In the matter of

Standing Committee on Industry, Science and Technology
Study on Broadband Connectivity in Rural Canada

Submission of SHAW COMMUNICATIONS INC.

February 2, 2018

Introduction

1. Shaw Communications (Shaw) is pleased to submit these comments to the Standing Committee on Industry, Science and Technology (the Committee) to inform its study on rural broadband connectivity in Canada.

2. Shaw is proud to serve customers from Victoria to Thunder Bay with broadband internet, Shaw Go WiFi, cable video, and digital home phone service. Our state-of-the-art Direct-to-Home satellite distribution system, Shaw Direct, delivers television programming to customers across Canada. Our 2016 acquisition of Freedom Mobile has expanded our products to also include wireless voice and data services in Vancouver, Calgary, Edmonton, Toronto and Ottawa. We are in the process of upgrading our entire network to LTE, a process which will be complete in the coming months.

3. Shaw welcomes and supports efforts to ensure that all Canadians have access to advanced broadband services. Digital connectivity is increasingly the means through which Canadians experience their world, empowering and enhancing their engagement with one another and facilitating access to critical services such as health care, education and banking. Moreover, reliable broadband connectivity will be the backbone for economic growth in all regions of the country, the foundation for harnessing and commercializing innovation, and the key to sustaining Canadians' economic and social prosperity.

4. To achieve the Government's Innovation Agenda and broader economic development goals, Canadians in all regions of the country must be able to rely on broadband connectivity with the capacity to meet today's needs, backed by the capability and resources to maintain the continuous cycle of capital investment in networks, by industry, that will be required to keep up with Canadians' exponential demand for bandwidth going forward.

5. Telecommunications policy in Canada has long reflected a strong cross-party consensus on the importance of fostering sustainable competition by incenting industry investment in networks. The policy focus on facilities-based investment has produced extensive competition between cable and telephone companies across Canada, to the benefit of consumers and business.

6. Rivalry in Western Canada in particular has created one of the most competitive wireline markets in the world, driving high-value, broadly affordable internet services, and leading equipment and software suppliers to use British Columbia and Alberta for product and service trials.

7. The Committee's study on rural broadband is a well-timed opportunity to reinforce key policy principles that have been successful in fostering targeted investment in competitive networks, thereby driving greater connectivity in all parts of the country.

8. Shaw respectfully submits that, at this critical juncture, the Committee should recognize and recommend that:

    - The Government of Canada should promote sustainable competition in wireline and wireless broadband markets by maintaining its long-held focus on policies that support facilities-based investment;

    - The Government of Canada should reduce the imbalance in spectrum holdings between incumbent wireless providers and new wireless competitors. There is a particular problem in terms of access to lower frequency spectrum bands, which is required for achieving coverage outside urban centres and is essential for rural deployment and the promotion of wireless competition across the country;

    - The Government of Canada should amend the *Telecommunications Act* to clarify the CRTC's jurisdiction over the terms and conditions of access to all support structures required to build and maintain broadband networks;

    - The Government of Canada's future investments in broadband should initially be focused on connecting communities by investing in the transport or 'backbone' layer of the internet. Without the proper backbone facilities that are required to connect communities with broadband internet, public investments in the last-mile or the 'household-by-household' layer of the internet will be ineffective.

Shaw commitment to invest and compete

9. Through the course of 2016 and 2017, Shaw pursued several multi-billion-dollar transactions in a committed effort to enhance the availability and affordability of wireline and wireless broadband services for Canadians across our footprint, in both large and small communities.

10. Shaw has invested billions of dollars and over two million engineering hours to build Shaw's FibrePlus network: a 100% fibre backbone that spans over 860,000 kilometers. By combining the speed of fibre with the durability of coaxial, Shaw's FibrePlus network provides our customers with the ultra-broadband experience, while ensuring optimal long-term growth of our broadband infrastructure.

11. This investment enabled Shaw to transform the competitive landscape in Western Canada with our launch of *WideOpen Internet 150*, Shaw's top-tier internet plan, in July 2016. *WideOpen Internet 150* provides Shaw's customers in 99.3% of our footprint – including both urban and rural communities—with download speeds of 150 Mbps, and is available with unlimited data. Shaw has been able to do this with the existing coaxial connections that connect our customer's businesses and homes to nodes on our FibrePlus network.

12. Again, Shaw launched this product at the same time in nearly every community we serve, rather than deploying it in the big cities first, and rolling it out to rural areas over the course of several years, as some of our competitors have announced. Today we provide ultra-fast broadband to a broader footprint of both urban and rural communities than any other Western Canadian provider.

13. Shaw has also built Canada's largest Wi-Fi network, with more than 100,000 Shaw Go WiFi hotspots in over 100 communities across Western Canada, both urban and rural. Access to the network is complimentary for Shaw internet customers, enhancing broadband connectivity outside of the home. The service is also available on a complimentary basis to non-Shaw internet customers in tens of thousands of municipally-owned spaces, including municipal buildings, parks, recreation facilities and transit stations.

14. Since launching, we have harnessed the power of the Shaw Go WiFi network in times of emergency to help families and first responders stay connected. Examples include opening up the service to Southern Alberta Residents during the 2013 floods, and again, to the entire community of Fort McMurray, and affected areas, during the fire of 2016.

15. Shaw's acquisition of *Freedom Mobile* in 2016 marked the introduction of a strong competitive challenger within Canada's wireless space. In the past eighteen months alone, Shaw has invested billions of dollars in our wireless initiative with a view towards providing a differentiated, high-quality, and sustainable alternative to meet Canadians' rapidly increasing demand for data and high-speed connections.

16. Shaw is a Canadian connectivity success story. Through our converged network strategy, we will offer a seamless, always-on, ultra-broadband experience for Canadian consumers and business. Shaw delivers the same level of connectivity to all of our customers, whether they live in urban or rural areas. The Government of Canada's focus on fostering facilities-based competition is a large part of the reason we are able to offer both urban and rural customers in 99.3% of our footprint ultrafast broadband at affordable prices, with options for unlimited data.

17. However, competition in Canada's wireless market is inadequate, as it continues to be dominated by the large, national wireless players that enjoy significant spectrum and other advantages over new competitors like Shaw, particularly in lower frequency spectrum bands that are essential to achieving coverage in areas outside of urban centres. We need continued support for facilities-based competition in wireless, as it will require a combination of technologies –both wireline and wireless—to bridge connectivity gaps that remain in much of Canada.

The opportunity before the Standing Committee on Science, Industry and Technology

18. The Committee has a clear opportunity to articulate policy objectives that will inform the legislative review process. Shaw respectfully offers the following four recommendations that the Committee should adopt in its final report on this study.

Recommendation 1: The Government of Canada should promote sustainable competition in wireline and wireless broadband markets by maintaining its long-held focus on policies that support facilities-based investment.

19. As noted above, successive Governments across the political spectrum have recognized that sustainable competition requires policies that encourage facilities-based investment. As Canadians' internet use continues to increase exponentially, network providers are in a cycle of constant re-investment in broadband networks, to meet growing demands for capacity. The pace and scope of network investment in Canada has created an intensely competitive broadband market, particularly in the wireline segment.

20. Facilities-based competition in wireless from Shaw and other new competitors is still in a very early phase. Continued focus on policies that promote facilities-based competition will provide more wireless broadband options for the broadest possible segment of our population. Wireless represents a key platform for enhancing connectivity in many hard-to-connect areas of the country. By contrast, any shift in focus to put a policy priority on 'service-based competition' (i.e. application-layer companies that resell access to another company's network, but who do not invest in any spectrum or networks of their own), would undermine incentives to invest in expanded networks, which will in turn jeopardize the prospects for long-term, sustainable and differentiated wireless competition in both urban and rural/remote markets, and have a negative impact on the Government's Innovation Agenda goals.

21. Recent reports from both the Competition Bureau and the Department of Innovation, Science and Economic Development (ISED) clearly indicate that in those regions with a strong regional, facilities-based competitor to the main wireless incumbents, wireless services are more affordable for Canadians.[i] Facilities-based investment has proven the most effective source of fostering sustainable competition in those regions.

22. The Government has charted a course to enable true, sustainable wireless competition in all regions of the country, by facilitating the build-out of, and further investment in, competitive mobile wireless infrastructure. Through this study, INDU should recommend that policy makers stay this course and remain committed to policies that encourage facilities-based investment.

Recommendation 2: The Government of Canada should reduce the imbalance in spectrum holdings between incumbent wireless providers and new wireless competitors. There is a particular problem in terms of access to lower frequency spectrum bands, which is essential for rural deployment and the overall promotion of wireless competition across the country.

23. As a new competitor in wireless, there are fundamental barriers beyond a network operator's control that, absent the proper policy positioning, will prevent Canadians in rural areas from having access to the same level of wireless broadband connectivity as Canadians in urban areas. These barriers will become more prominent as we approach a 5G world, where virtually every piece of personal and business technology that contains a processor will be connected to the internet.

24. Lower frequency spectrum with long wavelengths is particularly well suited to covering long distances with a small number of antennas. Mobile wireless networks that operate on lower frequency bands will be a critical piece of the puzzle when it comes to introducing and enhancing rural broadband connectivity. However, Shaw, like other new wireless competitors, faces a substantial spectrum disadvantage, especially in low-frequency bands.

25. For example, Shaw currently has only 10 MHz of low-frequency spectrum, while each of the incumbent competitors has access to between 50MHz and 60Mhz. The Big 3 established incumbents enjoy a significant head-start, with decades of established presence and substantial amounts of valuable spectrum, much of which they did not have to pay for at auction.

26. This is why it is critical that the Government continue to support policies that ensure that new wireless competitors have sufficient access to spectrum–particularly lower frequency spectrum—as part of any strategy to connect both urban and rural Canadians to next-generation broadband networks.

Recommendation 3: The Government of Canada should amend the *Telecommunications Act* to clarify the CRTC's jurisdiction over terms and conditions of access to all support structures required to build and maintain broadband networks.

27. Canada's network operators rely on a variety of support structures (e.g. electrical utility poles) to attach telecommunications facilities (including fibre-optic lines, coaxial cables, and wireless antennas). This is particularly true in rural and remote areas, where low population density and a lack of high-capacity transport networks over long distances creates significant economic and deployment challenges. Enhancing access to existing infrastructure is essential.

28. In 2003, the Supreme Court of Canada ruled that, under the current wording of section 43(5) of the *Telecommunications Act,* the CRTC does not have authority over poles of provincially-regulated electrical utilities for the purposes of attaching telecommunication facilities. This has led to a patch-work of provincial regulatory oversight of infrastructure critical to carriers in fulfilling the objectives of the federal *Telecommunications Act.*

29. One key result of this situation has been a significant increase in charges carriers pay to attach their facilities to utility poles – charges that far exceed those approved by the CRTC for similar structures owned by incumbent telecom providers. This results from a skewed costing methodology used by electrical utilities, and approved by some provincial regulators, that see carriers pay a far higher proportion of the cost of a pole than what the CRTC allows.[ii] This situation is exacerbated by a lack of an effective appeals mechanism, as the mandates of provincial regulators do not empower them to weigh the objectives of the *Telecommunications Act* when reviewing and making decisions on pole attachment rates proposed by electrical utilities. As a result, the lack of legislation has made it more challenging to expand our network into rural and remote areas using existing support structures.

30. Since 2003, experts (including the *Telecommunications Policy Review Panel* established by Industry Canada in 2004)[iii] have recommended that the *Telecommunications Act* be amended to confirm the CRTC's jurisdiction to oversee the terms of access by federally regulated telecommunications carriers to all support structures necessary to deploy broadband infrastructure. While provincially-regulated utilities would continue to own and operate these support structures, and would continue to set rates for access to them, the recommended amendment would provide a measure of oversight by the CRTC of the rates assessed by electrical utilities that apply to federally-regulated carriers.

31. The Committee should adopt this recommendation in its final report on this study, to ensure that the pace and cost of rural broadband deployment in Canada is not negatively impacted by unpredictable and exponential price hikes by provincial utilities for access to the necessary infrastructure.

Recommendation 4: The Government of Canada's future investments in broadband should initially be focused on the transport or 'backbone' layer of the internet, before any focus on the 'last-mile' or household-by-household layer of the internet.

32. The Committee has heard from representatives of ISED and the CRTC that public investment will be a key component of bridging remaining digital divides for the foreseeable future. Shaw concurs with that assessment, and encourages the Government to maintain the approach underpinning ISED's Connect to Innovate program, i.e., incenting investment in backbone connectivity or 'transport networks' where they either do not exist or where existing facilities are unable to meet current and future demand. Experience shows that focusing public investment on connecting communities, as opposed to focusing on individual households, will maximize the potential for choice and sustainable competition in the mid-to-long run.

33. In order to close the remaining connectivity gaps in Canada, it will be essential to enhance high-capacity transport to rural and remote communities. It would be ineffective to direct public funding to last-mile or 'local access network' enhancements in communities where backbone transport facilities are either nonexistent, or do not have the necessary capacity to support access network demands. Even when local networks in remote areas successfully connect households, quality and reliability is limited by a lack of access to transport. There is no point in building isolated pockets of local networks without connecting them to the world.

34. Enhanced transport infrastructure will increase the quality, capacity and reliability of existing and future local access networks, including the development of diverse, competitive local networks. It fosters competition in local access networks by reducing the high cost or lack of transport that generally undermines the business case for investing in local access networks. Moreover, investing in transport will increase overall capacity so that Canada's broadband infrastructure can meet the exponential increases in traffic demands that will be a by-product of increased connectivity in a 5G-and-beyond world.

Conclusion

35. As the Government embarks on a review of the *Telecommunications Act*, Shaw commends the Committee for its foresight in conducting this important study at an opportune time. Shaw's four recommendations will assist the Government in meeting its connectivity and competition objectives, and in ensuring that all Canadians have access to diverse and dynamic broadband opportunities, with all of the benefits they confer to society and the economy.

36. Shaw appreciates the opportunity to share its views as part of this important process.

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I. [i] SEE *COMPETITION BUREAU STATEMENT REGARDING BELL'S ACQUISITION OF MTS* (FEBRUARY 15, 2017):

"…the Competition Bureau (Bureau) concluded that as a result of coordinated behaviour among Bell, TELUS and Rogers, mobile wireless prices in Canada are higher in regions where Bell, TELUS and Rogers do not face competition from a strong regional competitor. Conversely, the Bureau concluded that where Bell, TELUS and Rogers face competition from a strong regional competitor, prices are substantially lower. The Bureau concluded that the lower prices are caused by the presence of a strong regional competitor who can disrupt the effects of coordination among Bell, TELUS and Rogers."

http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04200.html

II. SEE ALSO *CELLPHONE PLAN PRICES DROP FOR MILLIONS OF CANADIANS* (DECEMBER 12, 2017):

"The study also found that competition is producing meaningful results for Canadians. In regions with strong competition, wireless prices are as much as 31 percent lower than the national average. While progress is being made, the Government will continue to watch market dynamics promote more competition so that all Canadians can have high-quality services at affordable prices."

https://www.canada.ca/en/innovation-science-economic-development/news/2017/12/cellphone_plan_pricesdropformillionsofcanadians.html

[ii] Recent applications by electrical utilities in Ontario have sought increases to the rates telecommunications carriers pay to attach cables and other facilities to utility poles of up to 300%. Ontario is already the most expensive jurisdiction in North America in this regard, and the recent price increases there and in other provinces stand to raise the cost of building and maintaining rural broadband networks, to the detriment of rural Canadians.

[iii] See Recommendation 5-1 *Telecommunications Policy Review Panel Final Report 2006:*

"The wording of subsection 43.(5) of the Telecommunications Act should be expanded to ensure that the CRTC has a clear power to resolve disputes and order access to support structures constructed on, over, along or under public or private property of all descriptions. These access rights should be defined to include the right to install, maintain, repair and operate transmission facilities as defined in the Act. Subsection 43.(5) should be amended to ensure that it applies to support structures owned by electricity utilities, municipalities and other parties."

http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10029.html