

CANADA'S INTERNET PROBLEM

Canadians are being asked to “flatten the curve” to fight the impact of COVID-19.

This translates to an unprecedented reliance on the internet. Working from home, accessing healthcare services, communications, public safety, reliance on-line education, and social connections to name a few. For most rural Canadians, their internet service is inadequate at the best of times but in a case such as the pandemic it is unreasonably inadequate. Even after the pandemic, internet reliance is increasing exponentially. The Economic World Forum predicts more and more reliance on the internet for economic and social interactions. This situation should be a major wakeup call for Federal and Provincial leaders

The current COVID-19 pandemic has made it evident that rural Canada is a HAVE-NOT of high-speed internet.

Rural and remote communities in Canada are hit hard with inferior internet performance and low data caps. The restrictions under the pandemic is bringing the rural internet inferiority to the forefront. The recent announcements by Bell, Rogers and Telus to eliminate the data overage charges for their “home internet” customers was well received but very misleading. The decision applied to home fibre/cable/DSL internet customers but not their mobile wireless internet customers. Those that get their internet via a hub. The majority of rural internet is either satellite or mobile wireless internet. Performance is unreliable, inadequate, subject to bandwidth limitations, and customers are allocated low data caps by their internet provider. This is not sustainable and prohibitively costly.

Note - To put this in context is it important to understand the difference between home internet (fixed wireless) and mobile wireless which is very significant from a user experience perspective. Fixed wireless networks are designed for a specific number of users and performance and the number of users is predictable and generally as contracted. Mobile wireless has a fixed bandwidth capacity as well but is vulnerable to major swings in the number of users at any given time. For instance, many rural communities are part of what is known as “cottage country” where the population within a small geographical area can explode by 3 and 4 times for several months of the year when cottagers and visitors come into and through the area. If the community is along one of the major trans Canada highways, the numbers increase exponentially. Additionally, there is an issue with over subscription of services resulting in too many users on insufficient infrastructure whether it be satellite or wireless. As a result, promised speeds and resulting service levels are never obtained. All of these additional visitors and traffic create a major drain on the mobile wireless internet bandwidth capacity that was made available to the area. Performance degrades to almost unusable levels and is generally not as contracted.

Why is Rural Canada Lagging Behind?

When asked, people will tell you that the prominent reason for the lack of rural internet is insufficient funding. While funding is a critical factor, even billions and billions of dollars alone will not fix the significant lack of rural and remote internet in Canada. Solving rural internet requires real problem solving and that involves getting to the root cause. The following provides insight to the key problems and why the bar has been moved so slowly and immaterially over the past decade(s).

Consider:

- a) Who has Control of internet in Canada?

- b) How much of the problem can be attributed to the lack of a Comprehensive Canadian Broadband Strategy? and
- c) What is the level of Commitment to fixing the problem?

A. CONTROL OF INTERNET IN CANADA

- Canada's internet is controlled by the Oligopoly comprised of Bell, Rogers, and Telus
- In Ontario, the problem is exasperated as important infrastructure is owned by Ontario Hydro/Hydro One.

Both of these have serious ramifications to bringing high speed internet into rural Canada. Looking at these individually:

The Oligopoly (Bell, Rogers, Telus) control the following:

- a. Access to their networks – the oligopoly has built or acquired significant backhaul in Canada much of it continues to be publicly funded. For the most part they consider this network as “proprietary”. They control all access points to the backhaul. Access points are very limited and do not serve rural communities. While CRTC has mandated that the carriers provide access to these networks, in the real-world access is difficult and timely to obtain. The recent ruling by CRTC that Bell, Rogers and Telus provide wholesale access to their mobile networks (MVNO) resulted in threats by the three to cut jobs and reduce billions of dollars in investment in rural areas.
- b. Pricing – the Oligopoly set the pricing for internet services. Recently the Federal Government gave the big three wireless providers 2 years to cut prices by 25% for their 2 to 6 gigabyte data plans. Bell, Rogers, and Telus must reduce their mobile internet prices by 25% over 2 years. All three own budget brands (Bell-Virgin, Rogers-Fido, Telus-Koodo) who offer cheaper plans under 10 gigabytes. This DOES NOT afford the competition required by Canadians to bring prices down. According to their published revenue statements, the Oligopoly is colluding (as evidenced in their revenue statements) to maintain similar prices structures while at the same time accepting public funding and subsidies.
- c. Spectrum – to-date only the large players can afford to compete in the spectrum auction. Spectrum is often used by the big 3 carriers to push competition out of a community. Bell will go into a community, pick off the low hanging fruit (community clusters representing the best population density) and provide internet service with data caps to this cluster. Then leave the remainder of the community under-served with little hope of ever becoming served due to a poor ROI that could be achieved by local/regional providers. The Liberals recently announced that they will reserve space for regional providers in the upcoming 3.5 GHZ spectrum auction in an effort to open up the wireless market to competitors. Success of this latest action will depend on spectrum pricing and policy.
- d. Wholesale capacity – the Oligopoly have control of the majority of Canada's backhaul. CRTC is attempting to force sharing of this capacity, however, the Oligopoly are resistant, slow to respond to requests and make it difficult through engineering and installation delays and costs.
- e. Data Caps – Rural Canada is served primarily by satellite and mobile wireless internet. Bell, Rogers and Telus are the primary mobile internet providers and even through their own budget

brands which provide internet access through their phone services, they throttle the speeds and/or allocate low data caps to their subscribers. Prices are high and as an example, Bell hub subscribers pay \$4.00 per gigabit of data when they go over the cap. The low caps are insufficient to meet the basic needs of most families. According to CRTC, in 2018 approximately \$76M in overage revenue was collected by internet providers. Was this reinvested in the network?

- f. Infrastructure expansion decisions – much of the pole infrastructure in Canada is owned by the Oligopoly and Hydro. This gives them an unfair advantage and CONTROL.
- g. Anticompetition – On the Competition Bureau website, Bell has 77, Rogers has 66, and Telus has 48 reported incidents regarding anti-competitive behavior including speed throttling. These are just the reported incidents.
- h. Security of Canadian's information and data – The Oligopoly has a significant amount of Canadian's information. This is available to them to monetize.
- i. The Media and Content – The Oligopoly are essentially vertically integrated businesses. They own the internet infrastructure, the media, and content. As media companies they can have a fair amount of influence on the information available to Canadians and government. Through this ownership, they have the ability to bend their message to their advantage unchallenged. These are very powerful companies with finesse and expertise on how to get what they want from government. This does not serve Canadians well!

It is obvious that the Oligopoly in Canada controls access to the Internet!

These companies are *accountable to their shareholders NOT to the greater good of Canadians. Their actions and behavior reflect this.* Canadians need to get control of internet. They have received billions of public dollars, directly and through subsidies to build internet infrastructure in underserved areas and yet rural Canada Ownership to infrastructure remains solely with the oligopoly and not to Canadians who have contributed significantly. It begs the question of why internet infrastructure is not a public asset OR at minimum where the public through government has some form of control over expansion and use of the current infrastructure?

In 2015 CRTC designated Internet as an essential service and established the standard to be 50/10. Over 60% of Canadians do not reach that standard. The Oligopoly still have not invested in rural Canadian due to their focus return on investment and not the standard set for internet for Canadians.

Ontario Hydro Collusion?

Is there an arrangement between Hydro and Bell to share poles that disadvantages the growth of the fibre footprint.

In Ontario pole infrastructure is considered an asset of Ontario Hydro. This infrastructure would readily enable internet infrastructure growth if the pole infrastructure was readily available and cost effective for regional and local ISPs.

Ontario Hydro's practices complicate the situation through policies and practices that make use of poles unreasonably expensive and for most regional ISPs unfeasible. High engineering costs and long delays

in permitting complicate things further. Ontario Hydro should be allowing third party internet providers to hang fibre at only the cost of the actual fibre and not the cost of upgrading or replacing the pole

Consider that Ontarian's have funded Ontario Hydro through taxes and revenues. The poles should absolutely be a public asset that can be made available to regional and local providers.

Based on the fact that both Federal and Provincial dollars are being made available again for internet infrastructure, lets ensure these monies are used to expand internet infrastructure and not compensate Hydro's for their lack of pole maintenance - infrastructure that was built by public funds originally. We consider this to be double-dipping public funds.

B. CANADA DOES NOT HAVE A COMPREHENSIVE BROADBAND STRATEGY

Allocating funding for internet infrastructure without a comprehensive plan is like constructing a building without a build plan resulting in issues such as cost over-runs, material wastage, labour wastage, code infractions, etc.

The current environment of internet is complex with many disparate players, policies that are out of date and not effective, political agendas, data that reflects the oligopoly agendas vs fact, over-builds situations, ineffective use of public funds, no performance follow-up for funds provided, snail slow funding application processes, funding allocated and not spent. According to Globe and Mail article on March 8, 2020 only 27% of the planned monies allocated in the 2018-19 budget for internet infrastructure projects was spent.

A comprehensive Broadband Strategy is about more than just funding. It must address the known constraints, issues, sustainability and opportunities. Above all, Canadians must have a reasonable amount of control over the infrastructure and how it can be leveraged for expansion. Further, the strategy cannot be based on the 4-year election cycle or the Oligopoly's agendas. The strategy for rural internet must address the competition question and recognize that rural and regional providers should be a large portion of the solution.

C. REAL COMMITMENT TO HIGH SPEED INTERNET TO ALL CANADIANS IS LACKING

Real commitment to providing high speed reliable internet to rural and remote Canadians requires Government COMMITMENT and VISION. The same level of commitment and vision that politicians had for connecting Canadians with the Great Canadian Railway.

Why is it so much more difficult today to get high speed internet to all Canadians than it was to get electricity and telephone services to everyone in Canada and highways, rail services and public transit investments made in urban areas today? Is it that Internet is not considered as essential but rather a novelty tool? Or is it because decisions makers have high speed internet and do not understand the huge disparity? Or is it that the Oligopoly control so much of the internet and not Canadians?

The commitment to bringing internet at the standard set out by CRTC has to have at it's basic underpinnings the notion of demonetizing access to the Internet. As it stands right now the oligopoly treats access to the Internet as it treats the content that it creates and provides. The commitment of funding from both the federal and provincial level has been allocated with the understanding that it will help all Canadians access the Internet to the standards set forth by the CRTC. The way that system has

been set up or evolved unfortunately does not ensure that those funds will actually go towards creating network capacity; this is what we need to fix.

We need allies to ensure that the money set aside will actually go towards providing access to Rural Canadians, as opposed to revitalizing infrastructure for intermediaries. We need buy-in from Internet providers to cooperate to actually service the needs of Rural Canadians and have access to the Internet treated like an essential service, like we treat transportation in the form of roads and public transit, like we treat access to clean water electricity and the like. We need to ensure that in emergency situations that we find ourselves in the future, we don't have the magnification of the disparity country for our citizens that exists right now in this COVID-19 crisis and we need help to ensure that the interest of Canadians are put first as opposed to bottom lines and quarterly profits

List of Recommended Approaches and/or Policies (non-exclusive) that are essential to driving the change required:

1. Immediately to alleviate current bandwidth shortage, request ISPs and Canadian Military to deploy portable Cell on Wheels (COWS) with a priority to those areas where residents don't have internet.
2. Develop a holistic Canadian Broadband Strategy for rural internet
3. Partial ownership to infrastructure – how can the public get control for assets they have funded
4. No further monies to the oligopoly without terms favourable to the Canadian public particularly rural Canadians that will result in the objective set by CRTC
5. Policy changes will not be enough -good policy on bad policy will not fix root problem. Policies need to address the problems holistically not piece meal
6. Smaller regional players are quick to share networks and provide unlimited data – they are the answer to rural internet but they lack the incentives and capital to build.
7. Consider how to un-hinge the vertical integration of the Oligopoly (control of the infrastructure, media, and content. Canadians are NOT well-served with this situation.
8. Level the playing field for decisions made that impact policy (not all internet providers have the contacts and resources in Ottawa where policy and decisions are made – build this into the system to document number of meetings, number of meetings requested and turned down, why and how certain decisions and policies were made
9. Ontario Government should make Ontario Hydro's pole infrastructure a public asset and rework the rules for access by regional and rural providers.
10. All infrastructure projects like roads, pipelines, wind energy projects, etc. must include conduit for future fibre or they will not receive any public funding
11. Municipalities have an important role and need to be involved in decisions BUT do not have the funds to build fibre backbone on their own. Find better ways to tie Regional ISPs growth plans with Municipal needs. Regional ISPs are the answer to rural internet