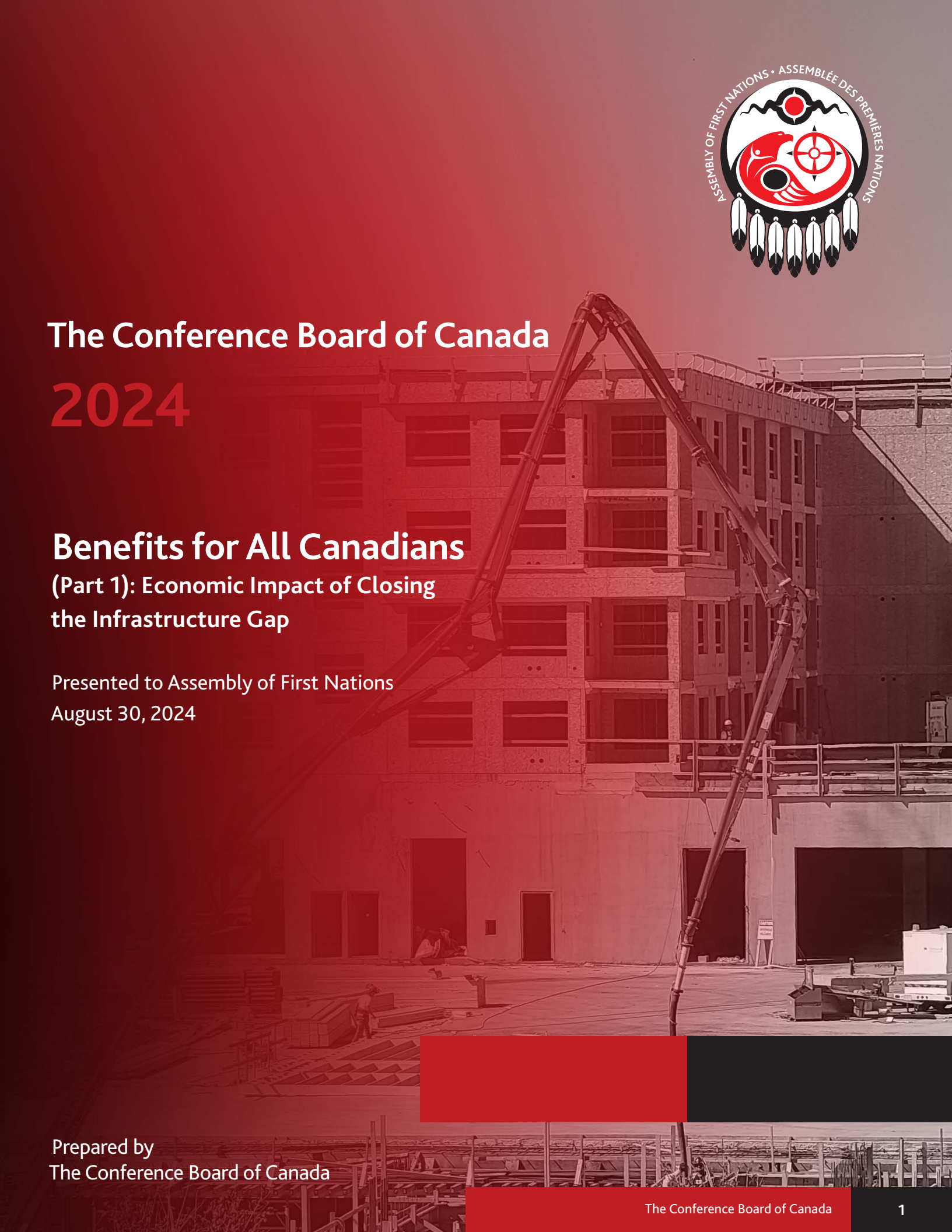

The Conference Board of Canada

2024

Benefits for All Canadians

(Part 1): Economic Impact of Closing the Infrastructure Gap

Presented to Assembly of First Nations
August 30, 2024

Prepared by
The Conference Board of Canada


ASSEMBLY OF FIRST NATIONS • ASSEMBLÉE DES PREMIÈRES NATIONS

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$349.2 billion over seven years is needed to close the infrastructure gap faced by more than 600 First Nations in Canada

Each dollar invested would generate **$0.25** in taxes.

The investments would boost federal government revenues by **$44.2 billion**, provincial and territorial revenues by **$29.7 billion** and local revenues by **$12.9 billion**.

Only the tip of the iceberg!
The investments would boost productivity, foster business growth, and increase workforce participation.

$18.2 billion in labour income would go to First Nations individuals.

$202.7 billion in labour income would be generated over the seven years

Each dollar invested would add **$1.82** to Canada's total economic output.

The investments would generate **$308.9 billion** in GDP. This boost could propel Canada from last to first among G7 countries in average annual GDP per capita growth between 2023 and 2030.

2.4 million full-time jobs or **338,300** jobs would be created each year

9% of the new jobs would be held by First Nations individuals.

The investments would generate **$635.3 billion** in economic activity over seven years.

Key Findings

- The Assembly of First Nations (AFN) and Indigenous Services Canada estimate that $349.2 billion in capital and operating investments over seven years is required to close the infrastructure gap faced by more than 600 First Nations in Canada.
- Closing the infrastructure gap has the potential to generate $635.3 billion in economic output over the next seven years. This means that every dollar spent would contribute $1.82 in economic output to Canada.
- The investment has the potential to generate an estimated $308.9 billion in gross domestic product (GDP) over the seven-year period. This boost could propel Canada from last to first among G7 countries in average annual GDP per capita growth between 2023 and 2030.
- Nearly 338,300 full-time jobs per year would be created and sustained by closing the infrastructure gap, with 91 per cent (306,800) of these jobs held by non-First Nations individuals and the remainder (31,400) held by First Nations individuals.
- The infrastructure spending would generate $202.7 billion in labour income over seven years, with $18.2 billion going to First Nations individuals and the remaining $184.4 billion going to non-First Nations individuals.
- Each dollar invested would generate $0.25 in taxes. The spending would boost federal government revenues by $44.2 billion, while provincial/territorial and local governments would receive $29.7 billion and $12.9 billion in additional revenues, respectively.
- The economic benefits of closing the First Nations infrastructure gap would extend far beyond the indicators presented in this report. This report focuses only on the immediate effects of the direct spending required to build and maintain the essential infrastructure. In that sense, this report only scratches the surface of the broader economic benefits, which include boosting productivity, fostering business growth, and increasing workforce participation. These broader economic impacts will be explored in a subsequent report.

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(Part 1): Economic Impact of Closing the Infrastructure Gap

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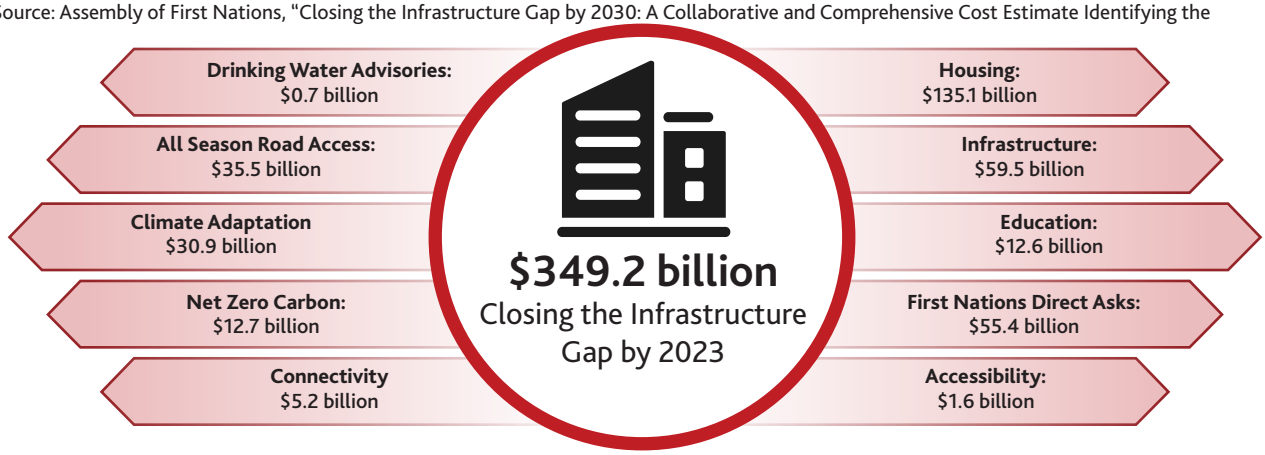
Introduction

The lack of access to critical infrastructure, such as housing, education, healthcare, internet, and other essential services, has perpetuated deep-rooted inequality across First Nations in Canada. In their report, *"Closing the Infrastructure Gap by 2030: A Collaborative and Comprehensive Cost Estimate Identifying the Infrastructure Investment Needs of First Nations in Canada,"* the Assembly of First Nations (AFN), in partnership with Indigenous Services Canada, have quantified the infrastructure deficiencies currently faced by more than 600 First Nations across the country.[1]

AFN's landmark report estimated that $349.2 billion is required to close the infrastructure gap (CTIG) for First Nations. (See Figure 1.) This estimate, developed in 2022, with an assumed start date in the 2023-24 fiscal year, will continue to increase as time passes without action.[2] These investments are crucial for building and maintaining infrastructure related to clean drinking water, all-season road access, climate adaptation, net zero carbon emissions, digital connectivity, housing, education, accessibility, and other essential community assets.

Figure 1: Closing the First Nations infrastructure gap will cost $349.2 billion

Source: Assembly of First Nations, "Closing the Infrastructure Gap by 2030: A Collaborative and Comprehensive Cost Estimate Identifying the Infrastructure Investment Needs of First Nations in Canada."



In this report, The Conference Board of Canada presents the economic benefits of closing the First Nations infrastructure gap in terms of economic output, gross domestic product (GDP), employment, labour income, and government revenues. These benefits only represent the tip of the iceberg of the broader socio-economic benefits expected to arise from closing the infrastructure gap. Further discussion about the wider socio-economic benefits will be presented in a forthcoming report, *"Benefits for All Canadians (Part 2): Long-term Socio-economic Impacts of Closing the Infrastructure Gap."*

1 Assembly of First Nations, "Closing the Infrastructure Gap by 2030: A Collaborative and Comprehensive Cost Estimate Identifying the Infrastructure Investment Needs of First Nations in Canada."

2 Assembly of First Nations, "Closing the Infrastructure Gap by 2030: Prioritization and Implementation Plan."

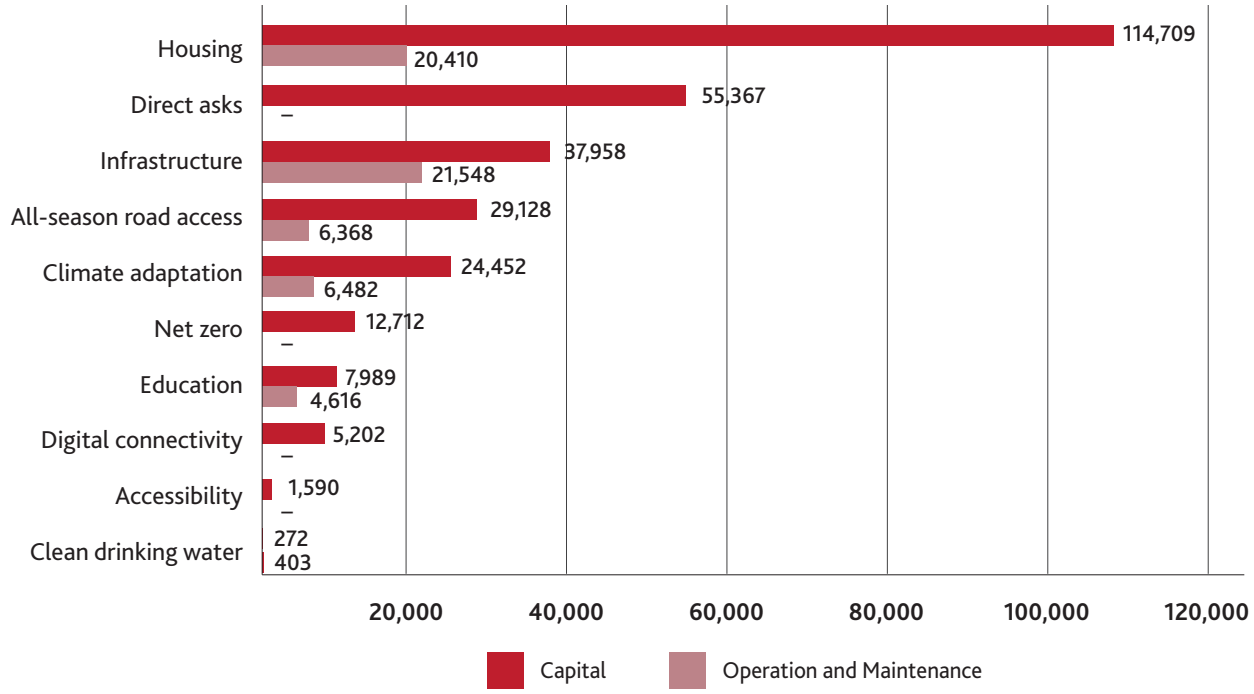
Overview of the Infrastructure Areas

The estimated $349.2 billion required to close the First Nations infrastructure gap in Canada includes both capital and operation and maintenance (O&M) costs and is spread over ten key infrastructure areas. (See Chart 1.) This spending will go towards ensuring access to clean drinking water (clean drinking water); providing access to all-season roads (all-season road access); preparing infrastructure for extreme weather events (climate adaptation); increasing energy efficiency (net zero); providing internet and telephone service (digital connectivity); building educational facilities (education); building housing sufficient for growing populations (housing); improving accessibility measures (accessibility); maintaining public infrastructure (infrastructure); and improving community and cultural infrastructure (direct asks). For a detailed description of each infrastructure area, see Appendix A.

Capital investments cover the fixed one-time expenses incurred during a project's construction phase, including the purchase of equipment related to the project. O&M investments are expenses incurred during a project's operational phase to ensure that an asset achieves its planned lifespan, including repairs and replacement of components. Six of the ten infrastructure areas require capital and O&M investments, while the remaining four only require capital investment. Overall, an estimated $289.4 billion is required for capital and $59.8 billion for O&M investments.

Chart 1: $349.2 billion is required across the ten infrastructure areas.

(Cost to close the infrastructure gap by area, $ millions)



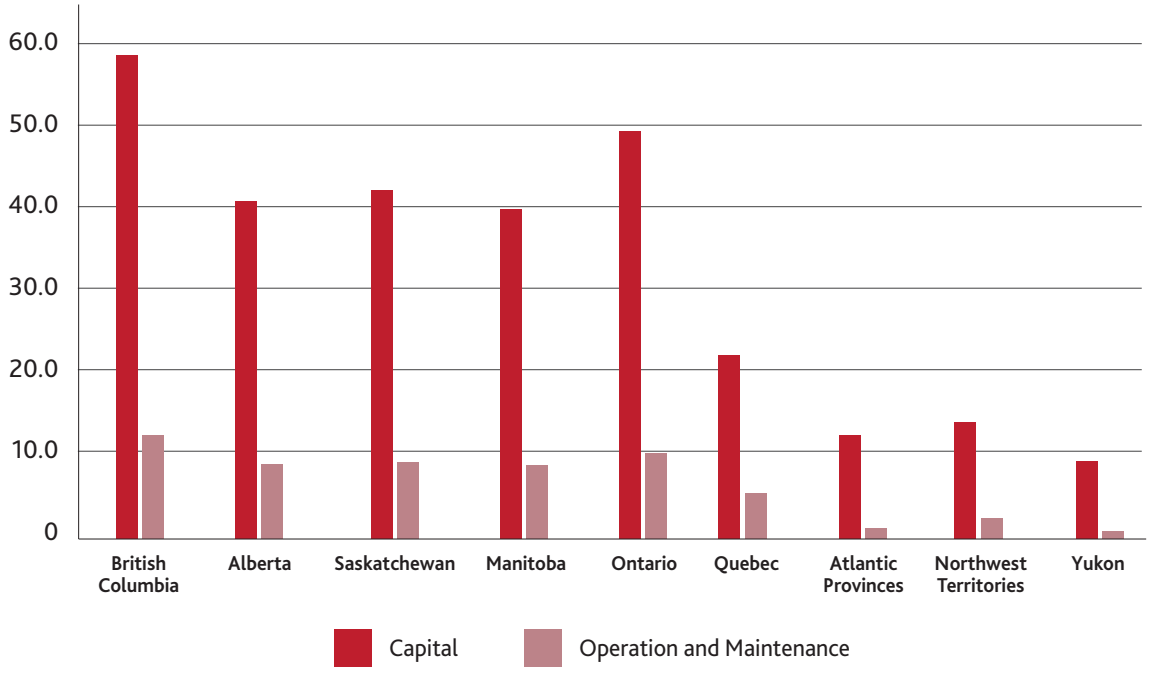
Source: Assembly First Nations.

Provincial Breakdown

For each investment area, spending would be spread across all provinces and territories in Canada. (See Chart 2.) The largest share of spending would occur in British Columbia and Ontario. The share of spending for each province and territory is proportional to the provincial and territorial First Nations population. The estimates account for the increased cost of servicing more rural First Nations.

Chart 2: Infrastructure investments needed for First Nations are greatest in British Columbia.

(Cost to close the infrastructure gap by province, $ billions)



Source: Assembly First Nations.
* Data unavailable for Nunavut.

Financing the Infrastructure Projects

Financing the hundreds of projects needed to close the First Nations infrastructure gap will require numerous funding approaches such as social transfers and government grants, partnerships with the private sector, debt financing (the receipt of present-day capital in exchange for future repayment), equity financing (the receipt of present-day capital in exchange for an ownership stake in an asset), and impact funds (financing focused on generating a return on investment and specific objectives related to improving socioeconomic outcomes).[3] The viability of each of these funding approaches is discussed in AFN's *"Closing the Infrastructure Gap by 2030: Prioritization and Implementation Plan."*

3 Assembly of First Nations, "Closing the Infrastructure Gap by 2030: Prioritization and Implementation Plan."

Economic Impact Assessment

Using The Conference Board of Canada's Economic Impact Assessment (EIA) model, we estimate the total, direct, indirect, and induced impacts of closing the infrastructure gap across five economic variables: economic output, GDP, employment, labour income, and government revenues (i.e., taxes). (See Appendix D for an explanation of these terms.)

What are direct, indirect, and induced impacts?

The **direct impact** measures the value added to the economy resulting from investing in the capital and O&M phases of each infrastructure area. This includes the number of jobs created, the salaries paid to employees, and the profits earned by construction and maintenance companies.

The **indirect impact** (or supply-chain impact) measures the value added by investing in an infrastructure area through the demand for intermediate inputs and support services. For example, building houses requires building materials, which creates higher GDP and employment and generates wages and government revenue in the manufacturing industry.

The **induced impact** measures the impacts when employees of the directly and indirectly affected industries spend their earnings and owners spend their profits. For example, construction workers will spend some of their wages on restaurant meals, resulting in higher GDP and employment and generating wages and government revenue in the food services industry.

The EIA model incorporates three key expenditure conditions:

- **Timing:** Investments in the capital and operational phases occur over seven years between fiscal years 2023-2024 and 2029-2030.
- **Taxes:** A significant amount of economic activity would occur on reserves, resulting in tax exemptions for First Nations' employees and businesses.
- **Leakages:** In a small open economy like Canada, some spending would be diverted towards products (goods and materials) made outside of the country (international imports), as is typical for modern supply chains.

The economic impacts produced by the EIA model only scratch the surface in terms of the possible socio-economic benefits that would be generated from investing in the ten infrastructure areas. While our economic impact results demonstrate significant increases in economic output, GDP, employment, labour income, and government revenues from the extensive construction, repair, and maintenance activities involved, they do not extend beyond the immediate impacts of the spending. The investment would yield additional long-term benefits such as improved educational attainment, better health outcomes, boosted

tourism, enhanced entrepreneurship opportunities, and cultural preservation—none of which are captured within the EIA model. These broader socio-economic impacts will be discussed in a forthcoming report, *"Benefits for All Canadians (Part 2): Long-term Socio-economic Impacts of Closing the Infrastructure Gap."*

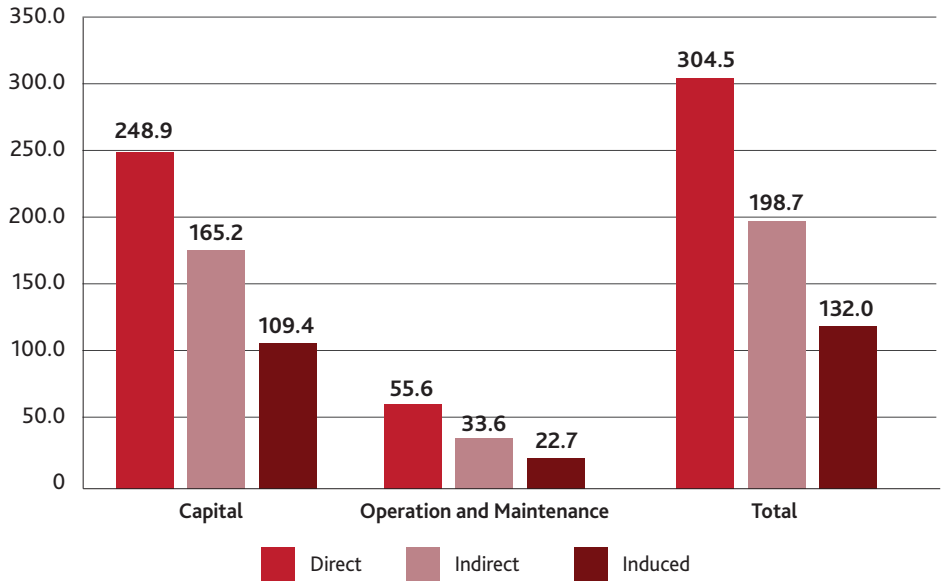
Economic Output

Closing the infrastructure gap has the potential to generate $635.3 billion (in 2023 dollars) in economic output in Canada over the next seven years. This means that every dollar spent would contribute $1.82 in economic activity to Canada.[4] An output multiplier above one represents a positive return on investment.

Economic output represents the total value of all economic activity, including the buying and selling of intermediate goods. Capital expenditures are projected to generate $523.4 billion in economic output, while the O&M expenditures would contribute $111.9 billion. The total impact on economic output is broken down by the type of impact: $304.5 billion in direct impacts, $198.7 billion in indirect impacts, and $132.0 billion in induced impacts.[5] (See Chart 3.)

Chart 3: Closing the First Nations infrastructure gap would yield $305 billion in direct economic output.

(Economic output contributions, 2023 $ billions, 2023 – 2030)



Source: The Conference Board of Canada.

While investments to close the infrastructure gap have the potential to generate $635 billion in economic output, there would be additional economic benefits beyond what the EIA captures. For example, the construction of all-season roads would unlock further economic impacts, such as improving access to critical

4 Output multiplier = Total Economic Output Impact/Total Investment.
5 The direct impact includes leakages (see Appendix B for more details), resulting in a total less than the initial investment of $349.2 billion.

mineral mines in Northern Ontario, which could advance the province's electric vehicle supply chain. Overall, the improved infrastructure would stimulate local economies, enhance trade and tourism opportunities, and drive additional productivity gains, which extend beyond our estimates.

Gross Domestic Product

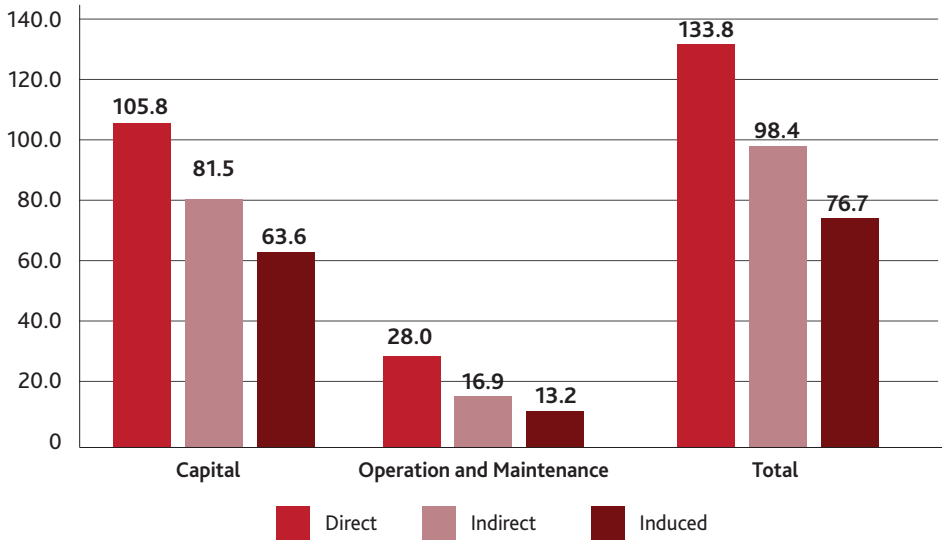
Over 80 per cent of GDP would be generated during the capital phase.

Unlike output, GDP measures the net value-add of all final goods and services produced in a country, excluding intermediate goods and services to avoid double counting.[6] It is estimated that the infrastructure spending would generate $308.9 billion in GDP for Canada over the next seven years. To put the size of this impact into context, this level of GDP represents 2 per cent of the country's total GDP in 2023.[7] We estimate that roughly 81 per cent of that GDP ($250.9 billion) would be generated in the capital phase of the projects while the remaining 19 per cent ($58.1 billion) would be generated during the O&M phase.

In terms of the direct impact, infrastructure spending has the potential to generate $133.8 billion in GDP, with $105.8 billion being generated during the capital phase and $28.0 billion during the O&M phase. (See Chart 4.) Additionally, the supply chain impact (indirect impact) is estimated to add $98.4 billion to Canada's GDP. The induced impact, which captures the impact of employees in the directly and indirectly affected industries spending their earnings and owners spending their profits, is projected to contribute $76.7 billion to GDP.

Chart 4: Closing the First Nations infrastructure gap would generate nearly $134 billion in direct GDP.

(GDP contributions, 2023 $ billions, 2023 – 2030)



Source: The Conference Board of Canada.

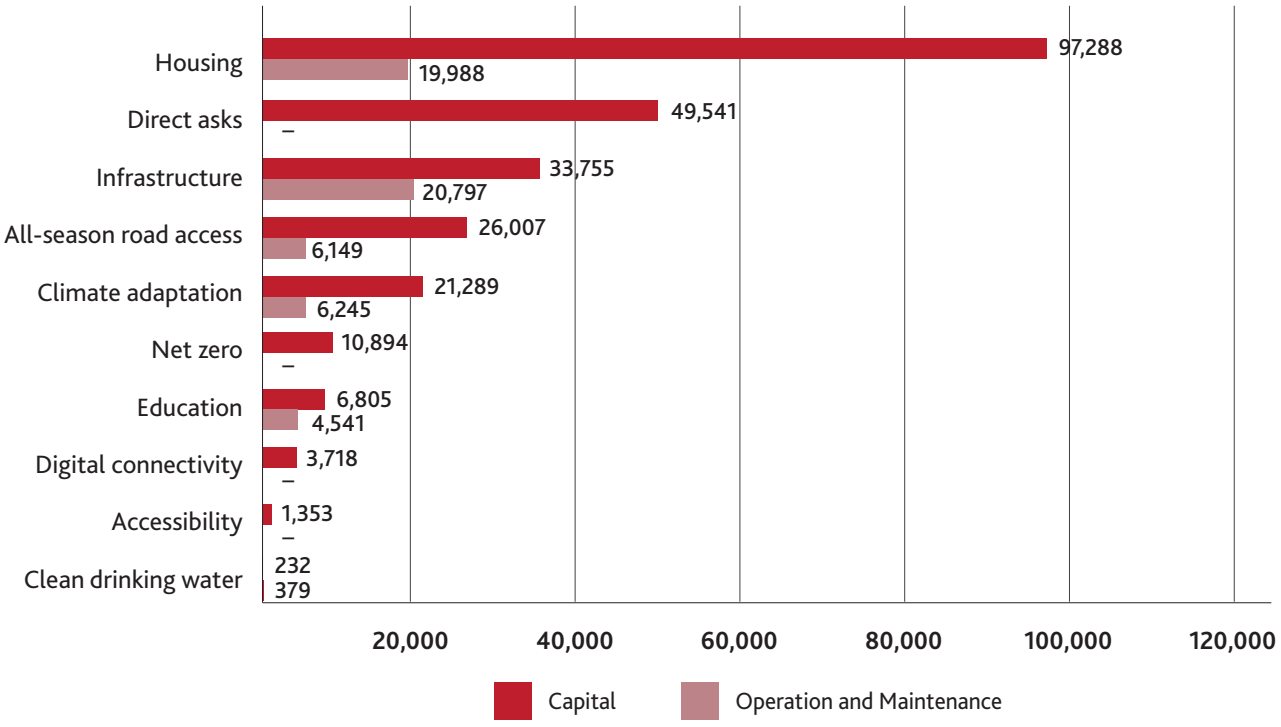
6 Intermediate goods and services are goods and services used as inputs in the production of other goods and services.
7 Statistics Canada, "Table 36-10-0434-03 Gross domestic product (GDP) at basic prices, by industry, annual average (x 1,000,000)."

Overall, the investment in the ten infrastructure areas yields a national GDP multiplier of 0.89, implying that, on average, every dollar of direct spending would add $0.89 to Canada's GDP.[8] A GDP multiplier above zero represents a net economic gain because GDP measures the net value added to an economy.

Housing investment would contribute the largest share of GDP.

The housing ($117.3 billion), infrastructure ($54.6 billion), and direct asks ($49.5 billion) infrastructure areas are projected to have the greatest GDP impacts across both the capital and O&M phases. (See Chart 5.) In terms of provincial impacts, Ontario would lead the way, generating $71.6 billion in GDP, while British Columbia and Alberta would trail closely behind, generating $61.7 billion and $50.6 billion, respectively. (See Appendix C: Table C17 for the full provincial breakdown.) Similar to the share of spending, the share of GDP generated for each region of the country would be proportional to the region's First Nations population.

Chart 5: The housing infrastructure area is expected to be the largest contributor to GDP.
(GDP contributions, 2023 $ millions, 2023 – 2030)



Source: The Conference Board of Canada.

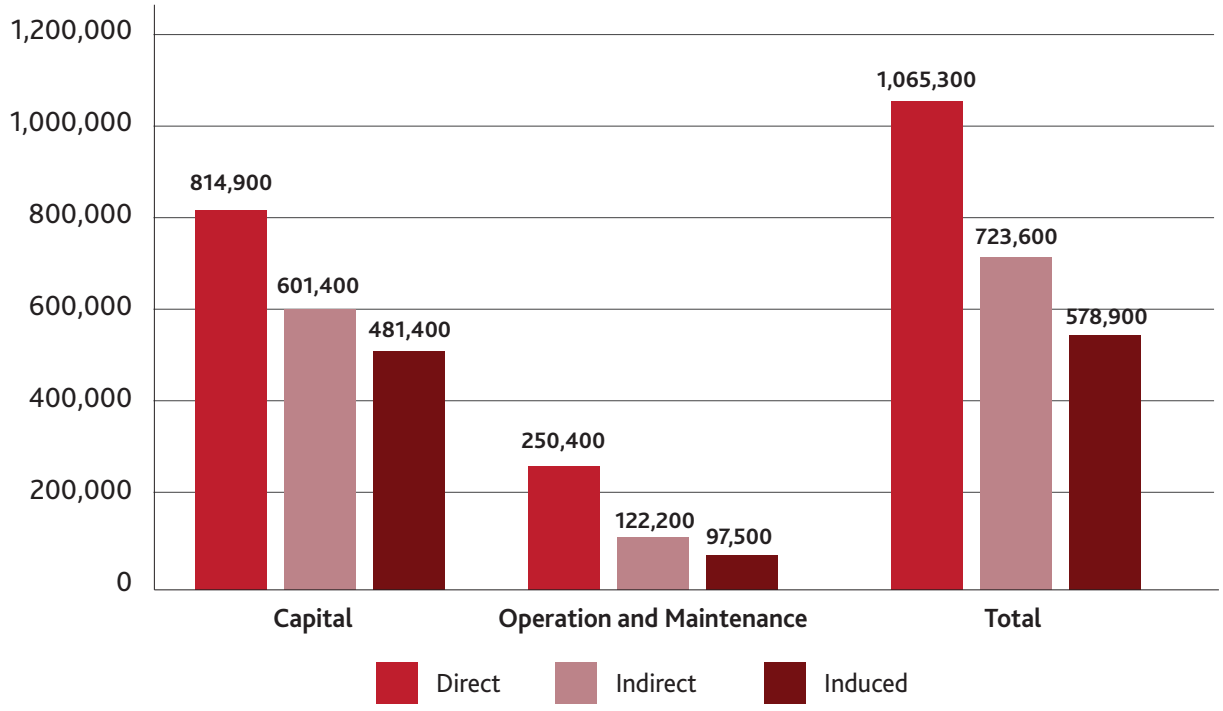
8 GDP multiplier = Total GDP Impact/Total Investment.

Employment

The infrastructure spending to close the First Nations infrastructure gap would create significant employment opportunities. It is estimated that the spending would support nearly 2.4 million full-time, full-year jobs nationwide over the next seven years, equivalent to an average of 338,300 full-time jobs per year.[9] This includes nearly 1.9 million full-time, full-year jobs (271,100 jobs per year) from the capital phase and roughly 470,000 full-time, full-year jobs (67,200 jobs per year) from the O&M phase. The direct impact on employment is projected to equal almost 1.1 million full-time, full-year jobs (152,200 jobs per year), with nearly 814,900 jobs (116,400 jobs per year) in the capital phase and 250,400 jobs (35,800 jobs per year) in the O&M phase. (See Chart 6.)

Chart 6: Closing the First Nations infrastructure gap would generate nearly 2.4 million full-time, full-year jobs.

(Employment contributions, full-time, full-year jobs, 2023 – 2030)*



Source: The Conference Board of Canada.

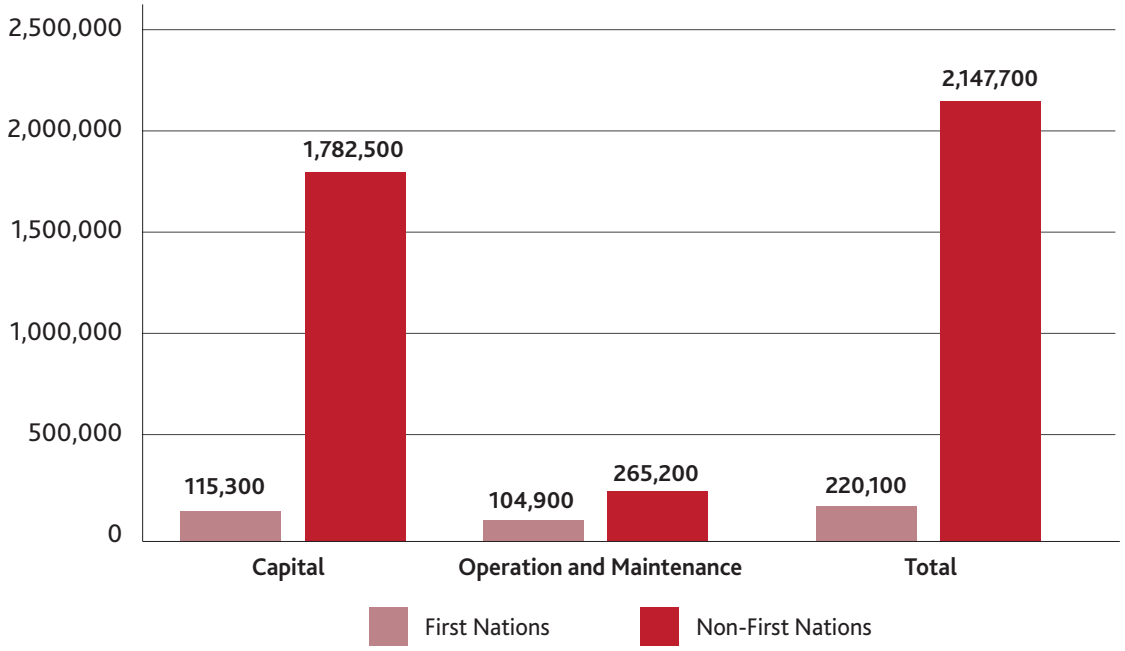
* Full-time, full-year jobs are rounded to the nearest hundred.

9 Full-time, full-year jobs represent the number of full-time jobs in a one-year period. In real terms, this could be one person working for a full year or four people working full-time for three months. If one person works a full-time job for seven years, this counts as seven full-time, full-year jobs in total.

Over 90 per cent of jobs would be held by non-First Nations individuals.

The injection of billions of dollars into infrastructure projects across Canada would have a significant impact on employment for both non-First Nations and First Nations individuals. Closing the infrastructure gap is projected to generate nearly 2,147,700 full-time, full-year jobs for non-First Nations individuals, accounting for 90.7 per cent of total employment. Additionally, an estimated 220,100 full-time, full-year jobs (31,400 jobs per year) would be created for First Nations individuals, representing 9.3 per cent of total employment.[10] (See Chart 7.) First Nations individuals would play a crucial role in the longer-term O&M of the infrastructure projects, ensuring their success.

Chart 7: Ninety per cent of jobs would be filled by non-First Nations workers.
(Employment contributions, full-time, full-year jobs, 2023 – 2030)*



Source: The Conference Board of Canada.
* Full-time, full-year jobs are rounded to the nearest hundred.

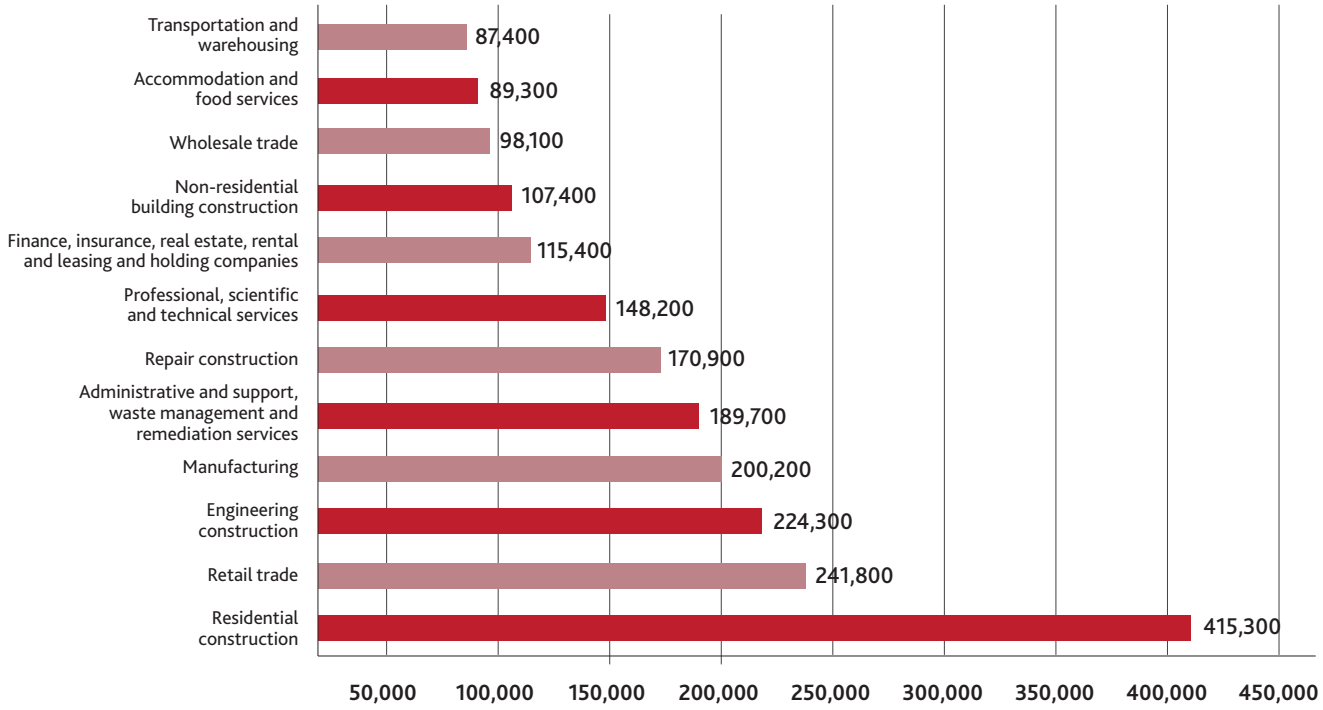
10 See Appendix B: Data and Methodology for details.

Almost 40 per cent of jobs would be in the construction sector.

Given the large investment needed for housing, employment in the residential construction industry would be the largest at nearly 415,300 full-time, full-year jobs, averaging 59,300 full-time jobs per year (See Chart 8.) Additionally, the construction of schools, roads, community buildings, and utility infrastructure would drive demand for workers in engineering construction, repair construction, and non-residential building construction. These industries would support an additional 502,600 full-time, full-year jobs, or approximately 71,800 full-time jobs per year. Overall, the construction sector would account for 38.8 per cent of the total jobs generated.

Construction activities would boost employment in other industries, such as retail trade, wholesale trade, and accommodation and food services, as individuals spend their earnings and business owners spend their profits. Specifically, nearly 241,800 full-time, full-year jobs, or 34,500 full-time jobs per year, would be created in retail trade, including jobs in clothing, drug, and grocery stores. Additionally, approximately 89,300 full-time, full-year jobs, or 12,800 full-time jobs per year, would be generated in accommodation and food services, particularly in hotels and restaurants. (See Chart 8.)

Chart 8: Jobs in construction industries account for almost 40 per cent of total employment.
(Employment contributions, full-time, full-year jobs, 2023 – 2030)*



Source: The Conference Board of Canada.

* Full-time, full-year jobs are rounded to the nearest hundred.

A Caveat of the Employment Estimates

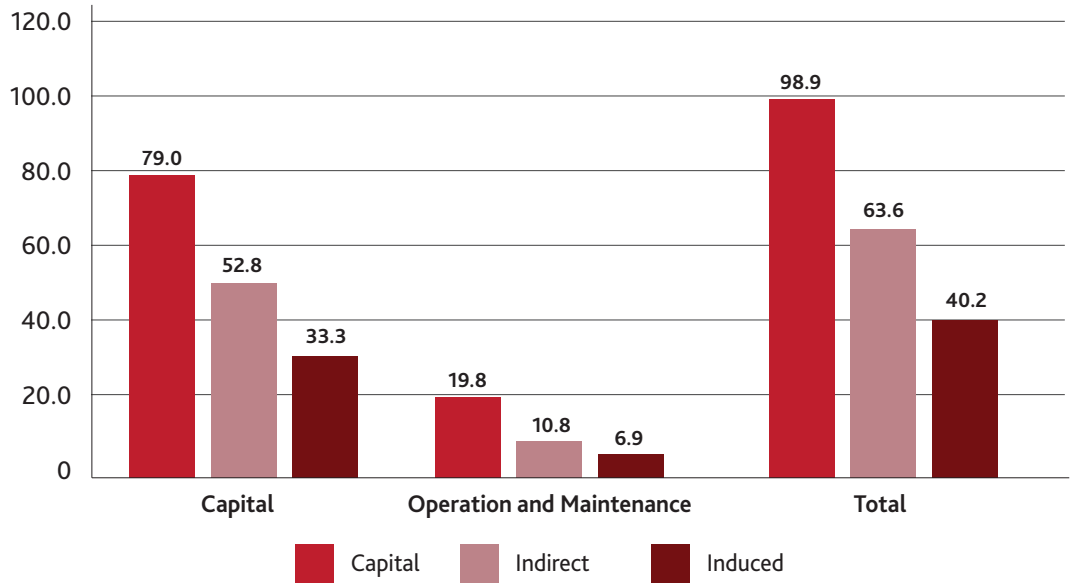
While the ten infrastructure areas are projected to generate significant employment opportunities for First Nations and non-First Nations individuals, these estimates should be interpreted carefully. The EIA model does not consider capacity constraints or the current skill profiles of workers in Canada. In other words, the employment estimates assume there are enough qualified workers (i.e., sufficient labour supply) available to participate in the capital and O&M phases of all ten infrastructure areas.

Thus, the ability to fully realize these employment opportunities will depend on the existing skill sets of the workforce and the availability of existing and future training programs to bridge any skill gaps. Investing specifically in First Nations knowledge, training, and education will be critical for the long-term success of the infrastructure projects.

Labour Income

Overall, the investment required to close the infrastructure gap has the potential to generate $202.7 billion in labour income. Of this, $165.2 billion would be generated from the capital phase and $37.4 billion from the O&M phase. The cumulative investment across the ten infrastructure areas would generate $98.8 billion in terms of direct impact, with 80 per cent concentrated in the capital phase of the project. (See Chart 9.) Moreover, $18.2 billion in labour income would go to First Nations individuals, while the remaining $184.4 billion would go to non-First Nations individuals.

Chart 9: Closing the First Nations infrastructure gap would generate nearly $203 billion in labour income.
(Labour income contributions, 2023 $ billions, 2023 – 2030)



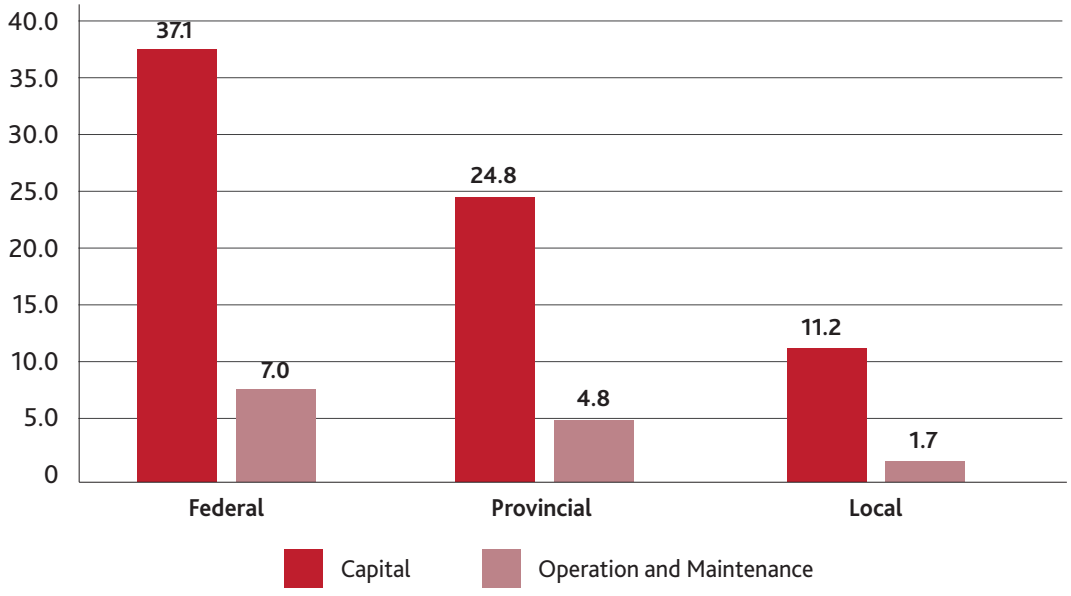
Source: The Conference Board of Canada.

Given the infrastructure projects are projected to support roughly 2.4 million full-time, full-year jobs, this translates to an average annual labour compensation of nearly $85,600.[11] Direct jobs generated by capital investments, mainly in the construction sector, would have an average annual compensation of $97,000. In contrast, direct jobs supported by the O&M investments, primarily in building services, would have an average annual compensation of $78,900.

Government Revenues

The infrastructure spending would result in substantial fiscal impacts. We estimate that $86.7 billion would be generated in government revenues over the next seven years. This includes $73.2 billion from the capital phase and $13.5 billion from the operational phase. A further breakdown reveals that $44.2 billion would be added to federal taxes, $29.7 billion to provincial taxes, and $12.9 billion to local taxes.[12] (See Chart 10.) The overall contribution to government revenues would equate to $0.25 in tax revenues for every dollar invested in the infrastructure areas.

Chart 10: Nearly $87 billion would be generated in federal, provincial, and local taxes.
(Government revenue contributions, 2023 $ billions, 2023 – 2030)



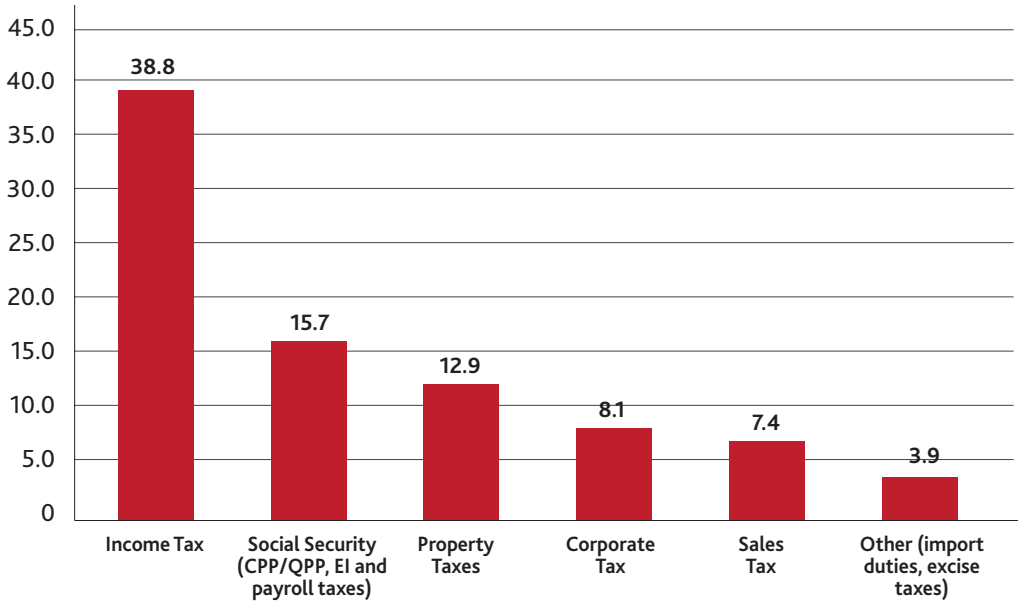
Source: The Conference Board of Canada.

11 Labour income/compensation includes wages and benefits.
12 Local taxes, for the purposes of this economic impact study, include taxes paid to municipal governments as well as First Nations imposed property taxation for land use.

A further breakdown of the total fiscal impacts of closing the infrastructure gap shows that personal income taxes ($38.8 billion), social security ($15.7 billion), and local property taxes ($12.9 billion) would be the primary contributors to government revenues. (See Chart 11.)

Chart 11: Nearly $40 billion would be generated through income taxes.

(Government revenue contributions, 2023 $ billions, 2023 – 2030)



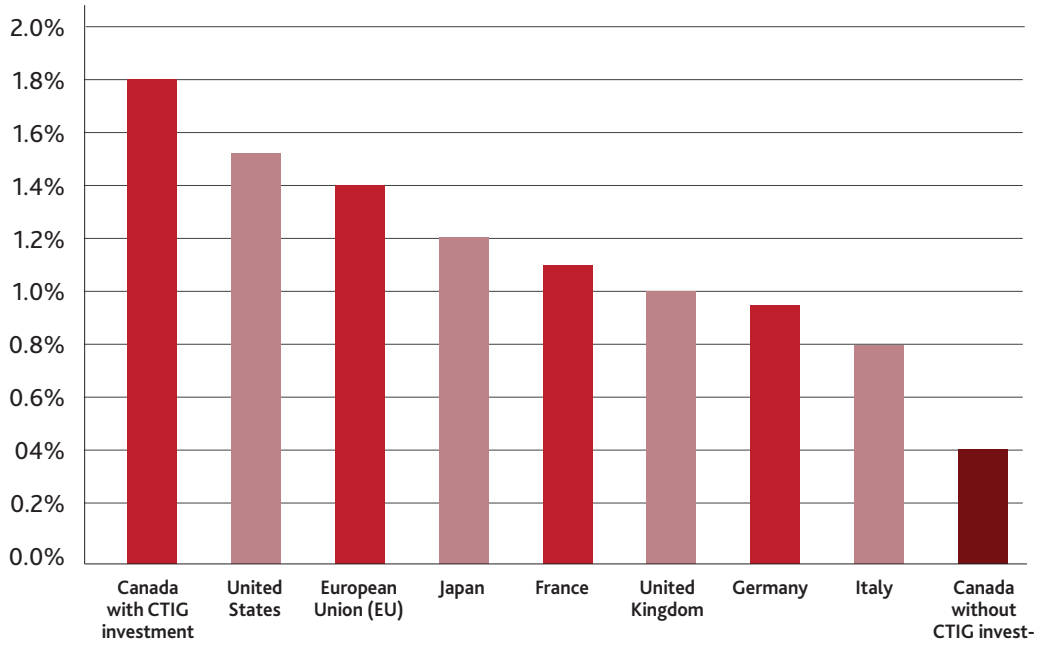
Source: The Conference Board of Canada.

International Competitiveness

Excluding investments to close the First Nations infrastructure gap, Canada ranks last among the G7 countries and the economy of the European Union in terms of the average annual growth rate of GDP per capita between 2023 and 2030.[13] Canada also ranks 36th out of the 38 advanced economies.[14] If the investments to close the infrastructure gap are all net new and the economy has the capacity—both physical and labour—with no crowding out effects, Canada's average annual GDP per capita growth rate will rise to 1.76 per cent between 2023 and 2030.[15] To put this impact into context, this would place Canada first among the G7 countries and the economy of the European Union, assuming all else remains constant in other countries. (See Chart 12.) The investments would also elevate Canada to 15th place among the 38 advanced economies, again assuming no changes in other countries. (See Appendix C, Table C21 for full list of advanced economies.)

Chart 12: Closing the First Nations infrastructure gap (CTIG) would increase Canada's GDP per capita growth, leading the G7 and the EU.

(Average annual growth rate of GDP per capita, 2023-2030)



Source: International Monetary Fund, World Economic Outlook Database: April 2024; The Conference Board of Canada.

13 International Monetary Fund, "World Economic Outlook database, April 2024."
14 Advanced economies according to the International Monetary Fund. International Monetary Fund, "World Economic Outlook Database - Groups and Aggregates."
15 This estimate assumes no additional population growth beyond current projections.

Addressing Construction Capacity

To directly build and maintain the infrastructure projects across the ten areas, the construction sector would need an average of 127,300 full-time workers per year for the next seven years. This demand for construction works represents a 10.8 per cent increase in the sector's labour demand.[16] Given the construction sector is already facing higher than average vacancy rates and an aging workforce, finding these additional skilled workers would be a significant challenge. Addressing the demand for additional workers will require a collaborative effort from governments, educational institutions, industry leaders, and First Nations.

Supporting Training and Apprenticeships

To meet the growing demand for skilled tradespeople in the construction sector, one strategy to increase the supply of workers in the sector is to expand support for training programs and apprenticeships.[17] This could include streamlining trades training, building connections between training programs and employers, and leveraging digital technology in training.[18] Additionally, promoting the benefits of skilled trades in schools and catering training programs for women and other underrepresented groups could encourage more individuals to pursue careers in construction.[19]

Targeted Immigration

Targeted immigration is another crucial strategy for addressing the shortage of workers in Canda's construction sector. By adjusting immigration policies to prioritize skilled tradespeople and other construction occupations, Canada can attract experienced workers from abroad to fill immediate labour gaps.[20] This could involve reducing barriers to licensing in regulated occupations and working with employers to improve credential recognition.[21] Current immigration programs working towards increasing workers in trades and construction occupations include the Category-Based Selection program and pilot program for out-of-status construction workers.[22] If these programs are successful, Canada should consider expanding eligibility requirements to allow a greater number of people to apply, and target immigrants with experience as construction trades helpers and labourers.[23] Additionally, providing settlement support, such as language training and community integration assistance, can help ensure these workers remain in the construction sector long-term.[24]

16 Labour demand = payroll employees + vacancies. Statistics Canada, "Table 14-10-0372-01 Job vacancies, payroll employees, and job vacancy rate by industry sector, monthly, unadjusted for seasonality."
17 Khan, "State of Skills: Innovation in Training, Recruitment and Upskilling for Skilled Trades."
18 Ibid.
19 Contini and Samardzic, "Diversity, Equity and Inclusion Policies in Canadian Small-to-Medium Sized Enterprises within Science, Tech, Engineering and Skilled Trades."
20 Dennler, Forge, and Craft, "Work in Progress: How Immigration Can Address Labour Shortages in Residential Construction."
21 Ibid.
22 Immigration, Refugees and Citizenship Canada, "Express Entry rounds of invitations: Category-based selection;" Immigration, Refugees and Citizenship Canada, "Permanent residence for out-of-status construction workers in the Greater Toronto Area."
23 Neither program currently accepts applicants who have experience as construction trades helpers and labourers with no formal education. Dennler, Forge, and Craft, "Work in Progress
24 Immigration Can Address Labour Shortages in Residential Construction." Dennler, "The Leaky Bucket: A Study of Immigrant Retention Trends in Canada."

Partnering with First Nations

Partnering with First Nations will be essential to the success of the infrastructure projects. Since most of the construction would take place on First Nations reserves, local First Nations individuals will be a vital source of labour. Equipping the First Nations workforce with the required skills will require specialized training programs developed in collaboration First Nations.[25] Additionally, establishing partnerships between construction firms and First Nation organizations can facilitate job placements and ensure that projects benefit from local talent.[26]

Tax Incentives

Encouraging skilled tradespeople to work in rural First Nations communities could be more effective with targeted tax incentives. Alberta recently offered a tax credit intended to attract 2,000 tradespeople to their province.[27] Tax incentives could include additional tax credits or deductions for tradespeople and construction workers who work on rural infrastructure projects for First Nations, beyond the Labour Mobility Deduction currently in place.[28] Such incentives could help attract talent from other regions of the country, expanding the available pool of skilled workers and ensuring that First Nations projects have the skilled labour necessary to succeed.

Retaining Talent

Beyond labour shortages, the construction sector struggles with retention challenges that limit its capacity. The Residential Construction Council of Ontario recommends several strategies to address this, including improving on-site conditions, especially during winter; formalizing career pathways; expanding opportunities for skills development and training; centralizing industry resources and communication; fostering a sense of community in the voluntary trades; helping workers plan for seasonal work; and enhancing communication and transparency in scheduling.[29] To better retain First Nations workers, the sector should also implement meaningful inclusion practices, mandate cultural awareness training, accommodate cultural traditions, and offer professional development and mentorship programs.[30]

25 Santoro and Walsh, "The Readiness and Resilience: Mapping the Contours of the Indigenous Skills and Employment Ecosystem in Canada."
26 Snook, "Constructing for the Future: First Nations Partnerships and the Environment."
27 French, "Alberta unveils tax credit to lure 2,000 skilled tradespeople to the province."
28 Canada Revenue Agency, "Labour Mobility Deduction (LMD)."
29 Residential Construction Council of Ontario, "Retaining Employees in the Skilled Trades."
30 MacLaine et al., "Working Together: Indigenous Recruitment and Retention in Remote Canada."

Conclusion

Closing the infrastructure gap for First Nations communities will require a $349.2 billion investment across the ten infrastructure areas. This level of investment would provide significant business and employment opportunities across the country. It has the potential to generate $635.3 billion in economic output, $308.9 billion in GDP, and boost government revenues by $86.7 billion over the next seven years. (See Figure 2.) This implies that every dollar invested has the potential to generate $1.82 in economic output, $0.89 in GDP, and $0.25 in government revenues. Additionally, the investment would support 338,261 full-time jobs per year, with 306,813 jobs benefiting non-First Nations individuals and 31,448 jobs being held by First Nations individuals.

Figure 2: Investment to close the First Nations infrastructure gap would generate significant economic benefits across the country.

(Total economic impact from 2023 to 2030)*

Source: The Conference Board of Canada
*Includes direct, indirect, and induced impacts.

The economic benefits of the ten infrastructure areas extend well beyond the economic indicators presented in this report. The investment in the infrastructure projects would have lasting benefits for First Nations, including enhanced educational attainment, improved health outcomes, increased tourism, enhanced entrepreneurship opportunities, and cultural preservation. These advantages would benefit the entire country by boosting productivity, fostering business growth, and increasing workforce participation. Delays in closing the infrastructure gap will not only cause infrastructure costs to rise but will also prevent the realization of the economic benefits of this investment.

The forthcoming report, *"Benefits for All Canadians (Part 2): Long-term Socio-economic Impacts of Closing the Infrastructure Gap,"* will explore these long-term impacts and provide a comprehensive overview of the transformative potential of closing the infrastructure gap for First Nations and Canada overall.

Appendix A: Overview of the Infrastructure Areas

Drinking Water Advisories: Investment in this area is required to improve on-reserve water and wastewater infrastructure and expand access to clean drinking water. The supply chain for clean drinking water involves source waters (surface water, groundwater), abstraction (groundwater wells and surface water intakes), treatment, storage (tanks, reservoirs and cisterns), transmission, and distribution (both piped systems and trucked water). The goal is to end all drinking water advisories in First Nations. This will require a $272.0 million investment in capital and $403.0 million in O&M.

All-season Road Access: Investment in this area is required to provide First Nations with access to all-season roads. Approximately 8,000 kilometres of winter roads need to be converted to all-season roads (at gravel road standards). This will require a $29.1 billion investment in capital and $6.4 billion in O&M.

Climate Adaptation: Investment in this area is required to equip First Nations assets to manage climate change and protect the assets from extreme weather events. This involves site-specific modifications to housing, non-residential buildings, utilities, and transportation infrastructure. Modifications include upgrading cladding and roofs on buildings, regular road resurfacing, and increased monitoring and testing of water. This will require a $24.5 billion investment in capital and $6.5 billion in O&M.

Net Zero Carbon: Investment in this area is required to increase energy efficiency (reduce carbon emissions) of First Nations' housing, non-residential buildings, vehicles, and utilities. Upgrades include installing energy-efficient lighting (LEDs), improving insulation in buildings, installing energy-efficient windows and doors, enhancing heating systems, using biocovers instead of conventional landfill covers, and switching to electric vehicles. This will require a $12.7 billion investment in capital.

Digital Connectivity: Investment in this area is required to provide all First Nations with a fibre backbone to the Internet, fibre-to-the-home last mile, and Long-Term Evolution (LTE) or 5G mobility services. This will require a $5.2 billion investment in capital.

Education: Investment in this area is required to ensure First Nations have adequate educational facilities. Investments are focused on schools, including the provision for outdoor learning and teacherages (i.e., on-reserve accommodation for teaching staff). This will require an $8.0 billion investment in capital and $4.6 billion in O&M.

Housing: Investment in this area is required to ensure First Nations peoples have access to sufficient housing for their growing populations. These investments include building new homes and renovating existing homes, along with the repairs and maintenance needed for housing. This will require a $114.7 billion investment in capital and $20.4 billion in O&M.

Accessibility: Investment in this area is required to improve accessibility and promote the inclusion of First Nations persons with disabilities in health services, social services, infrastructure, and housing. Upgrades include installing bathroom grab bars, widening doorways, providing exterior ramps, and installing elevators. This will require a $1.6 billion investment in capital.

Infrastructure: Investment in this area is required to maintain current public infrastructure, increase infrastructure to accommodate growing populations, and upgrade infrastructure to meet current building codes and safety standards. Infrastructure includes non-residential buildings (administrative, recreation, community, etc.), transportation assets (roads, bridges, ports, wharfs, etc.), utilities (wastewater pipes, treatment facilities, etc.), and vehicles (fire trucks, water trucks, etc.). This will require a $38.0 billion investment in capital and $21.5 billion in O&M.

Direct Asks: Investment in this area is required to meet the needs of First Nations based on their requests, which were obtained through a survey conducted by Indigenous Services Canada (ISC). The assets required range from transportation and utility infrastructure to educational, healthcare, community, and recreational facilities, as well as cultural assets and social programs. This will require a $55.4 billion investment in capital. Investments in this area are in addition to investments in the other areas and do not double count any other investments.

Appendix B: Data and Methodology

This study employs The Conference Board of Canada's Economic Impact Assessment (EIA) model at the provincial and territorial level to measure the impacts of closing the infrastructure gap for First Nations in Canada.

The economic impacts of each infrastructure area are based on the costs to close the infrastructure gap in that area, using data provided by the Assembly of First Nations. The total economic impact on the Canadian economy is the sum of the direct, indirect, and induced impacts described below.

Direct impacts: These are the economic impacts directly resulting from investing in the capital and operational phases of each infrastructure area. Direct impacts include the contributions to output, GDP, employment, wages, and government revenue as a result of the direct outlays in infrastructure spending.

Indirect impacts: The indirect, or supply-chain, impacts measure the additional value created by investing in an infrastructure area through the demand for intermediate inputs and support services. These impacts measure the contribution to output, GDP, employment, wages, and government revenue associated with direct spending on intermediate inputs and support services. For example, building housing requires building materials which creates higher GDP and employment and generates wages and government revenue in the manufacturing industry.

Induced impacts: Induced impacts are derived when employees of the directly and indirectly affected industries spend their earnings and owners spend their profits. These purchases contribute to output, GDP, employment, wages, and tax revenues, and are typically felt across a wide array of consumer-oriented industries. For example, construction workers will spend some of their wages on restaurant meals, resulting in higher GDP and employment and generating wages and government revenue in the food services industry.

The Conference Board's EIA model was developed using Statistics Canada's 2019 detailed input-output tables and multipliers. While 2020 multipliers are available, 2019 multipliers were utilized because they to better represent current economic structures, as 2020 marked the beginning of the COVID-19 pandemic. The EIA model also accounts for inflation and wage increases projected to occur during the period under analysis.

AFN provided all cost data related to closing the infrastructure gap. Annual cost breakdowns were provided by infrastructure area and by province and territory, covering the fiscal years 2023-2024 to 2029-2030. For each infrastructure area, the expenditures were aligned with industries that would directly benefit from the spending, based on information provided in the appendices of the *"Closing the Infrastructure Gap by 2030: A Collaborative and Comprehensive Cost Estimate Identifying the Infrastructure Investment Needs of First Nations in Canada"* report.[31]

31 Assembly of First Nations, "Closing the Infrastructure Gap by 2030: A Collaborative and Comprehensive Cost Estimate Identifying the Infrastructure Investment Needs of First Nations in Canada."

Given that spending to close the infrastructure gap spans the fiscal years 2023-2024 to 2029-2030, labour income is calculated using the wage rates from the midpoint year, 2026.

Direct Leakages

To ensure a conservative estimate, the analysis accounted for a portion of planned infrastructure spending flowing to products and services provided by international companies (i.e., international imports). Based on detailed expenditures data, it was estimated that 14 per cent of capital investment expenditures and 7 per cent of O&M investment expenditures would leak to international companies.

Taxes

The EIA model simulates the overall structure of the Canadian economy, where Indigenous businesses and employment represent only a small share of activity. However, since these infrastructure projects are expected to occur primarily within First Nations communities, significantly higher involvement of First Nations individuals and businesses is projected. Our analysis, therefore, considered exemptions for sales, corporate, property, payroll, and income taxes, applicable to First Nations individuals and businesses. [32]

To inform our tax exemption estimates, we considered the potential funding criteria. In particular, the federal government has set a 5 per cent Indigenous procurement target, which ensures a minimum 5 per cent of the total value of contracts are held by Indigenous businesses.[33] In addition, the Canadian Council for Aboriginal Business (CCAB) estimates that Indigenous business capacity exceeds 5 per cent within the construction sector.[34] Based on these sources, Table 1 summarizes the share of Indigenous businesses involved in the First Nations infrastructure projects.

Table 1: Share of Indigenous businesses

	Direct	Indirect	Induced
Capital	**25%**	**5%**	**5%**
Operation and Maintenance	**35%**	**5%**	**5%**

Source: The Conference Board of Canada
*Includes self-employed and with employees

32 Canada Revenue Agency, "Information on the tax exemption under section 87 of the Indian Act."
33 Indigenous Services Canada, "Mandatory minimum 5% Indigenous procurement target."
34 Canadian Council for Aboriginal Business, "Industry and Inclusion: An Analysis of Indigenous Potential in Federal Supply Chains."

These shares represent potential sources where businesses would be exempt from corporate, import, and sales taxes.[35] Further, since the infrastructure projects are government-funded and primarily located on First Nations reserves, it is assumed that no provincial or federal sales taxes (by First Nations and non-First Nations businesses) will be directly generated from the investment spending.

While the imposition of municipal or local taxes for businesses and workers located off-reserve are assumed to correspond with the municipal government ratios embedded in the Conference Board's EIA model, additional assumptions were developed to account for First Nations' imposed land use taxes for Indigenous businesses and workers located on reserve. Specially, it was assumed that 50 per cent of First Nations' businesses were located where property taxes were collected. The rates of property taxes in these instances were also assumed to be the same tax rates as their adjacent local governments.[36] While we did extend our analysis on taxes to include potential taxes collected on reserve land, we did not account for any newly imposed First Nations' land use taxes that may apply to non-First Nations businesses. In this case, it was assumed that these rates will be determined on a per use basis as the specifics of each project are finalized.

Furthermore, we also incorporated income tax and payroll tax exemptions based on the estimated shares of First Nations individuals employed. These estimates are discussed in the next section.

First Nations Employment

According to Statistics Canada's Labour Force Survey, First Nations employment accounted for roughly 1.7 percent of all Canadian employment in 2023.[37] Given that the infrastructure projects would primarily take place on First Nations reserves, we assume a higher proportion of First Nations individuals would be employed directly and indirectly to complete the infrastructure projects. The share of First Nations individuals employed varies depending on the stage of the project (i.e., more First Nations people are expected to be employed directly during the O&M phase compared to the construction stage). Table 2 provides the range of employment shares for each phase of the project. These shares were applied across all infrastructure areas and regions.

Table 2: Share of First Nations employed

	Direct	Indirect	Induced
Capital	**5-10%**	**1-5%**	**5-10%**
Operation and Maintenance	**25-50%**	**1-5%**	**5-10%**

Source: The Conference Board of Canada

35 Assuming they are located on a First Nations reserve and are generating income on the reserve.
36 First Nations Tax Commission, "Taxpayers: Property Taxation on Reserve."
37 Statistics Canada, "Table 14-10-0365-01 Labour force characteristics by region and detailed Indigenous group."

Based on the midpoint of the shares in Table 2, we estimate that First Nations employment would constitute 9.3 per cent of the total jobs generated across the ten infrastructure areas. Over the assumed seven-year period to build the infrastructure, this equates to 31,448 person-years of employment for First Nations individuals. Our estimates suggest that this employment would represent roughly 9.0 per cent of current First Nations employment annually.

Although the level of employment is a conservative estimate, significant public and private interventions would be necessary to ensure First Nations individuals have the capacity and skills required to work on the infrastructure projects. The lack of data on employment by industry for First Nation individuals living on reserve prevents a more detailed examination of employment capacity. Given that employment rates are generally lower for First Nations, there may be considerable workforce capacity assuming adequate support and training is provided.[38] Ensuring participation by First Nations will be critical for the success of these projects, particularly for the long-term O&M of each infrastructure project.

Limitations

The Conference Board of Canada's EIA model has several limitations when assessing large-scale investments that extend over a prolonged period.

Firstly, the EIA model assumes no capacity constraints related to physical or labour resources. It also does not account for inflationary pressures, such as rising prices for construction materials and wages, that could result from significant infrastructure investments.

The model also assumes constant returns to scale, whereby increasing the amount of investment by a certain percentage increases output by the same percentage. For example, if you double the investment, then GDP and employment impacts would also double. The investment to close the infrastructure gap is considered on top of all other planned investments in the country, meaning it does not account for any potential crowding-out impacts on other investments. For these reasons, the EIA model results may overestimate the actual, or observed, net economic impacts of the investment spending.

The Conference Board's EIA model also does not account for potential downstream impacts associated with the eventual use and integration of the infrastructure on First Nations. The potential downstream impacts include increasing land values, higher productivity, improved health outcomes (lower health costs), better education (higher wages), and additional business development. As a result, our EIA model likely underestimates the full impact of the investment spending on the communities and regions involved. A review of the broader socio-economic impacts will be the focus of the forthcoming report *"Benefits for All Canadians (Part 2): Long-term Socio-economic Impacts of Closing the Infrastructure Gap."*

38 Statistics Canada, "Status First Nations people in Canada: A snapshot from the 2021 Census." Statistics Canada, Accessed August 12, 2024. https://www150.statcan.gc.ca/n1/pub/41-20-0002/412000022023004-eng.htm.

Appendix C: Additional Data Tables

Table C1: Economic impact of closing the infrastructure gap on output, total (capital and O&M phases)

(Output contributions, 2023 $ millions, 2023 – 2030)

Capital and O&M	Direct	Indirect	Induced	Total
Accessibility	1,367.1	859.3	647.6	2,874.0
All-season road access	30,972.3	24,254.1	13,343.3	68,569.7
Clean drinking water	608.7	344.0	254.9	1,207.5
Climate adaptation	27,056.9	18,861.4	11,917.0	57,835.3
Digital connectivity	4,473.7	2,678.7	1,285.8	8,438.1
Direct asks	47,616.0	30,163.5	19,684.2	97,463.8
Education	11,163.4	6,881.0	4,323.4	22,367.8
Housing	117,631.0	74,159.4	53,349.0	245,139.4
Infrastructure	52,683.5	33,750.0	22,032.9	108,466.5
Net zero	10,932.5	6,768.3	5,210.9	22,911.7
Total	**304,505.3**	**198,719.7**	**132,048.9**	**635,274.0**

Source: The Conference Board of Canada.

Table C2: Economic impact of closing the infrastructure gap on output, capital phase

(Output contributions, 2023 $ millions, 2023 – 2030)

Capital	Direct	Indirect	Induced	Total
Accessibility	1,367.1	859.3	647.6	2,874.0
All-season road access	25,050.1	19,616.5	10,791.9	55,458.4
Clean drinking water	233.9	144.5	114.5	492.9
Climate adaptation	21,028.6	14,769.3	9,449.4	45,247.3
Digital connectivity	4,473.7	2,678.7	1,285.8	8,438.1
Direct asks	47,616.0	30,163.5	19,684.2	97,463.8
Education	6,870.5	4,592.7	2,857.7	14,320.9
Housing	98,649.7	63,195.9	45,181.6	207,027.2
Infrastructure	32,643.9	22,364.8	14,140.1	69,148.8
Net zero	10,932.5	6,768.3	5,210.9	22,911.7
Total	**248,866.2**	**165,153.4**	**109,363.6**	**523,383.2**

Source: The Conference Board of Canada.

Table C3: Economic impact of closing the infrastructure gap on output, O&M phase

(Output contributions, 2023 $ millions, 2023 – 2030)

O&M	Direct	Indirect	Induced	Total
All-season road access	5,922.2	4,637.6	2,551.4	13,111.3
Clean drinking water	374.8	199.5	140.4	714.7
Climate adaptation	6,028.3	4,092.2	2,467.6	12,588.1
Education	4,292.9	2,288.3	1,465.7	8,046.9
Housing	18,981.3	10,963.5	8,167.4	38,112.2
Infrastructure	20,039.6	11,385.2	7,892.8	39,317.7
Total	**55,639.1**	**33,566.3**	**22,685.3**	**111,890.7**

Source: The Conference Board of Canada

Table C4: Economic impact of closing the infrastructure gap on GDP, total (capital and O&M phases)

(GDP contributions, 2023 $ millions, 2023 – 2030)

Capital and O&M	Direct	Indirect	Induced	Total
Accessibility	555.6	419.9	377.8	1,353.3
All-season road access	12,332.2	12,078.3	7,745.4	32,155.9
Clean drinking water	288.7	172.6	148.8	610.1
Climate adaptation	11,195.0	9,410.6	6,928.9	27,534.6
Digital connectivity	1,572.8	1,398.6	747.0	3,718.4
Direct asks	22,946.7	15,187.7	11,406.4	49,540.8
Education	5,293.8	3,545.8	2,506.3	11,346.0
Housing	50,578.1	35,656.3	31,041.2	117,275.6
Infrastructure	24,496.9	17,263.0	12,793.0	54,552.8
Net zero	4,562.8	3,290.6	3,041.0	10,894.4
Total	**133,822.7**	**98,423.5**	**76,735.8**	**308,981.9**

Source: The Conference Board of Canada.

Table C5: Economic impact of closing the infrastructure gap on GDP, capital phase
(GDP contributions, 2023 $ millions, 2023 – 2030)

Capital	Direct	Indirect	Induced	Total
Accessibility	555.6	419.9	377.8	1,353.3
All-season road access	9,974.2	9,768.8	6,264.4	26,007.4
Clean drinking water	95.2	69.5	66.9	231.5
Climate adaptation	8,436.8	7,355.9	5,496.8	21,289.4
Digital connectivity	1,572.8	1,398.6	747.0	3,718.4
Direct asks	22,946.7	15,187.7	11,406.4	49,540.8
Education	2,781.3	2,366.4	1,657.3	6,805.0
Housing	40,691.2	30,285.0	26,311.5	97,287.7
Infrastructure	14,208.1	11,345.7	8,201.6	33,755.5
Net zero	4,562.8	3,290.6	3,041.0	10,894.4
Total	**105,824.7**	**81,488.1**	**63,570.5**	**250,883.3**

Source: The Conference Board of Canada.

Table C6: Economic impact of closing the infrastructure gap on GDP, O&M phase
(GDP contributions, 2023 $ millions, 2023 – 2030)

O&M	Direct	Indirect	Induced	Total
All-season road access	2,358.1	2,309.5	1,481.0	6,148.6
Clean drinking water	193.5	103.2	81.9	378.6
Climate adaptation	2,758.2	2,054.8	1,432.2	6,245.2
Education	2,512.5	1,179.5	849.1	4,541.0
Housing	9,886.9	5,371.3	4,729.7	19,987.9
Infrastructure	10,288.7	5,917.2	4,591.4	20,797.3
Total	**27,997.9**	**16,935.4**	**13,165.2**	**58,098.6**

Source: The Conference Board of Canada.

Table C7: Economic impact of closing the infrastructure gap on employment, total (capital and O&M phases)

(Employment contributions, full-time, full-year jobs, 2023 – 2030)

Capital and O&M	Direct	Indirect	Induced	Total
Accessibility	4,322	3,149	2,784	10,255
All-season road access	90,922	78,767	57,287	226,976
Clean drinking water	1,790	1,226	1,101	4,117
Climate adaptation	81,360	65,375	51,213	197,947
Digital connectivity	6,458	9,662	5,543	21,663
Direct asks	169,459	111,978	84,621	366,059
Education	39,249	26,408	18,584	84,240
Housing	468,620	281,878	240,536	991,035
Infrastructure	168,058	120,644	94,799	383,501
Net zero	35,091	24,545	22,399	82,035
Total	**1,065,330**	**723,632**	**578,866**	**2,367,828**

Source: The Conference Board of Canada.

Table C8: Economic impact of closing the infrastructure gap on employment, capital phase

(Employment contributions, full-time, full-year jobs, 2023 – 2030)

Capital	Direct	Indirect	Induced	Total
Accessibility	4,322	3,149	2,784	10,255
All-season road access	73,537	63,706	46,333	183,576
Clean drinking water	754	521	492	1,767
Climate adaptation	62,100	51,143	40,598	153,841
Digital connectivity	6,458	9,662	5,543	21,663
Direct asks	169,459	111,978	84,621	366,059
Education	20,182	17,713	12,282	50,177
Housing	341,779	239,703	205,557	787,039
Infrastructure	101,266	79,292	60,766	241,324
Net zero	35,091	24,545	22,399	82,035
Total	**814,949**	**601,412**	**481,375**	**1,897,736**

Source: The Conference Board of Canada.

Table C9: Economic impact of closing the infrastructure gap on employment, O&M phase

(Employment contributions, full-time, full-year jobs, 2023 – 2030)

O&M	Direct	Indirect	Induced	Total
All-season road access	17,385	15,061	10,954	43,400
Clean drinking water	1,036	705	608	2,349
Climate adaptation	19,260	14,231	10,615	44,106
Education	19,067	8,695	6,302	34,063
Housing	126,841	42,175	34,979	203,996
Infrastructure	66,792	41,353	34,033	142,178
Total	**250,381**	**122,220**	**97,491**	**470,092**

Source: The Conference Board of Canada.

Table C10: Economic impact of closing the infrastructure gap on labour income, total (capital and O&M phases)

(Labour income contributions, 2023 $ millions, 2023 – 2030)

Capital and O&M	Direct	Indirect	Induced	Total
Accessibility	411.2	276.3	198.0	885.5
All-season road access	9,451.4	7,545.6	4,073.3	21,070.3
Clean drinking water	177.1	109.2	78.1	364.4
Climate adaptation	8,375.7	6,040.8	3,640.2	18,056.7
Digital connectivity	795.8	894.7	394.0	2,084.5
Direct asks	17,722.7	9,899.0	6,005.4	33,627.1
Education	3,665.0	2,320.5	1,318.4	7,303.9
Housing	37,455.5	23,206.2	16,212.0	76,873.7
Infrastructure	17,448.0	11,162.6	6,732.3	35,342.9
Net zero	3,292.6	2,157.7	1,594.1	7,044.3
Total	**98,795.0**	**63,612.4**	**40,245.9**	**202,653.3**

Source: The Conference Board of Canada.

Table C11: Economic impact of closing the infrastructure gap on labour income, capital phase
(Labour income contributions, 2023 $ millions, 2023 – 2030)

Capital	Direct	Indirect	Induced	Total
Accessibility	411.2	276.3	198.0	885.5
All-season road access	7,644.2	6,102.8	3,294.5	17,041.5
Clean drinking water	69.4	45.6	35.0	150.0
Climate adaptation	6,355.3	4,739.5	2,886.6	13,981.4
Digital connectivity	795.8	894.7	394.0	2,084.5
Direct asks	17,722.7	9,899.0	6,005.4	33,627.1
Education	2,174.2	1,572.2	870.8	4,617.3
Housing	29,379.0	19,747.5	13,737.9	62,864.4
Infrastructure	11,194.1	7,399.1	4,316.1	22,909.4
Net zero	3,292.6	2,157.7	1,594.1	7,044.3
Total	**79,038.5**	**52,834.4**	**33,332.5**	**165,205.4**

Source: The Conference Board of Canada.

Table C12: Economic impact of closing the infrastructure gap on labour income, O&M phase
(Labour income contributions, 2023 $ millions, 2023 – 2030)

O&M	Direct	Indirect	Induced	Total
All-season road access	1,807.2	1,442.8	778.9	4,028.9
Clean drinking water	107.7	63.6	43.1	214.4
Climate adaptation	2,020.4	1,301.3	753.6	4,075.3
Education	1,490.8	748.2	447.6	2,686.6
Housing	8,076.5	3,458.6	2,474.1	14,009.2
Infrastructure	6,253.9	3,763.5	2,416.1	12,433.5
Total	**19,756.5**	**10,778.0**	**6,913.4**	**37,447.9**

Source: The Conference Board of Canada.

Table C13: Economic impact of closing the infrastructure gap on government revenues, total (capital and O&M phases)

(Government revenue contributions, 2023 $ millions, 2023 – 2030)

Capital and O&M	Federal	Provincial	Local	Total
Accessibility	198.6	134.2	75.7	408.4
All-season road access	4,733.3	3,199.4	741.2	8,673.9
Clean drinking water	74.7	54.1	26.4	155.2
Climate adaptation	3,972.8	2,693.4	979.3	7,645.6
Digital connectivity	539.7	367.1	82.7	989.6
Direct asks	7,399.3	4,910.8	1,447.9	13,758.0
Education	1,540.0	1,050.1	440.6	3,030.7
Housing	16,591.6	11,013.1	6,986.8	34,591.5
Infrastructure	7,528.5	5,158.1	1,516.7	14,203.4
Net zero	1,581.2	1,069.6	599.3	3,250.1
Total	**44,159.8**	**29,650.0**	**12,896.6**	**86,706.4**

Source: The Conference Board of Canada.

Table C14: Economic impact of closing the infrastructure gap on government revenues, capital phase

(Government revenue contributions, 2023 $ millions, 2023 – 2030)

Capital	Federal	Provincial	Local	Total
Accessibility	198.6	134.2	75.7	408.4
All-season road access	3,915.7	2,639.8	601.1	7,156.6
Clean drinking water	33.6	22.8	13.6	70.0
Climate adaptation	3,178.9	2,143.9	808.8	6,131.5
Digital connectivity	539.7	367.1	82.7	989.6
Direct asks	7,399.3	4,910.8	1,447.9	13,758.0
Education	1,036.9	693.6	310.4	2,040.9
Housing	14,125.3	9,408.0	6,357.4	29,890.6
Infrastructure	5,119.6	3,428.8	921.6	9,470.0
Net zero	1,581.2	1,069.6	599.3	3,250.1
Total	**37,128.9**	**24,818.4**	**11,218.4**	**73,165.8**

Source: The Conference Board of Canada.

Table C15: Economic impact of closing the infrastructure gap on government revenues, O&M phase

(Government revenue contributions, 2023 $ millions, 2023 – 2030)

O&M	Direct	Indirect	Induced	Total
All-season road access	817.6	559.7	140.1	1,517.4
Clean drinking water	41.1	31.3	12.8	85.2
Climate adaptation	793.9	549.6	170.5	1,514.0
Education	503.1	356.5	130.2	989.8
Housing	2,466.3	1,605.2	629.4	4,700.9
Infrastructure	2,408.9	1,729.4	595.1	4,733.4
Total	**7,030.9**	**4,831.6**	**1,678.2**	**13,540.7**

Source: The Conference Board of Canada.

Table C16: Economic impact of closing the infrastructure gap on output, by region

(Output contributions, 2023 $ millions, 2023 – 2030)

Region	Capital	O&M	Total
Alberta	88,205.5	18,937.6	107,143.2
Atlantic	20,732.6	4,423.6	25,156.2
British Columbia	101,851.8	21,930.5	123,782.3
Manitoba	59,534.7	12,799.1	72,333.8
NWT	16,292.1	3,658.6	19,950.7
Ontario	116,849.7	24,323.5	141,173.2
Québec	51,058.7	10,368.1	61,426.9
Saskatchewan	58,428.5	13,028.7	71,457.3
Yukon	10,429.6	2,420.9	12,850.5
Canada	**523,383.2**	**111,890.7**	**635,274.0**

Source: The Conference Board of Canada.

Table C17: Economic impact of closing the infrastructure gap on GDP, by region
(GDP contributions, 2023 $ millions, 2023 – 2030)

Region	Capital	O&M	Total
Alberta	41,683.0	8,953.3	50,636.3
Atlantic	9,912.3	2,329.9	12,242.3
British Columbia	49,996.0	11,707.0	61,703.1
Manitoba	27,373.9	6,975.0	34,348.9
NWT	6,461.3	1,697.3	8,158.6
Ontario	58,550.8	13,028.9	71,579.7
Québec	24,299.7	5,442.2	29,741.9
Saskatchewan	27,556.4	6,648.2	34,204.6
Yukon	5,049.9	1,316.7	6,366.6
Canada	**250,883.3**	**58,098.6**	**308,981.9**

Source: The Conference Board of Canada.

Table C18: Economic impact of closing the infrastructure gap on employment, by region
(Employment contributions, full-time, full-year jobs, 2023 – 2030)

Region	Capital	O&M	Total
Alberta	279,921	60,817	340,738
Atlantic	87,443	21,987	109,430
British Columbia	393,728	97,124	490,852
Manitoba	226,994	60,791	287,785
NWT	30,531	9,495	40,026
Ontario	439,715	101,914	541,629
Québec	199,119	46,403	245,522
Saskatchewan	210,096	61,768	271,864
Yukon	30,189	9,793	39,981
Canada	**1,897,736**	**470,092**	**2,367,827**

Source: The Conference Board of Canada.

Table C19: Economic impact of closing the infrastructure gap on labour income, by region

(Labour income contributions, 2023 $ millions, 2023 – 2030)

Region	Capital	O&M	Total
Alberta	26,011.1	5,384.0	31,395.1
Atlantic	6,866.5	1,476.0	8,342.5
British Columbia	33,198.3	7,480.9	40,679.2
Manitoba	19,468.7	4,793.8	24,262.4
NWT	3,706.3	1,102.7	4,808.9
Ontario	39,702.3	8,635.2	48,337.5
Québec	17,210.9	3,656.5	20,867.4
Saskatchewan	15,793.1	4,001.3	19,794.4
Yukon	3,248.3	917.5	4,165.8
Canada	**165,205.4**	**37,447.9**	**202,653.3**

Source: The Conference Board of Canada.

Table C20: Economic impact of closing the infrastructure gap on government revenues, by region

(Government revenue contributions, 2023 $ millions, 2023 – 2030)

Region	Capital	O&M	Total
Alberta	11,484.0	1,964.0	13,448.0
Atlantic	2,883.6	548.9	3,432.4
British Columbia	13,331.1	2,520.7	15,851.8
Manitoba	8,111.1	1,649.3	9,760.4
NWT	1,144.2	213.7	1,358.0
Ontario	18,501.2	3,417.5	21,918.7
Québec	9,129.3	1,691.7	10,821.0
Saskatchewan	7,431.8	1,283.5	8,715.4
Yukon	1,149.4	251.3	1,400.7
Canada	**73,165.8**	**13,540.7**	**86,706.4**

Source: The Conference Board of Canada.

Table C21: GDP per capita growth in the 38 advanced economies, 2023-2030

Country	Average annual growth rate of GDP per capita
Macao SAR	4.46%
Malta	3.30%
Lithuania	3.13%
Croatia	2.88%
Slovak Republic	2.68%
Slovenia	2.57%
Latvia	2.57%
Taiwan Province of China	2.45%
Cyprus	2.27%
Korea	2.26%
Czech Republic	2.13%
Portugal	2.06%
Hong Kong SAR	2.03%
Estonia	1.80%
Canada with CTIG investment	1.76%
Singapore	1.75%
Greece	1.67%
United States	1.54%
Israel	1.52%
Japan	1.21%
Denmark	1.20%
Sweden	1.13%
Puerto Rico	1.10%
Australia	1.08%
France	1.05%
United Kingdom	1.04%
San Marino	1.00%
Netherlands	0.97%
Norway	0.96%
Germany	0.93%
Belgium	0.90%
New Zealand	0.88%
Italy	0.81%
Spain	0.78%
Switzerland	0.66%
Iceland	0.61%
Canada without CTIG investment	0.36%
Luxembourg	0.27%
Andorra	-0.43%

Source: International Monetary Fund, World Economic Outlook Database: April 2024; The Conference Board of Canada.

Appendix D: Glossary of Terms

Capital costs: Fixed one-time expenses incurred during the capital phase of the project, including the equipment related to the project.

Corporate taxes: Taxes collected by federal and provincial governments on corporations' and other similar legal entities' profits.

Direct impacts: These are the economic impacts directly caused by investing in the construction and operational phases of the ten infrastructure areas in Canada.

Economic output: Economic output measures the gross value of all economic activity. This measure includes all goods and services produced, both final products and intermediate goods and services, which are used in the production of other goods and services. On the contrary, GDP only includes the value of final goods and services and avoids double counting the value of intermediate goods. For example, if a company buys a car for $500 and then sells the car for $1,000, output will include the intermediate purchase plus the sale of the car ($500 + $1,000), whereas GDP will only include the final sale of the car ($1,000).

Gross domestic product (GDP): It is a measure of the value-added economic activity, expressed in terms of actual prices a purchaser pays after taxes. Unlike economic output, GDP only includes the value of final goods and services, giving a more representative picture of a nation's economic performance by avoiding double counting the value of intermediate goods.

GDP multiplier: The GDP multiplier captures the net economic impact of total investment. It is the ratio between the investment across the ten infrastructure areas and the corresponding total GDP impact. It is calculated as the amount of GDP generated from $1 of spending.

Indirect impacts: Indirect impacts measure the value added that the "direct impact firms" generate through their demand for intermediate inputs or other support services.

Induced impacts: Induced impacts are derived when employees of the directly and indirectly affected industries spend their earnings and employers spend their profits. These purchases lead to another round of employment, wages, income, and tax revenues, and are typically felt across a wide array of consumer-oriented industries.

Labour income: Monetary compensation and benefits paid to wage and salary earners and self-employed individuals. Labour income is presented in gross terms before taxes and other deductions.

Local taxes: Taxes collected from firms and individuals by the municipality and First Nations where they reside.

Operation and maintenance costs (O&M): Expenses incurred during the operational phase of the project which ensure that an asset achieves its planned lifespan, including repairs and periodic replacement of components.

Output multiplier: The output multiplier captures the total/gross economic impact of total investment. It is the ratio between Canada's investment across the ten infrastructure areas and the corresponding total output impact. It is calculated as the amount of output generated from $1 of spending.

Personal income taxes: Taxes collected by federal and provincial governments on individuals' income.

Sales tax: Taxes collected by federal and provincial governments on the purchase of goods and services.

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