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Item No. 7

Halifax Regional Council
August 14, 2018

TO: Mayor Savage and Members of Halifax Regional Council

Original Signed by 

SUBMITTED BY:

John W. Traves, Q.C., Acting Chief Administrative Officer

DATE: July 30, 2018

SUBJECT: High-Speed Internet Service in Rural HRM

INFORMATION REPORT

ORIGIN

Staff-initiated report based on recent federal and provincial activity.

LEGISLATIVE AUTHORITY

Halifax Regional Municipality Charter

Power to expend money

79 (1) The Council may expend money required by the Municipality for:

... (m) promotion and attraction of institutions, industries and businesses, the stabilization and expansion of employment opportunities and the economic development of the Municipality;

... (av) a grant or contribution to ... (v) any charitable, nursing, medical, athletic, educational, environmental, cultural, community, fraternal, recreational, religious, sporting or social organization within the Province;

Business and industrial development

71(2) The Municipality may not grant a tax concession or other form of direct financial assistance to a business or industry.

BACKGROUND / DISCUSSION

In March 2018, the Province of Nova announced the investment of a \$120 million in the Nova Scotia Rural Internet Funding Trust. That month, the Nova Scotia Department of Business released its Middle Mile Strategy to support current and future high-speed Internet infrastructure across the province. The middle mile infrastructure is the segment of a telecommunications network that links the core to local last mile facilities. It is also known as backbone infrastructure and includes fibre and fibre access locations, which are commonly referred to as POPs (points of presence).

In May 2018, the Province released its Last Mile Strategy, a blueprint for connecting residents and businesses to POPs.

In July, Waterfront Development Corp. was renamed “Develop Nova Scotia” and made responsible for strategic economic infrastructure and property, including rural broadband development.

This report outlines recent federal and provincial rural broadband decisions, strategies, and programs; issues HRM should consider when supporting rural broadband development; and, Develop Nova Scotia’s upcoming work to engage stakeholders on the roll-out of its Nova Scotia Internet Funding Trust (NSIFT).

Recent Federal and Provincial Decisions, Strategies, and Programs

Several federal and provincial decisions, strategies, and programs since 2015 are informing how high-speed Internet could be implemented in underserved areas in HRM. They include four key developments:

- 1. The CRTC’s ruling that broadband Internet is a basic telecommunications service.** In December 2016, the CRTC wrote that “Canadians living in rural and remote areas should have a level of broadband Internet access services that is similar to those available in urban areas.”¹ CRTC set service speed targets of at least 50 megabits per second (Mbps) download and 10 Mbps upload. The 50 Mbps target can accommodate higher Internet browsing and video streaming usage practices than a typical user and it can support multiple connected devices simultaneously within a household or business.²

A \$750-million federal fund is being established to support these targets. Funding criteria and processes are expected to be released in 2018.

- 2. The federal government’s Connect to Innovate Program.** In Budget 2016, the federal government committed to investing \$500 million by 2021 to bring high-speed Internet to rural and remote communities in Canada through the Connect to Innovate Program (CTI). CTI supports new “middle mile” infrastructure that transmits Internet to a point in a community for broader distribution and, to a lesser extent, “last mile” infrastructure that distributes Internet from the middle mile in a community to individual homes and businesses. The only intake for applications closed on April 20, 2017.

In May 2018, CTI announced \$17.7 million in funding to bring Internet to 64 rural and remote communities and up to 80 institutions in Nova Scotia. Projects included \$5.6 million to the County of Kings for a project that will provide 10 communities and 12 institutions with access to high-speed Internet.³

It is possible that HRM-based applications could still receive funding under CTI. The Sheet Harbour Chamber & Area Chamber of Commerce & Civic Affairs and possibly other groups have applied to the

¹ “Telecom Regulatory Policy CRTC 2016-496”, Canadian Radio-television and Telecommunications Commission, December 21, 2016. <https://crtc.gc.ca/eng/archive/2016/2016-496.htm> . Accessed July 31, 2018.

² *Nova Scotia Department of Business Middle Mile Strategy*. Brightstar. March 2018.

<https://novascotia.ca/business/Internet/middle-mile-Internet-strategy-report.pdf> . Page 5. Accessed July 31, 2018.

³ ISED News Release, May 4, 2018. Accessed July 30, 2018 at: <https://www.canada.ca/en/innovation-science-economic-development/news/2018/05/rural-and-remote-communities-in-nova-scotia-will-benefit-from-faster-Internet.html>.

program to fund work in the municipality. The outcome of their applications has not been announced.

3. **The Province's rural high-speed Internet review and supporting Middle Mile and Last Mile Strategies.** In spring 2015, the Department of Business contracted EY (formerly Ernst & Young) to review the state of rural Internet service in Nova Scotia. The consultant delivered its "Review of Alternatives for Rural High-Speed Internet" report (<http://novascotia.ca/business/docs/Broadband-Deliverable-Report.pdf>) in June 2016. The report assessed the current state of Nova Scotia's Internet service, technologies available, and roles for government in improving service. EY concluded that success for Nova Scotia will require a mix of technologies and key partners. Wired technologies (e.g., fibre and cable) offer better reliability while fixed wireless and satellite are also viable options.

Based on experience elsewhere, EY recommended that Nova Scotia build a long-term plan for middle-mile and last-mile infrastructure⁴. To these ends, the Department of Business engaged consultant Brightstar to prepare two reports in 2018 – a Middle Mile Strategy (<https://novascotia.ca/business/Internet/middle-mile-Internet-strategy-report.pdf>), released in March 2018; and, a Last Mile Strategy (<https://novascotia.ca/business/Internet/last-mile-Internet-report.pdf>), released this past May.

Based on consultations with the public and Internet service providers, the Middle Mile Strategy states that a middle mile infrastructure enabling last mile Internet service speeds of up to 50Mbps download for wireline last mile services and up to 10Mbps download for wireless last mile services should be built over the next ten years. It should serve more than 95 per cent of populated rural property locations across Nova Scotia. According to the report, most of the balance of populated rural property locations could be serviced through satellite technologies which do not rely on middle mile infrastructure. The Mbps target is consistent with the CRTC's ruling mentioned above. Based on what has been experienced in other jurisdictions in North America, Brightstar speculates that public subsidies in the range of \$300 million to \$500 million may be required to build the middle- and last-mile infrastructure in Nova Scotia.⁵

The Last Mile Strategy released this past May reaffirms this total estimated cost and recommends the following:

- **Coverage** – at least 95% of populated property locations outside of urban Sydney and urban Halifax;
- **Speed targets** – 50 Mbps download /10 Mbps upload for Wired and 25 Mbps download /5 Mbps upload for Wireless;
- **Timeline** -- build the infrastructure in 2-5 years;
- **Finances** – government and its partners provide investment as required to alleviate market failure and create the business case for private sector to proceed; subsidies provided should support capital costs and not be provided for ongoing operating expenses; and,
- **Process** – a competitive process for all services, inclusive of those that may have limited providers, such as satellite.⁶

The Middle Mile and Last Mile strategies would have informed the Province's establishment of the Nova Scotia Internet Funding Trust announced this year.

⁴ In this context, "middle mile", "backbone", and "point of presence" refers to the infrastructure needed to bring Internet to a point in a community for broader distribution, while "last mile" is the infrastructure that distributes Internet from the middle mile to individual homes and businesses.

⁵ Middle Mile Strategy, Page 5-6.

⁶ <https://novascotia.ca/business/Internet/last-mile-Internet-report.pdf>, 5.

4. **The Nova Scotia Rural Internet Funding Trust and Develop Nova Scotia.** On March 15, 2018, the Province announced the creation of a \$120-million Nova Scotia Internet Funding Trust (NSIFT) to leverage funding from the private sector, federal government, municipalities, and others to connect businesses and households to high-speed Internet and to enhance service delivery for under-served communities.

In July, Waterfront Development Corp. was renamed “Develop Nova Scotia” and made responsible for strategic economic infrastructure and property, including rural broadband and the NSIFT. Throughout August 2018, Develop Halifax is holding community engagement sessions throughout Nova Scotia to discuss the organization’s vision and the provincial rural Internet strategy.

On July 26, 2018, the Province announced a further \$73 Million in funding to be placed in the Trust, bringing the total funding envelope to \$192 Million.

NSIFT is more ambitious than the Municipal and Community Rural High-Speed Internet Funding (MCRHSIF) Program the Province delivered in 2016/17. MCRHSIF made \$500,000 available for projects to enable municipalities or community groups to partner with Internet Service Providers (ISPs) to make immediate improvements to last-mile service. The program supported 22 projects in all, with a total investment of approximately \$1.4 Million. Four groups in HRM received funding: Goffs-Devon, Moser River, Watts Section and Harrigan’s Cove.

HRM’s Role

HRM has been involved in efforts to expand affordable high-speed Internet services to underserved, mainly rural, areas in the municipality. In February 2006, Regional Council included Rural Broadband as a priority project for the federal government’s Municipal Rural Infrastructure Funding program (MRIF). Council directed staff to investigate additional funding sources from other government agencies and private sector parties.

In April 2006, HRM released a Request for Proposal (RFP) to secure an agreement with a private sector Internet service provider to co-fund, build, manage, market and maintain broadband Internet access in the un-served areas of HRM. An evaluation committee selected the highest-ranking proponent based on greatest number of homes serviced for the funds available.

In March 2007, the Atlantic Canada Opportunities Agency (ACOA) committed \$1.1 million from the Innovative Communities Fund for the rural broadband project. HRM confirmed an additional \$945,919 from the Federal Government through the MRIF program, with the Province contributing \$607,200 as its share. HRM managed the project but did not contribute financially. The 2007/08 projects were part of provincial work to bring Internet service to all Nova Scotians. The program improved Internet service in the short term, but in the years since, expectations of availability and speed requirements have changed.

HRM was not the recipient of the MCRHSIF funds that benefitted four communities (Goffs-Devon, Moser River, Watts Section, and Harrigan’s Cove) in the municipality in 2016-17. In one project, the Halifax Partnership acted as project manager for a community group. In the other three, the groups themselves, or a local society, received the funds.

The new Nova Scotia Rural Internet Funding Trust offers an opportunity for HRM to more actively advance broadband infrastructure development. Before becoming involved to a greater degree, HRM should consider:

- **Its municipal mandate.** The provision of Internet service is inherently a private sector transaction between customers who want the service and ISPs who can provide that service. It is not a core responsibility of the municipality. However, governments recognize that Internet service provision is not always commercially viable and that some subsidization may be required to provide what is now often viewed as an essential service.

There is a case for affordable high-speed Internet being deemed a necessity. In a world where many fundamental services are moving to Internet-based platforms, having access to Internet is no longer a luxury. In rural HRM, interacting with municipal, provincial or federal governments or with private sector services like banking or utilities means either a trip to an office or using an Internet connection. Running a business in rural HRM also requires a minimal standard of Internet. If HRM wants to encourage economic development in rural areas, availability of affordable high-speed Internet is vital.

A report on Rural Benchmarks and Service Levels to the February 16, 2016 meeting of Regional Council made the point that economic development in the rural parts of HRM should drive service levels. That said, basic infrastructure like access to high-speed Internet service is a prerequisite for most modern economic development. While Internet may not be viable in some remote areas at costs the federal and provincial are prepared to subsidize, HRM should encourage funders and Internet Service Providers as much as possible to make better service available. In some cases, minimal municipal funding could help.

The Municipality is prohibited from granting a tax concession or other form of direct financial assistance to a business or industry, and its authority to invest in broadband Internet is limited to the placement of underground wiring, as per the Halifax Charter. The Nova Scotia Department of Municipal Affairs is consulting with municipalities regarding amending the Halifax Charter and Municipal Government Act to make municipal spending authority more flexible, thereby allowing municipalities to invest in broadband initiatives.⁷ Proposed amendments could be brought to the Nova Scotia Legislature as early as fall 2018.

- **Financing.** As noted, the Middle Mile and Last Mile strategies estimate that middle and last mile infrastructure required to bring 95% broadband coverage at targeted speeds throughout Nova Scotia could cost between \$300 and \$500 million, far greater than the Nova Scotia Internet Funding Trust envelope. In HRM, infrastructure investment required to provide service to 95% of rural property locations could be in the tens of millions of dollars.

Some local ISPs have studied the HRM situation and have identified where and under what conditions they can provide service. There are areas where the 75% construction subsidy that have been offered by federal or provincial programs makes it viable for private sector companies to participate. Larger subsidies will be required in more sparsely populated areas.

ISPs have made it clear that connecting everyone at CRTC speeds will be extremely expensive using the technologies they favour. Once infrastructure is in place, ongoing customer costs may be higher than residents or businesses are willing or able to pay, even if the rates are the same or similar to what is being charged to urban customers.

- **Access.** The availability of affordable high-speed Internet throughout 100% of the municipality is not possible using current technologies.
- **Technology solutions.** The two main Internet Service Providers (ISPs) in Nova Scotia – Bell Aliant and Eastlink – have shown themselves willing to cooperate if the business case for increased service can be made. Eastlink and Bell Aliant are not the only ISPs in Nova Scotia, and there may be other technologies available. EY noted that fixed wireless and satellite technologies could be viable in rural HRM. Discussions with one ISP suggested that for some parts of the municipality, far away from fibre optic cable, satellite links may be the most cost-effective way to deliver higher speed Internet.

⁷ "Power to Expend: Presentation to the Association of Municipal Administrators and the Nova Scotia Federation of Municipalities." Nova Scotia Department of Municipal Affairs. <https://www.nsfm.ca/news/703-follow-up-to-consultations/file.html> . Accessed July 31, 2018.

Seaside Wireless offers high-speed wireless Internet in several counties including Halifax. Seaside officials have attended broadband meetings held on the Eastern Shore and are interested in increasing their presence. (See <http://www.seasidehighspeed.com/splash.php>)

Non-traditional delivery methods could also be considered. For example, opportunities to leverage the LED streetlights wireless communications network to provide wireless Internet connectivity may exist. This functionality is not included in the current streetlight communications network and would need to be further investigated.

Several residents have written to HRM suggesting that the municipality consider “Community-owned Broadband” as a response to the needs of rural HRM. Community broadband offers an independent alternative to services provided by large telecom conglomerates. A community broadband network is typically invested in by the local government, and Internet services can be sold by municipalities themselves, nonprofits, small ISPs, co-operatives, public utilities, public-private partnerships, and other community organizations.”⁸ While the HRM Charter allows HRM to pay grants to community organizations to support broadband projects, it does not grant specific authority for HRM to spend money directly on the provision of broadband services (although, as mentioned, this may change).

- **Project management.** HRM's experience with the MCRHSIF showed that while there is considerable interest in providing better Internet service to rural parts of HRM, there is limited expertise in the organization in the subject matter. Community groups, for their part, often face capacity challenges accessing related federal and provincial support.

Next Steps

The Action Plan for Years 3-5 of the *Halifax Economic Growth Plan 2016-21* include an HRM and Halifax Partnership commitment (action #25) to grow rural economic development in a number of areas including broadband infrastructure.

Develop Nova Scotia is holding a series of community engagement sessions across Nova Scotia regarding its new mandate and the Nova Scotia Internet Funding Trust in August 2018. HRM will use this as an opportunity to identify potential ways to leverage federal and provincial funding and provide incremental support to the implementation of Internet infrastructure in the municipality.

FINANCIAL IMPLICATIONS

There are no financial implications at this time. However, if Regional Council were to consider funding the expansion of high-speed Internet to underserved areas in the municipality at a later time, the costs could be considerable. A financial analysis would be provided at that time.

COMMUNITY ENGAGEMENT

Lessons learned from the community engagement in the MCRHSIF project and community meetings on rural Internet service in 2017 have been built into this report.

A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

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⁸ See <https://community-broadband.ca/> for more information.