.
6 Environment and Climate Change Canada, National Inventory Report.
7 Statistics Canada, Table 17-10-0005-01 and Table 36-10-0402-01.
What we heard from the North

Economy

• Mineral resources represent a significant source of revenue-generation opportunities for governments in the region. At the same time, the cyclical nature of these resource industries creates challenges for long-term sustainable development that meets the needs of the communities.

• Crown–Indigenous resource revenue-sharing agreements provide direct economic benefits to Indigenous communities. These agreement models have seen recent success in British Columbia, for example, and could be replicated for clean energy projects in the North, resulting in long-term economic opportunities at the local level.

• The dispersed nature of the North’s population and the high energy needs of Northern communities mean that distributed energy solutions are a good fit for the region. They also present economic development opportunities for remote areas. But supporting infrastructure and funding from the federal government are required to make these projects viable. At the same time, while government-led energy infrastructure and investment are crucial, it is not enough—the private sector must also play a role.

Environment

• The adoption of alternative energy solutions in the North is limited by the region’s unique climate, geography, population distribution, end-use requirements, and affordability. For example, hydro and solar availability peaks in the summertime when demand is at its lowest. Electrification of the vehicle fleet (the region’s largest GHG emitter) only makes sense if generation is clean and the grid infrastructure is in place. Biomass, geothermal, and liquefied natural gas can replace diesel as the dominant energy source for heating, but that will mean building the appropriate infrastructure. And the feasibility of alternative energy solutions in the region is restricted by their high costs.

• Energy efficiency is an area that requires better understanding and measurement in the North. But it does have the potential to reduce emissions and energy costs. For example, overcrowded dwellings in the North obscure common residential energy-efficiency metrics, such as energy use per household, relative to other regions of the country.
Human capital investments can help reduce unemployment, lift living standards, and ensure the people of the North capitalize on the transition.
Society

• Energy poverty remains a pervasive issue in the North owing to the high cost of energy. The uptake of energy efficiency and the displacement of diesel as a primary fuel source could bring social (e.g., financial and physical health) and environmental benefits to Northern communities.
• The high reliance on government for income and housing in the region means less financial flexibility for households in the North. Potential cost pressures from rising energy prices can threaten living standards if not managed properly.
• Development of the territories' natural resource wealth should benefit the region's peoples. One way this can be achieved is in the form of human capital investments, such as investment in education and training. This can help to reduce unemployment and improve labour availability issues, lift living standards, and ensure that the people of the North capitalize on the transition.

Impact of the CEGE Regional Input Tour’s findings on the indicators framework

The CEGE Regional Input Tour gathered evidence from stakeholders across Canada on the opportunities and challenges of moving to a clean energy growth economy. Comments included issues that are region-specific and others that are common to the entire country. These insights can be incorporated into the indicators' quantitative analytical framework.

From issues to figures: stakeholder insights and quantitative analysis

Policy and regulatory complexity and uncertainty are difficult to quantify at the macro level. We assume that their effect on Canada's sustainability indicators (e.g., GDP, GHG emissions, and employment) is negative. However, it is difficult to isolate their impact from other factors that play into investment decisions, or to measure their magnitude without an exhaustive analysis. Using proxies provides us with insights.

The Conference Board of Canada produces a 12-question, survey-based, quarterly index of business confidence in Canada. It measures decision-makers' current views of the business climate and their near-term investment intentions. Historically, Canada's business investment levels have tracked this index closely within a couple of quarters—in other words, stated investment intentions soon materialize as actual spending trends. This highlights the index's validity. For example, the index began to decline in early 2018. Soon after, we began to see a distinct deceleration and then a contraction in Canada's business investment levels. (See Chart 4.)

Multiple factors affect how business leaders read current economic conditions, resulting in them either boosting, maintaining, or lowering their near-term investment intentions. These include:
• their views on the prices they will receive for their products;
• their firms' financial positions and operating capacity;
their perception of where we are in the business cycle;
• their views on GHG emissions-reduction policies (a recent addition to our survey).

One survey question asks business leaders in Canada to identify factors that adversely affect their planned expenditure levels. Among the 15 different factors, “government policies” and “taxes” have rapidly surged since the start of 2016 and are now among the factors most commonly cited as impediments to investment. (See Chart 5.) Others include labour-related issues, such as labour costs and availability.

Negative perceptions of government actions in the last few years coincide with a waning appetite for business investment in Canada. Whether that is the result of policy and regulatory complexity and uncertainty is less clear, but trends registered in an index of economic policy uncertainty for Canada indicate this is likely the case. (See Chart 6.)

Examining sector-specific investment trends across jurisdictions provides further evidence of the impact of regulatory and policy uncertainty. For example, investment trends in the forestry, energy, and mining sectors in Canada and the U.S. were similar between 2007 and 2016.
After the 2014 correction in oil prices, investment levels in both countries’ sectors dropped by about 35 per cent. But, from 2016 onward, as oil prices began to recover, investment levels in the two countries took distinct trajectories. In the U.S., investment levels recovered much lost ground and by 2018 were about 15 per cent below their 2014 peak. In Canada, investment levels remain at around 40 per cent below their 2014 levels. (See Chart 7.)

**Chart 7**

**Natural resource investment levels in Canada and the U.S. have diverged**

(natural resource investment and oil prices, indexes, 2014 = 100)

Canada's lagging investment levels are likely being influenced by government actions that are creating an environment of complexity and uncertainty. The lack of clarity, certainty, consistency, and Canada-wide cross-jurisdictional cooperation on policy and regulation was a key issue raised throughout the CEGE tour. Participants from the natural resources sector in all regions pointed to the negative impact of government actions on investment and innovation.

Other participants echoed that concern, stating negative impacts are now limiting economic, environmental, and community benefits.

A “two-way street” analogy illustrates the importance of the CEGE tour’s results in informing the Conference Board’s indicators project. In one direction, data-based quantitative analysis can test, validate, and evidence the issues we heard about during the tour. In the other direction, the qualitative evidence collected during the tour can expand and augment the quantitative analysis for each of the main indicators (e.g., capital investment).

The CEGE tour unearthed issues central to the transition to a clean energy growth economy in Canada—issues that might have not been readily apparent in the main indicator numbers. While these issues may be difficult to measure, they can be evidenced through proxy indicators, additional research, or events that tap into the expertise of highly engaged individuals, such as those who participated in the tour.

Ultimately, this approach helps us to evolve and adapt the “right” mix of indicators for Canada’s clean energy growth economy. It also helps us to decide how best to present the insights (for example, making use of case studies). The insights gained from the CEGE tour add depth and knowledge for crafting a long-term strategy that can help move Canada to a clean energy growth economy over the coming years.
Other examples and ideas to consider next

From the CEGE tour, we summarized key findings on the common issues facing a transition to a clean energy growth economy. The regulatory and policy uncertainty is a good example. This complex, cross-cutting, and difficult-to-gauge issue shows how inputs from the tour fit into our analytical framework. Other examples that illustrate the need for this approach include:

- **Labour-related issues.** Indicators such as education investment, employment rates, and wage levels are useful to our analysis. But the analysis needs to go beyond headline numbers to include items such as the skills required in a clean energy growth economy, the availability of those skills within the labour force, and the actions needed to close potential gaps for those skills requirements.

- **GHG emissions levels.** This is a key environmental indicator. But total GHG emissions levels hide variations in emissions types and sources. They also fail to capture all the driving factors for a given source, such as economic activity levels, types and levels of energy used, and output intensity. The agriculture sector, for example, is one we heard about during the CEGE tour. Headline numbers show increasing emissions in the Prairie provinces, but this is due mainly to a rapid rise in demand for agricultural products. Focusing on total levels obscures the fact that agriculture has lowered its emissions intensity (emissions per unit of output) through productivity improvements and innovation (doing more with less). It would also be instructive to understand how emissions performance in Canada’s agriculture sector stacks up against that of its global peers.

The tour’s experience also helped identify areas for potential exploration in the future:

- Every region faces its own unique circumstances. At the same time, many issues are common across Canada. An analysis of national-level indicators is a good starting point, but regional-level differences need to be unpacked, not only qualitatively, but also quantitatively.

- At the regional level, there is room to unpack the analysis of our two aggregated regions—Atlantic Canada and the North. This is true as well at the sub-regional level. Specific regions within a province face unique circumstances (e.g., urban vs. rural) that must be considered in the context of the transition to a clean energy growth economy.
• Each key finding presents a new opportunity for a deep-dive analysis at the economic, environmental, and societal levels—for example, analysis of the economic and environmental impact of multi-jurisdictional cooperation on energy infrastructure assets in Canada.

• Stakeholder engagement adds significant value to the conversation on building a clean energy growth economy. Local engagements across provinces and territories, and sector- and population-specific opportunities should be explored.

• Although issues have been categorized by theme, most cut across more than one theme. Actions in one area have broader implications that require better understanding. For example, economic policy impacts environmental protection and community well-being.

• Every major actor has a role to play in the transition, whether it is governments crafting policies, businesses making investment decisions, or consumers making choices. A better understanding of their respective roles and interactions is needed.
Appendix A

Methodology

Seven tour events were held in major regional centres in November 2019:

- November 5—Calgary, Alberta
- November 6—Vancouver, British Columbia
- November 6—Winnipeg, Manitoba
- November 7—Regina, Saskatchewan
- November 12—Halifax, Nova Scotia (for the Atlantic region)
- November 12—Toronto, Ontario
- November 13—Montréal, Quebec

An e-mail survey was sent to a group of stakeholders from Canada’s Northern territories on November 25. The Conference Board’s Indigenous and Northern Communities knowledge area supplied contacts and distributed the survey.

Contact development and communication

Criteria for invited guests focused on leadership representation from a cross-section of regional stakeholders. Web-based and internal database searches, as well as direct contact, were used to identify guests from business, government, academia, non-governmental organizations, and Indigenous sectors.

E-mails were sent three weeks prior to each event, with follow-up e-mails two and one week prior to each event. E-mail campaigns were supplemented with direct phone calls to organizations. The reminder e-mail sent to confirmed guests one week prior to each event included a handout that provided context on the definition of a clean energy growth economy, the indicators project, and the purpose and outcomes of the Regional Input Tour.

Attendance metrics

Ninety-six (of 110 confirmed) participants across the seven events attended, and we received three responses (out of 15 requests) to our invitation to participate in our Northern e-mail survey.

On average, 14 people attended each event, with group sizes varying from eight in Toronto (attendance there was lower than expected due to inclement weather the day of the event) to 21 in Vancouver. Just over half of all participants represented businesses or industry associations. The rest came from government, NGOs, and academia.
Tour events and survey structure

Event attendees were provided with an information handout and a CEGE brochure. A PowerPoint deck was used to introduce key concepts, provide an overview of CEGE indicators, and introduce the discussion themes. The presentation began with region-specific data snapshots and trends on the economy, environment, and society.

The structure for each regional meeting was identical. Each two-and-a-half-hour meeting included a Chatham House Rule declaration and explanation, an acknowledgement of Indigenous territory, participant introductions, a PowerPoint presentation, and three half-hour discussion sessions.

Input from the events was structured in two ways. First, each discussion session focused on one of the three major themes of the CEGE indicators platform—the environment, economy, or society. Second, guests were asked to frame their comments in the context of opportunities or challenges in achieving the theme-defined strategic goals in their region.

The same structure was used for the e-mail survey distributed to Northern stakeholders. This consistent format allowed for results that were comparable across regions and themes.

Regional summaries for executives and impact paper

Input from the events was summarized into a series of “issues.” For each region, an executive summary was prepared. These included economic, environmental, and societal facts about the region, and a brief discussion of major opportunities and challenges across the three themes. In total, more than 120 unique issues were identified. All input was reviewed using content-style analysis.

Finally, a matrix-style quantitative analysis was completed. Region-specific issues were classified and grouped as opportunities or challenges across each main theme. This resulted in 23 main or summary issues being identified. Incidence-based ranking flagged the most common issues across regions, identified issue prevalence, and placed each issue in the most appropriate theme, based on its counts. The result of this approach led to the list of issues discussed in this impact paper.
Appendix B

Bibliography


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