3 Landscape

3.1 Context

An extensive Landscape document, providing overall perspective and context to a wide range of trends, issues, and concerns relating to broadband, was developed for and released by the Calgary Regional Partnership in September 2016. A copy of the report can be downloaded from the noted website.[16] Among the various other reports written by Taylor Warwick Consulting Limited, the following may also be of interest to the readers of this report:

- *A Business Case for Next Generation Broadband*, completed for the City of Chestermere, April 23, 2017;
- *Regional Broadband Investigation – Needs, Opportunities, and Approaches at the Local Level and for the Calgary Region*, September 28, 2016;
- *Regional Broadband Strategy – Options & Financials*, prepared for the Alberta SouthWest Regional Alliance, January 16, 2015; and
- *The True Economics of Broadband*, completed for the Regional Municipality of Wood Buffalo, September 2009.

Although the environment and underlying technologies, together with an ever-widening array of applications and impact areas, continue to evolve quickly, the material presented in the Landscape report remains comprehensive and relevant. Since the release of that document, however, there have been a number of developments at the federal, provincial, and service provider levels that are worth noting. These are outlined below.

3.2 Federal Updates

3.2.1 Basic Service Ruling[17]

On December 21, 2016, the Canadian Radio-television and Telecommunications Commission (CRTC) declared Broadband Internet to be a basic telecommunications service. Until now, only voice services were '*basic'.* Existing universal service frameworks will now shift from voice to Internet, with a basic universal service of 50 Mb/s download and 10 Mb/s upload and the option of unlimited data. The CRTC set the deployment target of 90% of Canadian households by 2021 and 100% by 2031.

Whereas in the past, service providers have had to contribute 0.53% of their voice service revenues into a fund accessible to providers to improve services in areas that do not meet minimum voice service levels. These funds will now be used to support meeting the broadband Internet objectives in rural areas where it is not otherwise economical to do so. This fund is expected to grow to $750 million within five years. A further proceeding in 2017 will examine the preliminary fund guidelines established in this ruling. Should this proceeding finish by the end of 2017, money from the fund is unlikely to be dispersed until late 2018.

The ruling also set an objective to have the latest generally deployed mobile wireless technology (currently long-term evolution (LTE)) deployed not only in homes and businesses but along as many major roads as possible.

[16] https://www.dropbox.com/s/i4m68awenkb546d/CRP-Regional%20Broadband%20Investigation-Landscape%20Issues-FINAL.pdf?dl=0.

[17] *Modern Telecommunications Services – The Path Forward for the Canadian Economy*; Telecom Regulatory Policy CRTC 2016-496; 2016-12-21.

3.2.2 Connect to Innovate Program (CTI)

Announced on December 15, 2016, the Federal *Connect to Innovate Program (CTI)* from Innovation, Science, and Economic Development (ISED) Canada will provide up to $500 million in support of new high-capacity open-access backbone networks; upgrades to existing backbone networks; improving resilience; and last mile access connections by 2021. The program covers 75% of the costs of new infrastructure and 50% of the costs for upgrades. Applications required significant detail, including design details and costs, the identification of who will build, own, and operate the network. Preferences were to be given to applications with the most community benefit, cover communities with the least service, cover multiple communities and/or provide infrastructure that is scalable and services that are the most affordable. The application deadline for the program closed on April 20, 2017 and the funding recipients are now being announced.

At the March, 2017 Digital Futures symposium in Cochrane, program staff indicated that a follow-up program is likely within an 18-month timeframe. As these programs have historically favoured shovel-ready projects and the application windows short, interested municipalities would do well to use the interim period to develop suitable projects and have them ready for when the next funding round opens.

3.2.3 Statistics Canada

Statistics Canada released their 2016 Census Population and Dwelling Counts on February 8, 2017.[18] All related numbers in this document have been updated to reflect new data.

3.2.4 Federation of Canadian Municipalities (FCM)

Working in partnership with the municipal sector, the Federation of Canadian Municipalities (FCM) continues to advocate for the federal government to:

- Adopt a comprehensive and long-term funding mechanism for basic broadband access. The existing arrangement for basic telecommunications services is a good starting point and
- Update the basic service objective to include universal access to affordable high-speed broadband Internet at speeds that reflect present realities and guarantee long-term, reliable connectivity while continually re-evaluate its broadband speed targets to reflect technological advancements, changes in user needs, traffic, and network capacity

[18] http://www12.statcan.gc.ca/census-recensement/2016/rt-td/population-eng.cfm

The FCM continues to engage with Innovation, Science, and Economic Development to ensure that the needs of rural municipalities are considered in the rollout of the *CTI*. For example, FCM shared feedback from the communities that indicated that more time was needed to prepare their applications, and the deadline was extended from March 13, 2017 to April 20, 2017.

The FCM actively participated in the CRTC's 2015-134-5, *Review of basic telecommunications services*. The FCM's submission to the CRTC consultation called for universal access to affordable and reliable high-speed Internet and highlights the significant barriers faced by communities in both rural and northern Canada. In particular, FCM recommended that the CRTC expand its basic service objective to guarantee long-term, reliable broadband connectivity across Canada and to continually evaluate its broadband speed targets to reflect technological advancements and evolving user needs.

The CRTC is currently in the process of consulting on the design of a new broadband infrastructure fund. The CRTC is examining matters related to the fund's establishment including: eligibility and assessment criteria; eligible costs; roles and responsibilities; and governance and accountability. All levels of government are encouraged to participate in these consultations beginning later this year. The FCM will continue engaging with the CRTC to ensure that municipalities are consulted in the design of this program.

3.3 Provincial Updates

3.3.1 Service Alberta and the Alberta SuperNet Contract

The original SuperNet operating contracts expires at midnight, June 30, 2018. According to Stephen Bull, Service Alberta's Assistant Deputy Minister responsible for the SuperNet, Cabinet has made its decision regarding the future direction of the SuperNet. Work is now proceeding to finalize a Request for Proposals. Three service providers have been pre-qualified.[19]

3.3.2 Changes to the Municipal Government Act (MGA)

The *Municipal Government Act (MGA)* currently gives municipalities the option to work together on initiatives with neighbouring municipalities. This is about to change. All municipalities outside of the growth management areas (e.g., City of Edmonton region) will be required to develop an Inter-Municipal Collaboration Framework. The framework will formalize how municipal entities will work together to better manage growth, coordinate service delivery, and optimize resources.[20]

3.3.3 Regional Economic Development Alliance (REDA) Broadband Studies

3.3.3.1 A Provincial View

Courtesy of funding from the NADC (for this project) and EDT, regional broadband studies are underway province-wide – each building on the results of the previous studies. On completion of the studies, there will be the opportunity to aggregate the results to create a province-wide broadband view and use the outcome as a basis to influence policy.

[19] Bull, Stephen – Assistant Deputy Minister, Service Alberta, SuperNet Secretariat; *Northern Alberta Broadband Preparedness Project – Finalizing the Current State Report*; Email message to Doris Regula; 2017-08-01.

[20] https://mgareview.alberta.ca/whats-changing/plan-for-growth/

3.3.3.2 Northern Alberta Broadband Preparedness Project

As outlined in the Introduction, the intent of the *Northern Alberta Broadband Preparedness Project* is to, at both the municipal and regional levels,

- Create a common understanding of both the potential benefits of enhanced broadband availability and the options available to realize them;
- Establish where each community is at and which are interested in pursuing broadband; and
- For those interested, which options might best meet their needs.

The work will then proceed to a feasibility review of the regional opportunities of most interest and develop a business case for those that garners the most support.

3.3.3.3 Calgary Regional Partnership (CRP)

The Calgary Regional Partnership (CRP) study was completed in September 2016 and all recommendations were unanimously endorsed by the Steering Committee, the Executive Committee, and the Board. A number of inter- and intra-municipality initiatives are now underway across the region.

3.3.3.4 Palliser Economic Partnership (PEP)

The mandate for the Palliser Economic Partnership (PEP) study is similar to the *Northern Alberta Broadband Preparedness* study, in that not only are strategic options to be developed, but also business cases for the options of most interest. Community engagement sessions were completed in June 2016 and by December, a set of options together with deployment cost estimates had been developed. A joint CRP/PEP backbone initiative is underway and business case estimates for the more promising options have been completed.

3.3.3.5 SouthGrow Regional Initiative (SouthGrow)

SouthGrow Regional Initiative (SouthGrow) issued a Request for Proposal for its broadband project in January 2017 and work commenced in February 2017. In this case, the emphasis is more on community engagement and requirements than deployment estimates and feasibility studies.

3.3.3.6 Broadband Toolkit and Portal – University of Alberta

Under contract to EDT, Dr. Michael McNally led a team at the University of Alberta to develop a document entitled, *Understanding Community Broadband – The Alberta Broadband Toolkit*. The document was released in early January 2017. In conjunction with the Toolkit, the group is creating an online portal to serve as a reference centre for related material.

3.3.4 Alberta Urban Municipalities Association (AUMA)

The Alberta Urban Municipalities Associations (AUMA) continues to advocate to the federal and provincial governments to address the lack of sufficient broadband service that affects many communities in Alberta. The AUMA has two active resolutions on broadband: Review of Broadband Internet and Broadband Internet Availability in Alberta. The first one was submitted by the City of St. Albert and requests the province to provide direct funding and support to municipalities for broadband. The second resolution's active clauses request that the AUMA establish a committee on broadband; work with REDAs and other organizations with similar mandates to advocate for affordable fibre optic-based Internet to Albertans; and continue to advocate for a provincial Broadband Policy. In February 2017, the AUMA released a bulletin, *Developing Broadband Solutions for your Community*, to assist members in determining their broadband needs.

The topic of broadband figures prominently during the AUMA's annual convention as well as during the two mayors' caucuses held each year. The AUMA conducted market research related to broadband with its members in 2016.

3.3.5 Alberta Association of Municipal Districts and Counties (AAMDC)

The Alberta Association of Municipal Districts and Counties (AAMDC) provides an advocacy voice for rural municipalities seeking ways to enhance rural broadband in their communities. It regularly engages with Service Alberta and ISED Canada to provide the rural Alberta perspective on challenges with rural broadband, funding programs, and existing infrastructure such as the Alberta SuperNet.

Over the past year, the AAMDC has worked with its members to gather a better understanding of their challenges, priorities, and initiatives related to developing rural broadband (e.g., AAMDC Broadband and SuperNet survey) and used the information to provide input into the development of the federal CTI program; the new Alberta SuperNet operating agreement; and the CRTC's review of whether broadband should be considered a basic telecommunications service.

Looking forward, the AAMDC plans to engage further with the CRTC when they begin the public proceeding related to the $750 million fund to support projects in areas that do not meet the CRTC's targets of speeds of 50 Mb/s download/10 Mb/s upload for fixed broadband Internet access services; an unlimited data option for fixed broadband access services; and the latest mobile wireless technology available not only in homes and businesses, but also along major Canadian roads. It will also engage with Service Alberta as they move forward in finalizing the new SuperNet operating agreement.

3.4 Service Provider Updates

TELUS Corporation (TELUS) is deploying fibre to mobility/cell towers and recently launched a SmartHub product that enables high-speed Internet using the 700 MHz spectrum to serve rural areas. TELUS' new SmartHub for rural customers offers speeds of 12 Mb/s to 25 Mb/s download. Three monthly plans are available (two-year contract) – progressively more expensive as the GB monthly data usage increases: $60 for 50 GB; $75 for 250 GB; and $110 for 500 GB. The Whitecourt Chamber of Commerce recently selected the higher-end service and is pleased with the results.

Bell Canada's (Bell's) Turbo Hub offers a similar service to rural communities with up to 150 Mb/s download and up to 50 Mb/s upload speeds with typical download speeds of between 12 Mb/s and 25 Mb/s (comparable to the TELUS offer). Monthly prices and data usage maximums are provided in Table 8.

Table 8 – Bell Turbo Hub Pricing & Data Usage Maximums

Price ($)	GB
$60	Up to 5
$75	5 to 10
$90	10 to 20
$110	20 to 50
$145	50 to 100

Rogers Communications' (Rogers') Turbo Hub offers '*light*' user and '*heavy*' user options, ranging from $10 for up to 100 MB monthly usage to $145 for between 50 GB and 100 GB usage per month.