

RURAL RECOGNITION:

Affordable and Safe Transportation Options for Remote Communities

More than four million Canadians live in low-density areas, which include rural, remote, Indigenous and northern communities. Most have few transportation options aside from driving a personal vehicle. For those who cannot drive because of cost, age or ability, the lack of options can exacerbate inequities and increase risks to their health and safety.

To address these issues, the federal government should work with its provincial, territorial and Indigenous counterparts to develop a new vision of passenger travel in Canada, while leveraging and expanding federal infrastructure funding to close gaps in service.

Although fewer people live in these areas, they are more likely to face higher transportation costs and generate more greenhouse-gas emissions per person because they must travel longer distances.

Given the unique needs of rural communities, creative solutions are necessary. The absence of a reliable national transportation vision contributes to gaps in services, and the closure of vital bus routes is amplifying the problem. While the federal government has made progress on rural daily transportation needs through its Rural Transit Solutions Fund, the fund's potential is limited because it does not cover operating costs or intercommunity routes.

The Affordability Action Council recommends that the federal government:

- Work with provinces, territories and Indigenous governments to develop a renewed national vision of passenger transportation supported by better data, research and analysis
 - Update the 2013 Vision for Transportation with greater emphasis on the needs of rural, remote and Indigenous communities and closing gaps in inter-regional bus and rail service
 - Invest in improved data collection, including a national survey to track household travel patterns that extend beyond work commutes
- 2 Leverage infrastructure funding and Via Rail to help close gaps in inter-regional bus and rail service
 - Invest in improving Via Rail's service coverage, service offerings, frequency and fare affordability
 - Support provincial, territorial and Indigenous-led efforts to close gaps in bus and rail service
- 3 Expand the Rural Transit Solutions Fund to cover a greater range of costs, projects and applicants
 - Allow the fund to cover operating expenses such as leased vehicles and employee salaries
 - Use the fund to support intercommunity travel









"Canadians living in rural and remote areas face different transportation and affordability challenges and need tailored solutions to meet their needs. Expanding the Rural Transit Solutions Fund can truly fulfil its promise for the communities that need it the most."

- Nate Wallace, Program Manager, Clean Transportation, Environmental Defence

RURAL RESIDENTS FACE INCREASING TRANSPORT POVERTY

The risk of transport poverty, or the lack of adequate transportation options to access essential services and employment, is increasing across Canada's rural and remote communities. While transport poverty also exists in urban areas, people in rural and remote communities face additional barriers because of the long distances they must travel to access services, see a doctor or apply for social assistance (Fairbairn & Gustafson, 2006).

People living in these areas rely more on cars to get to work and to access services and amenities in part because they must travel farther distances and because they have significantly smaller public transit systems. The increasing costs of car ownership may also limit their transportation options. People who live in rural communities typically have lower earnings compared to their urban counterparts, which may compound the problem.

There are higher proportions of seniors and young people living in rural and remote communities — two groups that are often unable to drive or access a vehicle and are thus more restricted in their travel when no other transit options exist (see table 1). Very remote communities may have few roads, and northern communities face the added challenge that ice roads built on permafrost only function part of the year (Barrette & Charlebois, 2018). Climate change is increasingly creating uncertainty around the future of these ice roads.

Compared to urban areas, large-scale public transportation options are less feasible in rural and remote communities. Less than 2 per cent of commuters in rural and remote regions use public transit to get to work (Larijani et al., 2019; Statistics Canada, 2023b). This is because communities are spread out over a large territory, and rural populations are smaller. Consequently, rural transportation systems are often smaller, with fewer riders, and lack the economies of scale of many urban systems.

Figure 1 shows Canada's census subdivisions grouped according to five degrees of remoteness, as defined by Statistics Canada (2022a). Canada's population centres are shown in orange. All territory outside the orange areas is considered to be rural. Atlantic and northern Canada have a significantly higher share of rural and remote communities.

Some of the most remote communities in Canada lack road and ferry access for much of the year (Transport Canada, 2020). In 2021, 117 census subdivisions, out of a total of 5,112 across

TABLE 1. CANADIANS LIVING IN REMOTE AREAS COMMUTE MAINLY BY CAR AND FOR LONGER DISTANCES

| | Population groups | | | |
|-----------------------------------------------|-------------------|-------------------|-------------|-------------|
| | All Canadians | Moderately remote | More remote | Most remote |
| Population | | | | |
| Total | 36,991,927 | 2,822,396 | 1,837,991 | 265,698 |
| Share | 100% | 8% | 5% | 1% |
| Demographics (share of population group) | | | | |
| Individuals 15-19 years old | 6% | 6% | 6% | 10% |
| Individuals 65+ years old | 23% | 27% | 26% | 18% |
| Commuting to work (share of population group) | | | | |
| Mainly by car, truck or van | 84% | 90% | 89% | 74% |
| Mainly by public transit | 8% | 2% | 1% | 1% |
| Over 30 km away | 8% | 12% | 14% | 16% |
| Wages (share or average of population group) | | | | |
| Share of low-income households | 11% | 13% | 14% | 23% |
| Average income | \$54,500 | \$49,700 | \$48,800 | \$43,300 |

Source: IRPP calculations based on Statistics Canada (2023a) and Census 2021.

Notes: Remoteness groups are based on the top three tiers of Statistics Canada's Index of Remoteness, as described in Statistics Canada (2022a).

Canada, were not connected to population centres via a main road or ferry network. These communities can be reached only by plane, seasonal ferries and water taxis, which in some cases don't have a regular schedule or must be chartered (see box 1).

TRANSPORTATION OPTIONS IN RURAL AREAS ARE KEY TO ADDRESSING EQUITY CONCERNS

A lack of transportation options for those living in low density areas can restrict their access to health care and social activities and put people at higher risk of physical harm. Those who are low-income, Indigenous, older or young people and those who have disabilities are particularly affected.

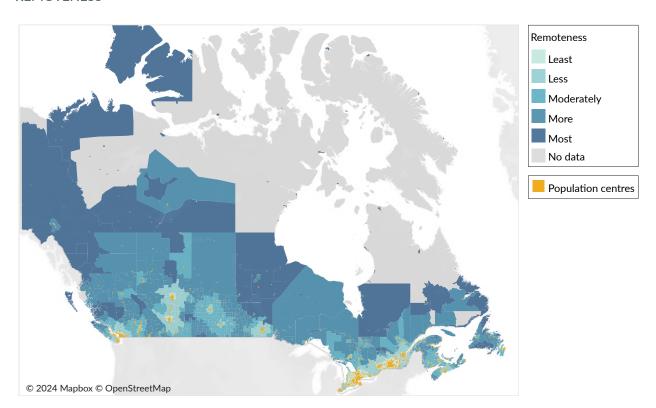


FIGURE 1. TRANSPORTATION NEEDS IN RURAL CANADA VARY SIGNIFICANTLY DUE TO LEVELS OF REMOTENESS

Source: Statistics Canada (2023a) and Census 2021 boundary files.

Notes: Census subdivisions are shaded in blue and are based on Statistics Canada's Index of Remoteness, which combines information about the proximity of communities to population centres, their size and the cost of travel. It groups together communities that have similar access to a comparable pool of services and employment. Remoteness groups come from Statistics Canada (2022a). Population centres are shaded in orange. Territory in the "moderately," "more" and "most" categories is considered remote, and territory adjacent to population centres (orange areas) is considered rural.

Access to essential services such as health care is more restricted in rural areas, an issue that is exacerbated by a lack of transportation options (Canadian Institute for Health Information, 2012; Mirza & Hulko, 2022). Remote areas are also less likely to have access to the quality telecommunication networks that would allow them to circumvent some issues of transportation access, such as by telehealth appointments.

Seniors living in urban and rural areas alike face increased risk of social isolation (National Seniors Council, 2014), but those living in rural areas and in places without adequate transportation options face even higher barriers to participating in social activities (National Seniors Council, 2017).

Some people who are unable to drive or lack accessible and affordable travel options may be at risk of physical harm. The Final Report of the National Inquiry into Missing and Murdered Indigenous Women and Girls (2019) called for increased safe and affordable

transit and transportation services and infrastructure for Indigenous women, girls and 2SLGBTQQIA people living in remote and rural communities. In response to the murders of more than 40 people, who were mainly Indigenous women and girls, on a stretch of highway between Prince George and Prince Rupert in British Columbia, the provincial government took steps to improve community transit (Government of B.C., n.d.).

BOX 1. DEFINING RURAL AND REMOTE AREAS

Statistics Canada's Index of Remoteness (Statistics Canada, 2023a) combines information about the proximity of communities to population centres, their size and the costs of travelling to them. It groups together communities that have similar access to a comparable pool of services and employment.

The index can identify the regions that are most likely to need help and is well suited to assessing transportation needs because it takes into account roads and ferry networks between regions. When using the term "rural and remote" throughout this brief, we are referring to areas within the top three of five categories of remoteness under the Statistics Canada index. These areas are shown in the map of Canada in figure 1.

Fewer and more costly transportation options also exacerbate the incidence of poverty in rural communities, where the cost of essentials such as food and energy is already considerably higher than in urban areas (Food Banks Canada, n.d.; Lovekin & Heerema, 2019). Studies show that energy bills in remote communities can be six to 10 times higher than in the rest of Canada (Lovekin, 2021). Adding higher transportation costs to the equation can bring low-income rural household budgets to their breaking point.

Accessible and affordable transportation options can enhance the resilience of communities by providing workers with the ability to travel to places of employment and nearby regions, and helping communities retain their working age population (Orb, 2021). This is particularly important for communities with a high share of seasonal workers because it could increase employment opportunities available in the off-season, and for communities with smaller economies that rely on emission-intensive industries such as mining and oil production, which may be more vulnerable to economic fluctuations (Canadian Climate Institute, 2021; Infrastructure Canada, 2019).

TRANSPORTATION SOLUTIONS ARE CRITICAL TO THE RURAL NET-ZERO TRANSITION

Canada has the highest rural population growth rate among the G7 and is one of only two countries where the rural population is growing (Statistics Canada, 2022a). Many rural and remote communities are composed of farmers, foresters, tradespeople, fishers and mine operators. Many Indigenous communities are also located in remote areas.

Although fewer people live in these areas, they face higher costs and generate more greenhouse-gas emissions per person (OECD, 2021). In part, this is because Canadians living in rural, remote and northern communities must travel longer distances and are more likely to rely on more expensive and polluting fuels such as diesel, propane and home heating oil (Campbell, 2023; Lovekin & Heerema, 2019; Statistics Canada, 2022b).

As Canada and other countries transition to net-zero and adopt more renewable energy options, mismatches between the supply and demand for oil could lead to increasing price volatility (Leach, 2022). Households that remain dependent on fossil fuels for transportation and energy will be increasingly exposed to cost increases. Without affordable alternatives, low-income rural households will increasingly see their budgets squeezed.

The Rural Supplement to the Climate Action Incentive Payment (carbon tax rebate) was doubled in 2023 to account for the higher cost of living in rural areas (Department of Finance Canada, 2023). The federal government also removed the carbon tax on home heating oil for three years to provide time for households to switch to heat pumps. An enhanced rebate for heat pump installation helps make the switch more affordable.

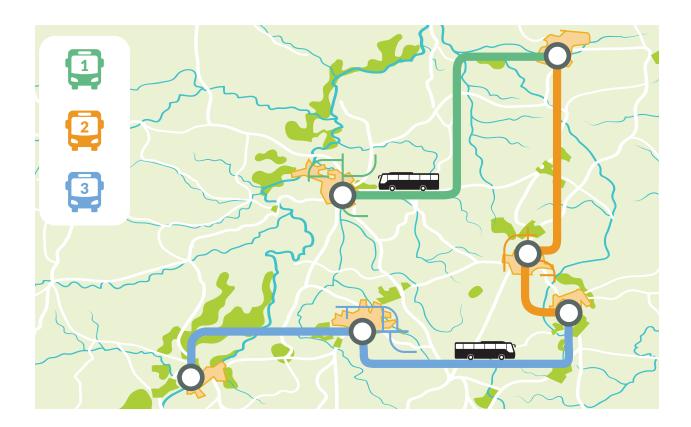
Expanding access to affordable, low-carbon transportation solutions will require a different approach in rural communities. Creative solutions such as on-demand transit and shuttle buses tailored to specific community needs will be most effective because they provide low-emission alternatives while also helping to address transport poverty. These options are often at the appropriate scale for rural and remote regions, which lack the density required for cost-effective fixed-route transit. Greater access to affordable low-emission private transportation options, such as used electric vehicles, will also help (Affordability Action Council, 2024).

GAPS IN RURAL AND INTERCOMMUNITY TRANSPORTATION

Canada lacks a coherent national vision for transportation

In 2013, federal, provincial and territorial transportation ministers agreed on a strategic vision for transportation that would maintain, promote and enhance safe, competitive, viable and sustainable transportation networks that would in turn enhance economic prosperity and Canadians' quality of life. It included a five-year priority plan to foster seamless transportation systems that connect people, services and jobs (Council of Ministers, 2013).

While progress has been made in some areas, gaps still exist. The 2013 strategic vision preceded Canada's current climate targets and must be updated to reflect them. Additionally, Transport Canada describes the role of transportation largely as supporting Canada's economy and trade (Transport Canada, 2023a). While that role is important, transportation is also a basic need, necessary for people to survive and thrive in their communities.



The closure of Greyhound Canada bus routes and the Saskatchewan Transportation Company (STC) in 2017 and 2018 led to sharply reduced affordable transportation options for many Canadians in rural and remote communities (see box 2). However, the scale and scope of gaps in bus and rail connectivity go far beyond these closures.

Governments have failed to develop a reliable backbone of affordable intercommunity bus and rail transportation

Passenger transportation in Canada is a shared jurisdiction across federal, provincial, territorial and Indigenous governments. Bus and rail operators range from private companies to public agencies, with a mix of other models in between. The federal government plays an important role in passenger transportation through infrastructure funding, Via Rail, regulation and its collection and analysis of transportation data.

Providing affordable, sustainable transportation services to rural communities requires a national backbone of motorcoach and rail routes along the most travelled corridors, with hubs along the way where smaller communities can develop fixed or on-demand transportation solutions that safely drop off passengers to continue their journey.

And yet, Canada does not have a reliable transportation backbone. Via Rail services and ridership have been in decline since capital and operating subsidies to the Crown corporation

were significantly reduced in the 1990s (Dupuis, 2014). Between their peak in 1983 and 2022, combined capital and operating subsidies decreased by 66 per cent (Dupuis, 2014; Via Rail Canada, 2022). In addition, Via Rail owns only 2 per cent of the tracks it uses, which has led to challenges in delivering frequent, on-time service because Via trains must yield to freight traffic on shared tracks (Office of the Auditor General of Canada, 2016).

BOX 2. MAJOR BUS CLOSURES HAVE REDUCED TRANSPORTATION OPTIONS FOR RURAL CANADIANS

Acadian Lines, a coach operator in Eastern Canada, closed down operations in 2012, citing financial losses due to having to service unprofitable routes (CBC, 2012a). It was replaced by Maritime Bus, which, at the time, picked up 80 per cent of Acadian's customers and left some communities unserved (CBC, 2012b). This reduction in service occurred at the same time that Via Rail ended daily service in the Maritimes, reducing trips to three days a week (CBC, 2012c).

In 2017, the Saskatchewan government shut down the Saskatchewan Transportation Company (STC), a Crown corporation that had provided vital transportation service in the province since 1946 and operated 25 routes, connecting 253 communities and covering approximately 2.8 million miles annually (Saskatchewan Transportation Company, 2017).

Then, in 2018, Greyhound Canada announced that it would suspend service in northern Ontario and western Canada, a move that affected 583 stops and up to two million passenger trips a year (Transport Canada, 2018). This disproportionately impacted vulnerable groups in rural areas, including Indigenous communities. In 2021, Greyhound Canada announced it would end bus service across the rest of the country.

With the loss of important transportation services from Via Rail, Greyhound, Saskatchewan Transportation Company and many more since the onset of the pandemic, passengers in communities across Canada are left without safe and affordable transportation options.

The 2023 report of the House of Commons Standing Committee on Transport, Infrastructure and Communities called on the federal government to collaborate with other levels of government and public and private operators to identify and close gaps in passenger transportation services. One of the committee's recommendations was for the federal government to expand the Rural Transit Solutions Fund administered by Housing, Infrastructure and Communities Canada to provide incentives for intercommunity rural routes (House of Commons, 2023a).

The federal government has other levers at its disposal to improve Canada's transportation backbone, including infrastructure funding for provinces, territories and municipalities, Via Rail and the Canada Infrastructure Bank (CIB).

Since many of the routes that are needed most urgently in rural areas are not profitable, the federal government would need to either adjust the mandate of the CIB or provide supplementary sources of funding for CIB investment to be a long-term solution that creates permanent and reliable transportation options. It will also be important to keep fares affordable for those who need transportation the most. In many cases, a public or non-profit entity may be best suited to providing affordable passenger transportation services in rural and remote areas.

For example, a combination of funding sources from Transport Canada, CIB and the government of Quebec was used to finance Canada's first Indigenous-led railway, Tshiuetin, which connects three First Nations (the Innu Takuaikan Uashat mak Mani-utenam, the Innu Nation of Matimekush-Lac John and the Naskapi Nation of Kawawachikamac) with Schefferville, Quebec (Canada Infrastructure Bank, 2021). Fares are structured to provide deep discounts to youth, seniors and Indigenous people (Transport Ferrovaire Tshiuetin, n.d.)

Ontario has invested in improved transportation service to northern communities through its Crown corporation, Ontario Northland, which provides bus and rail service. It is in the process of reinstating shuttered train routes between Toronto and the northeastern part of the province (Ontario Northland, 2023). This will leave northern Ontario communities served by a mix of bus and rail services provided by provincial and federal entities, a model that could be adopted by other Crown corporations.

British Columbia's provincial Crown corporation, BC Transit, also manages public transportation within cities and between cities outside the Greater Vancouver Area. Federal funding was used to help establish public transportation services for rural, remote and Indigenous communities in northern British Columbia following Greyhound's cancellation of routes in 2018 (House of Commons, 2023b).

Via Rail provides important linkages to and between rural and remote communities in Canada. These routes could be extended and the frequency of service could be improved and made more affordable. For example, a one-way economy class ticket from Sioux Lookout, Ontario, to Toronto in February 2024 cost \$221 and trips were only available on Mondays and Thursdays (Via Rail Canada, n.d.).

The federal government has announced a high-frequency rail project that will span the Toronto to Quebec City corridor with dedicated tracks, which aims to improve the frequency and reliability of rail service in the future (Transport Canada, 2023b). To ensure that rural and remote communities can also benefit from these and other improvements to the system, rail stops could be part of a regional hub-and-spoke system that provides bus or van connections to smaller communities, as well as warm buildings, washrooms, seating and food services.

NDP MP Taylor Bachrach has launched a petition calling for the federal government to develop legislation to update the mandate of Via Rail to meet passenger and environmental needs and finance the renewal of Via Rail's long-distance fleet (House of Commons, 2024).

Greater collaboration between transportation service entities at the federal and provincial levels is needed to support seamless connections between services by integrating booking systems and enabling transfers.

The Rural Transit Solutions Fund is a great start, but its mandate and tools are limited

The \$250-million, five-year federal Rural Transit Solutions Fund (RTSF), introduced in 2021, was a first step in addressing the severe lack of access to day-to-day transportation options that rural communities face.

The RTSF has supported solutions in very small communities with fewer than 1,000 people as well as small cities with rural peripheries. It also provides significant support to Indigenous communities and has already exceeded its mandate to dedicate 10 per cent of its funds to Indigenous communities. Nova Scotia and Alberta took the early lead in accessing the fund, but its popularity is expanding to other regions (Infrastructure Canada, personal communication, September 6, 2023).

However, there are several constraints placed on the fund that limit its potential. The program only covers the capital costs of transit systems, and not their operations. For rural transportation, operating costs such as driver wages can be one of the most significant expenses and a barrier to service expansion. The focus on capital costs also prevents the use of leased vehicles, which can be a cheaper option.

Currently, many rural transit options are community-based charities that rely on volunteer drivers or are supported by local governments with very limited tax bases (Levesque, 2022). It is difficult to introduce new service lines without being able to fund the operating and capital costs required to manage and run the routes, in particular for communities with limited tax bases.

On-demand transit service allows passengers to book a ride on a day and time when they need it. It is growing in popularity in small cities and rural communities. Some services target seniors or people with disabilities, but many are expanding service to offer it to anyone who needs it. On-demand transit is being made more practical and cost-effective with software applications and digital technologies that allow for seamless ride booking and route planning (Mobility Innovators, 2022). To realize the potential of on-demand transit, operators need funds to provide software or partner with private technology providers.

The RTSF generally limits project funding for travel to nearby communities and for daily appointments and groceries rather than for travel between communities or connections to transportation hubs or larger urban centres. It also has not supported interprovincial or territory-provincial travel (see figure 2).

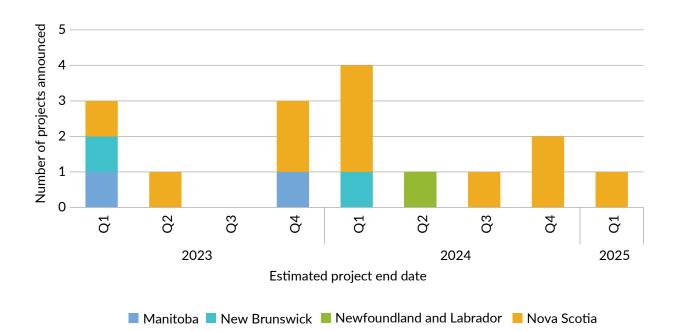


FIGURE 2. FUNDING PROVIDED BY THE RTSF HAS SUPPORTED 16 PROJECTS AND TOTALLED \$6 MILLION

Source: Infrastructure Canada (n.d.).

Notes: Bars show all announced projects as per Infrastructure Canada's Housing and Infrastructure Project Map. In January 2024, the government announced two projects in Nunavut with a total federal contribution of \$230,000 (Infrastructure Canada, 2024). Additionally, the 2022-23 Infrastructure Canada Departmental Results Report includes another 118 approved projects (totalling \$69 million) that have not yet been formally announced (Infrastructure Canada, 2023).

THE ROLE OF THE FEDERAL GOVERNMENT IN SUPPORTING BETTER RURAL TRANSPORTATION OPTIONS

The federal government should play a greater role in supporting transportation solutions in rural communities. The Affordability Action Council recommends that it take the following actions.

Recommendation #1: Work with provinces, territories and Indigenous governments to develop a renewed national vision of passenger transportation supported by better data, research and analysis

The federal government should spearhead a pan-Canadian initiative to update the 2013 federal-provincial-territorial Vision for Transportation in Canada, with greater emphasis on the needs of rural and Indigenous communities and closing gaps in inter-regional bus and rail transportation. The vision should be informed by Canada's climate targets, and the federal government should invest in improved data collection and analysis to identify transportation needs and gaps that are a concern from an affordability, equity, health and safety, and environmental perspective. This should include developing a national household travel survey, managed by Statistics Canada, to track travel patterns that extend beyond work commutes.

Recommendation #2: Leverage infrastructure funding and Via Rail to help close gaps in national inter-regional bus and rail service

The federal government should support provincial, territorial and Indigenous-led efforts to close gaps in bus and rail service through infrastructure funding and through improvements to Via Rail infrastructure and services. As part of its efforts, the federal government should aim to address the needs of vulnerable populations with more affordable, accessible and lower-emission transportation services. Improving Via Rail's frequency of service and affordability of fares will require greater investment in locomotive and train car renewal, stops and stations, staff, as well as rail infrastructure.

To make Via Rail the backbone of a national transportation network, the government could provide additional funding for Via to offer shuttle bus service from rail stops to nearby communities. Via Rail should also improve its integration with existing provincial bus networks, using rural and remote stops as safe regional transportation hubs that enable seamless transfers across a Canada-wide network.

Recommendation #3: Expand the Rural Transit Solutions Fund to cover a greater range of costs, projects and applicants

The federal government should expand the Rural Transit Solutions Fund to build on its success. It can do this by expanding eligible costs to include operating costs such as leased vehicles, employee salaries and other human resources required to oversee routes, as well as the software required to manage on-demand services. The fund can also be used to support intercommunity travel across provinces and territories.

These adjustments will advance equitable and sustainable transit solutions across rural communities and will help the federal government meet its climate and poverty-reduction goals while facilitating reconciliation efforts with Indigenous communities.

CONNECTIONS TO OTHER AFFORDABILITY PRIORITIES

The Affordability Action Council has prioritized housing, transportation and food as key areas in which the federal government can take action to help low-income households meet their basic needs in ways that also support emission reduction and resilience to a changing climate.

Well-planned and affordable transportation options can improve access to employment and social activities and reduce the need to own a car in rural areas. In an accompanying policy brief on urban transportation, the Affordability Action Council recommends changes to the federal Incentives for Zero-Emission Vehicles Program that could likewise benefit rural drivers by providing incentives to the purchase of used electric vehicles. Smoother connections between regional bus and rail networks and urban public transit systems would improve transportation access and affordability across the country. More affordable transportation options would benefit household budgets as well as the environment, and free up spending for food to reduce food insecurity.

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REFERENCES

- Affordability Action Council. (2024). Rethinking urban mobility: Providing more affordable and equitable transportation options. Institute for Research on Public Policy.
- Barrette, P. D., & Charlebois, L. (2018). Winter roads and climate adaptation: Prospective solutions through R&D. Transportation Association of Canada 2018, Innovation and Technology: Evolving transportation 2018 conference and exhibition of the Transportation Association of Canada. https://www.tac-atc.ca/sites/default/files/conf_papers/barrettep_winter_roads_and_climate_adaptation.pdf
- Campbell, K. (2023). Even without carbon tax, heating oil still the most expensive way to heat your home. CBC News. https://www.cbc.ca/news/canada/prince-edward-island/heating-oil-carbon-tax-pei-1.7012855
- Canada Infrastructure Bank. (2021). Tshiuetin railway. https://cib-bic.ca/en/projects/trade-and-transport/tshiuetin-railway/
- Canadian Climate Institute. (2021). Sink or swim: Transforming Canada's economy for a global low-carbon future. https://climateinstitute.ca/reports/sink-or-swim/
- Canadian Institute for Health Information. (2012). Disparities in primary health care experiences among Canadians with Ambulatory care sensitive conditions. https://secure.cihi.ca/free_products/PHC_Experiences_AiB2012_E.pdf
- CBC. (2012a, August 7). Acadian Bus Lines shutting operations by November. *CBC News*. https://www.cbc.ca/news/canada/nova-scotia/acadian-bus-lines-shutting-operations-by-november-1.1224330.
- CBC. (2012b, October 12). South Shore bus route in the works. *CBC News*. https://www.cbc.ca/news/canada/nova-scotia/south-shore-bus-route-in-the-works-1.1200630
- CBC. (2012c, October 26). End of the line for daily Via Rail service in Maritimes. *CBC News*. https://www.cbc.ca/news/canada/new-brunswick/end-of-the-line-for-daily-via-rail-service-in-maritimes-1.1146257
- Council of Ministers. (2013). Connecting now to the future: A vision for transportation in Canada. https://www.comt.ca/Reports/Vision%20for%20Transportation%202013.pdf
- Department of Finance Canada. (2023). Lowering energy bills for Canadians across the country. Government of Canada. https://www.canada.ca/en/department-finance/news/2023/10/lowering-energy-bills-for-canadians-across-the-country.html
- Dupuis, J. (2014). VIA Rail Canada Inc. and the future of passenger rail in Canada. Library of Parliament Research Publications. https://lop.parl.ca/sites/PublicWebsite/default/en_CA/ResearchPublications/201555E
- Fairbairn, J., & Gustafson, L. J. (2006). *Understanding freefall: The challenge of the rural poor.* Interim Report of the Standing Senate Committee on Agriculture and Forestry. Senate of Canada, Committees. https://sencanada.ca/en/content/sen/committee/391/agri/rep/repintdec06-e
- Food Banks Canada. (n.d.). Northern food insecurity. https://foodbankscanada.ca/northern-food-insecurity/
- Government of B.C. (n.d.). Highway 16 transportation action plan. https://www2.gov.bc.ca/gov/content/transportation/transportation-reports-and-reference/reports-studies/planning-strategic-economic/highway16-action-plan
- House of Commons. (2023a, May 30). Improving bus connectivity in Canada, Report of the Standing Committee on Transport, Infrastructure and Communities. https://www.ourcommons.ca/DocumentViewer/en/44-1/TRAN/report-13/
- House of Commons. (2023b, September 25). Government Response to Report 13 Improving Bus Connectivity in Canada. https://www.ourcommons.ca/DocumentViewer/en/44-1/TRAN/report-13/response-8512-441-268
- House of Commons. (2024). *Petition e-4754 (Transportation)*. https://www.ourcommons.ca/petitions/en/Petition/Details?Petition=e-4754.
- Infrastructure Canada. (n.d.). *Housing and infrastructure project map*. Government of Canada. https://www.infrastructure.gc.ca/gmap-gcarte/index-eng.html.
- Infrastructure Canada. (2019). Rural opportunity, national prosperity: An economic development strategy for rural Canada. Government of Canada. https://publications.gc.ca/site/eng/9.875073/publication.html
- Infrastructure Canada. (2023). Infrastructure Canada 2022–23 departmental results report. Government of Canada. https://www.infrastructure.gc.ca/alt-format/pdf/drr-rrm/2022-23-drr-rrm-en.pdf

- Infrastructure Canada. (2024). Federal government and Nunavut invest more than \$194 million in critical infrastructure and transit projects across the territory. Government of Canada. https://www.canada.ca/en/office-infrastructure/news/2024/01/federal-government-and-nunavut-invest-more-than-194-million-in-critical-infrastructure-and-transit-projects-across-the-territory0.html
- Larijani, M. M., Nahornyi, T., & Crizzle, A. M. (2019). Using GIS to examine transportation connectivity in Saskatchewan. Journal of Rural and Community Development, 14, 87–99.
- Leach, A. (2022). Canada's oil sands in a carbon-constrained world. *Canadian Foreign Policy Journal*, 28(3), 285-304. https://doi.org/10.1080/11926422.2022.2120508
- Levesque, M. (2022). Governance models for rural accessible transportation: insights from Atlantic Canada. *Disability & Society*, 37, 684-710 http://doi.org/10.1080/09687599.2020.1828044
- Lovekin, D. (2021). *Diesel subsidies Simplified, Part I.* Pembina Institute. https://www.pembina.org/pub/diesel-subsidies-simplified-part-i
- Lovekin, D., & Heerema, D. (2019). The true cost of energy in remote communities. Pembina Institute. https://www.pembina.org/pub/diesel-true-cost
- Mirza, N. A., & Hulko, W. (2022). The complex nature of transportation as a key determinant of health in primary and community care restructuring initiatives in rural Canada. *Journal of Aging Studies*, 60, Article 101002. https://doi.org/10.1016/j.jaging.2022.101002
- Mobility Innovators. (2022). Evolution of on-demand transit services in Canada. https://mobility-innovators.com/evolution-of-on-demand-transit-services-in-canada/
- National Inquiry into Missing and Murdered Indigenous Women and Girls. (2019). Reclaiming power and place: The final report of the National Inquiry into Missing and Murdered Indigenous Women and Girls. https://www.mmiwg-ffada.ca/final-report/
- National Seniors Council. (2014). Report on the social isolation of seniors 2013-2014. Government of Canada. https://www.canada.ca/content/dam/nsc-cna/documents/pdf/policy-and-program-development/publications-reports/2014/Report on the Social Isolation of Seniors.pdf
- National Seniors Council. (2017). Who's at risk and what can be done about it? A review of the literature on the social isolation of different groups of seniors. Government of Canada. https://seniorsocialisolation.ca/wp-content/uploads/2019/04/nsc1.eng_.pdf
- OECD. (2021). Regional outlook 2021 Country notes: Canada. https://www.oecd.org/regional/RO2021%20Canada.pdf
- Office of the Auditor General of Canada. (2016). VIA Rail Canada Inc. Special examination report 2016. Government of Canada. https://www.oag-bvg.gc.ca/internet/English/parl_oag_201602_07_e_41251.html
- Ontario Northland. (2023). *Annual report* 2022-2023. Government of Ontario. https://ontarionorthland.ca/sites/default/files/corporate-document-files/AR-2024-EN_0.pdf
- Orb, R. (2021). Rural communities are essential to Canada's recovery. Federation of Canadian Municipalities. https://fcm.ca/en/resources/rural-communities-are-essential-canadas-recovery
- Saskatchewan Transportation Company. (2017). *Annual report 2016-2017*. https://www.cicorp.sk.ca/pub/Reports/STC%20Reports/2016-17-stc-annual-report.pdf
- Statistics Canada. (2022a). Population growth in Canada's rural areas, 2016 to 2021. Government of Canada. https://www12.statcan.gc.ca/census-recensement/2021/as-sa/98-200-x/2021002/98-200-x2021002-eng.cfm
- Statistics Canada. (2022b). Primary heating systems and type of energy. Table 38-10-0286-01. https://doi.org/10.25318/3810028601-eng
- Statistics Canada. (2023a). *Index of remoteness*. Government of Canada. https://www150.statcan.gc.ca/n1/pub/17-26-0001/172600012020001-eng.htm
- Statistics Canada. (2023b). 2021 census of population. Government of Canada.
- Transport Canada. (2018). The Government of Canada addresses Greyhound Canada's discontinuation of bus routes. News release. Government of Canada. https://www.canada.ca/en/transport-canada/news/2018/10/the-government-of-canada-addresses-greyhound-canadas-discontinuation-of-bus-routes.html

Transport Canada. (2020). Government of Canada announces new measures to support essential air access to remote communities. News release. Government of Canada.

https://www.canada.ca/en/transport-canada/news/2020/08/government-of-canada-announces-new-measures-to-support-essential-air-access-to-remote-communities.html

Transport Canada. (2023a). *Transportation in Canada*, 2022 overview report. Government of Canada. https://tc.canada.ca/sites/default/files/2023-07/transportation-canada-2022.pdf

Transport Canada. (2023b, October 13). Minister of Transport announces the launch of the request for proposals for the high frequency rail project. Government of Canada. https://www.canada.ca/en/transport-canada/news/2023/10/minister-of-transport-announces-the-launch-of-the-request-for-proposals-for-the-high-frequency-rail-project.html

Transport Ferrovaire Tshiuetin. (n.d.). Tarifs. Transport Canada. https://www.tshiuetin.net/tarifs

Via Rail Canada. (n.d.). Explore Canada by train. https://www.viarail.ca/en/explore-our-destinations/trains

VIA Rail Canada. (2022). *Annual report* 2022. VIA Rail Canada. https://media.viarail.ca/sites/default/files/publications/VIA%20Rail_2022%20Annual%20Report_0.pdf