



Assessing the efficacy of instruments for the delivery of rural broadband

Executive Summary

Institute of Fiscal Studies and Democracy at
the University of Ottawa

Helaina Gaspard, Ph.D.
Sahir Khan

The authors wish to recognize the contributions of key informants and experts, including senior federal government officials, academics, and community and industry stakeholders in this work.

This report was prepared at the request of TELUS Communications.

The views expressed here are those of the author and do not necessarily represent the views of TELUS Communications.

Executive summary

Rural broadband connectivity is a challenge. Nearly 99% of urban households have a 50/10 connection standard, relative to approximately 46% of rural households, with broadband availability at 35% of households on First Nations reserves.¹ Canada is falling short of the goal of a universal service objective.

Canada's rural broadband challenge is fundamentally about connectivity. Connectivity is a matter of 'hard' infrastructure and technology to bring broadband to rural places, but it also requires a digital culture and uptake in a community for sustainability. As the COVID-19 pandemic has underscored, broadband is an essential service and a public utility. From accessing education to supporting agriculture, connectivity is an integral means for participating in the economy and society.

Other countries like the United States, United Kingdom and Australia have also invested in rural broadband and leveraged various instruments to improve connectivity. In the United States, the Federal Communications Commission (FCC) asks the market to dictate the cost of building connectivity in unserved or underserved areas. In the United Kingdom, supplier-targeted subsidies and agreements with suppliers are intended to better align need and public money. While Australia had a vision for state-built fibre capable internet connectivity, its cost and current results suggest that a state-led initiative may not be a desirable approach for connection and risk management.

Abstracting from the reviewed cases, there is clear recognition that a subsidy for rural broadband and multiple technologies (e.g. fibre, wireless, satellite, etc.) are necessary to achieving connectivity. With low population density and variable terrain, costs for building the infrastructure for rural connectivity are higher than in urban areas creating a limited business case for private sector investment. To achieve universal connectivity, public subsidy is required. The public-private investment mix for rural broadband projects, ranges from 2/3 public and 1/3 private to 1/2 public and 1/2 private.

Federally, in Canada, nearly \$8B in expenditures through various programs and the Canada Infrastructure Bank has been allocated to rural connectivity initiatives. While the commitment is significant, only a fraction of that total (\$870M or roughly, 11%) has been reported as expended. Budget 2021 announced an additional \$1B for the Universal Broadband Fund (this and other commitments are subject to parliamentary approval).² The difference between the allocated funding and actual expenditures suggests that there are difficulties in recipients accessing funding and the federal government adjudicating applications.

¹ Canadian Radio-television and Telecommunications Commission (CRTC), "LTE and Broadband Availability," last modified December 10, 2020, <https://crtc.gc.ca/eng/publications/reports/policymonitoring/2020/cmr4.htm>.

² Budget 2021 also proposed amendments to the Telecommunications Act to facilitate broadband delivery, through information sharing and expedited decision-making.

The regulatory and funding environment for rural broadband would benefit from differentiation between practices for rural and urban places, by recognizing that different approaches to spectrum policy, deployment conditions and set asides are needed in different contexts. Canada's rural connectivity challenge is a regulatory and demand issue, not a supply challenge when appropriate resources are allocated to make the buildout viable. Supplying connectivity can be incentivized and industry is more likely to bring connectivity when demand for connectivity is met with resources to offset costs.

Three key messages are highlighted in the analysis of this report, based on lessons from other countries and the perspectives of key informants:

1) **Understand need from the bottom-up.**

All actors in Canada's broadband ecosystem, i.e. federal and provincial governments, industry, communities, need improved data on existing connectivity, user demand and potential to close gaps on a geographic basis.

2) **Leverage a variety of instruments.**

Canada is a large and geographically diverse country with varying levels of community engagement and government intervention on broadband. Using a variety of regulatory and funding instruments, can help to better align public subsidy and policy to need on the ground. A single approach will not be sufficient to achieve the goal of rural connectivity.

Regulatory and funding instruments include:

- a) **Tax credit:** Tax expenditures (tax credits) are used to incentivize behaviours or promote policy outcomes. While an expeditious tool, tax expenditures are also blunt instruments that do not guarantee investment in areas of need or deliver on specific standards (e.g. speed, timely deployment, etc.).
- b) **Grants and contributions (G&Cs):** G&Cs are mechanisms for government to transfer money to another entity to achieve a policy goal. The manner in which the funding is allocated and managed should be reconsidered to include approaches that better respond to policy goals.
- c) **Spectrum allocation:** Spectrum policy allocations and deployment conditions should be differentiated for urban and rural contexts. This means considering realities of geography, density and coverage objectives when allocating spectrum for auction.
- d) **Single door:** Accessing federal funding through a single point of contact would help to promote access. A single-door for programs that can be consolidated now could be explored, with other programs added as their requirements are reviewed and updated.
- e) **Reverse auction:** The reverse auction is an approach to align market forces to public funding. The winning bid meets the coverage and deployment requirements at the most reasonable price.

3) **Both political will and administrative action are necessary for change.**

The instruments reviewed in this report mostly require administrative and policy changes, most feasibly and expeditiously achieved with political direction that supports policy and program changes.

Improving rural broadband connectivity in Canada will be a joint effort between government, industry and communities. Their collaboration and cost-sharing are imperative to achieving the goal of connectivity.