

TELUS Submission to INDU

Submitted to the Standing Committee on Industry, Science, and Technology

Submitted on December 10, 2020

Submitted by Katie Preiss, Director of Government Relations on behalf of TELUS

Contents

Briefing Note: How better spectrum policy will close the rural-urban divide	2
Backgrounder: Fixing Spectrum Policy for Rural Broadband	3
Policy Paper: Cracking the rural broadband challenge	7
TELUS Indigenous Connectivity Report.....	7
GSMA: 5G and Economic Growth, and assessment of GDP impacts in Canada	7

Briefing Note: How better spectrum policy will close the rural-urban divide

How can we build out rural Canada on an accelerated timeline?

Closing the rural-urban connectivity divide by 2025 is both possible and achievable. In order to connect all Canadians on this accelerated timeline, a combination of connectivity services (wireline, wireless, and satellite) is necessary. Wireline, or fibre, is extremely expensive and time consuming to build, and geographic challenges can pose significant problems for delivery. To provide the connectivity that Canadians need now, wireless high speed internet is a time and cost effective solution that - with access to sufficient spectrum - can offer download speeds of up to 50 Mbps.

Government funding is an important component to closing the rural-urban divide, as it helps improve the business case for private sector companies looking to connect small communities. However, **government funding alone is insufficient to connect all of Canada by 2025**. Without access to sufficient spectrum, it is impossible to offer the wireless speeds and capacity necessary to serve rural communities with wireless high speed internet.

TELUS makes the following public policy recommendations to drive better rural connectivity outcomes for Canadians:

For upcoming spectrum auctions (3500 MHz, 3800 MHz, mmWave), TELUS recommends that the government encourage rural network investment and deployment by:

1. Imposing strong deployment conditions on spectrum licence holders to build infrastructure in rural and not just urban areas Canada, specifically:
 - a. A “**use it or lose it**” policy, that requires greater rural deployment within 3-5 years of a license grant; and progress reports should be required over 12 month intervals to ensure compliance. Failure to build in rural areas sufficiently would result in forfeiture of all or part of a spectrum license; and/or
 - b. Incentives to build networks by **rebating spectrum fees** when carriers complete rural builds.
2. **Maximizing the amount of spectrum** available for deployment to build out wireless connectivity in Canada. In the 3800 Mhz auction this means making as much as **400 MHz of total spectrum** available in the auction, in 100 MHz chunks.
3. **Ending set-asides** in all upcoming spectrum auctions. The last 12 years of spectrum set asides have failed rural Canadians. The companies that have benefited from these are sitting on hundreds of MHz of unused spectrum. An open auction would solve this problem because companies that want to build everywhere would be able to bid for all the spectrum equally. More money would also be generated by the auction which could be used for new broadband programs.

In addition, there are a number of easy reforms for existing spectrum licenses that could be used to accelerate rural broadband investment:

4. **Facilitating a secondary market** in spectrum so that companies looking to purchase spectrum from those who are just sitting on it can put it to use for Canadians. Today ISED makes these spectrum sales very complex and uncertain, which retards the market.
5. Offering **spectrum fee rebates** to existing licenses who grow and improve access to broadband for rural Canada.

6. **Stricter enforcement of existing rules** that take licenses away when deployment conditions are not met.

7. To identify opportunities for **federal leadership in coordinating the overlapping broadband investment programs** at the federal, provincial, and municipal level, helping to offset the costs of constructing new infrastructure.

Background: Fixing Spectrum Policy for Rural Broadband

Efficient spectrum policy, whereby spectrum is auctioned in an open format and licenses have meaningful deployment conditions, will achieve Canada's connectivity goals on accelerated timelines in a cost-effective manner.

What is Spectrum?

Spectrum refers to the radio waves that keep us all connected. From your AM/FM radio to your Wi-Fi router and your smartphone, all connected devices rely on different spectrum bands to relay and receive information. Spectrum is a public resource – just like water – and exists everywhere in the country. The Government of Canada regulates how spectrum is used, and by whom.

Telecommunications companies need access to spectrum to offer wireless coverage in Canada (including wireless high speed internet). They buy licences via federal government run auctions. Spectrum licences cover a specific geography (e.g. a province), and typically last for 20 years. They come with conditions that the licence owner must deploy – or use – the spectrum to serve a certain percentage of the population within a specific time frame.

Why is spectrum so important for rural Canada?

Because spectrum transmits through the air using antennas on towers or telephone poles, it is often cheaper and faster to cover a community with wireless connectivity than it is to install wired networks. Many rural and remote communities face additional geographic challenges that make running physical wires especially challenging. With enough spectrum deployed, rural Canadians can enjoy internet speeds over the wireless network equivalent to their urban peers.

Wireless connectivity can help to close the rural-urban connectivity gap sooner, and more cost effectively.

Wireless connectivity can help to close the rural-urban connectivity gap sooner, and more cost effectively.

Why isn't spectrum being used now to support rural communities?

Through a practice called “set asides”, the Government has earmarked up to 40% of the available spectrum for companies that do not invest to build coverage in rural areas. These companies are focused on urban networks where their business case is stronger, leaving rural Canadian behind. The problem is these spectrum licences last up to 20 years, with no accountability to rural Canadians.

The multi-billion dollar companies benefitting from this system have only deployed between 15-17% of their rural spectrum. TELUS has deployed close to 65% of our rural spectrum, covering 95.5% of rural Canadians where we hold licences [see chart on page 3].

Carrier	Rural holdings (Where they hold spectrum)	Rural deployment Rate
TELUS	169.5 MHz	63%
Shaw (set-aside eligible)	93.1 MHz	15%
Videotron (set-aside eligible)	127.7 MHz	17%
Eastlink (set-aside eligible)	90.1 MHz	15%

As set out above, the government has the opportunity to fix these issues by making more spectrum available and by putting it into the hands of companies that will invest in building rural broadband infrastructure.

Coordinating Broadband Funds

Over the past four years, the government has invested \$536.6M in the Connect to Innovate and allocated an additional \$1B over 10 years in connectivity programs in the 2019 budget, including the Universal Broadband Fund. These are valuable programs that have resulted in significant new projects, but they have challenges. Each program takes time to design and administer, and the application process can be arduous. They also have their own unique criteria, assessment and reporting obligations. There needs to be one set of criteria, one oversight mechanism and one service delivery window for provincial, federal, municipal and CRTC funds.

TELUS recommends that the government of Canada revisit its funding programs, specifically:

1. To identify opportunities for federal leadership in coordinating the overlapping web of broadband and connectivity investment programs at the federal, provincial, and municipal level, helping to offset the costs of constructing new infrastructure.

APPENDIX

Upcoming Spectrum Auctions

Upcoming Auction band	What it can be used for	When it will be auctioned
3500 MHz	Rural deployment, 5G	2021
3800 MHz	Rural deployment, 5G	2022
mmWave	5G, rural wireless high speed internet potential for small communities	2021

Rural deployment rates by province

BRITISH COLUMBIA

Carrier	Rural holdings (BC)	Rural deployment Rate
TELUS	199.3 MHz	75%
Shaw	110.0 MHz	21%

ALBERTA

Carrier	Rural holdings	Rural deployment Rate
TELUS	200.4 MHz	73%
Shaw	111.4 MHz	8%

SASKATCHEWAN

Carrier	Rural holdings	Rural deployment Rate
TELUS	199.2 MHz	18%
Shaw	220.0 MHz	54%

ONTARIO

Carrier	Rural holdings	Rural deployment Rate
TELUS	150.5 MHz	66%
Shaw	54.6 MHz	25.3%
Videotron	27 MHz	7.2%
Eastlink	11.6 MHz	0.6%

QUEBEC

Carrier	Rural holdings	Rural deployment Rate
TELUS	182.9 MHz	70%
Videotron	144.7 MHz	18%

NEW BRUNSWICK

Carrier	Rural holdings	Rural deployment Rate
TELUS	79.9	63%
Eastlink	110.0	0%

NOVA SCOTIA

Carrier	Rural holdings	Rural deployment Rate
TELUS	113.7 MHz	88%
Eastlink	110.0 MHz	0%

PRINCE EDWARD ISLAND

Carrier	Rural holdings	Rural deployment Rate
TELUS	130.0 MHz	70%
Eastlink	220.0 MHz	36%

NEWFOUNDLAND AND LABRADOR

Carrier	Rural holdings	Rural deployment Rate
TELUS	120.0 MHz	51%
Eastlink	90 MHz	0%

Policy Paper: Cracking the rural broadband challenge

Read the full paper here:

https://habitat.cdn.avp.telus.com/Documents/TELUS_Rural_Connectivity_Paper_-_Cracking_the_rural_broadband_challenge.pdf

TELUS Indigenous Connectivity Report

Read the full paper here:

https://assets.ctfassets.net/rz9m1rynx8pv/5ctQR51RpSZ736FBwiMNdg/fd34e2ac084405054429d1b637f05d70/TELUS_IndigenousConnectivityReport_TELUS.COM_SinglePages.pdf

GSM: 5G and Economic Growth, and assessment of GDP impacts in Canada

Read the full paper here: <https://data.gsmaintelligence.com/research/research/research-2020/5g-and-economic-growth-an-assessment-of-gdp-impacts-in-canada>