



HOUSE OF COMMONS  
CHAMBRE DES COMMUNES  
CANADA

# **REPORT 1, CONNECTIVITY IN RURAL AND REMOTE AREAS, OF THE 2018 FALL REPORTS OF THE AUDITOR GENERAL OF CANADA**

**Report of the Standing Committee on Public Accounts**

**Honourable Kevin Sorenson, Chair**

**APRIL 2019  
42<sup>nd</sup> PARLIAMENT, 1<sup>st</sup> SESSION**

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## **NOTICE TO READER**

### **Reports from committee presented to the House of Commons**

Presenting a report to the House is the way a committee makes public its findings and recommendations on a particular topic. Substantive reports on a subject-matter study usually contain a synopsis of the testimony heard, the recommendations made by the committee, as well as the reasons for those recommendations.

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# **THE STANDING COMMITTEE ON PUBLIC ACCOUNTS**

has the honour to present its

## **SIXTY-THIRD REPORT**

Pursuant to its mandate under Standing Order 108(2), the Committee has studied Report 1, Connectivity in Rural and Remote Areas, of the 2018 Fall Reports of the Auditor General of Canada and has agreed to report the following:







# REPORT 1, CONNECTIVITY IN RURAL AND REMOTE AREAS, OF THE 2018 FALL REPORTS OF THE AUDITOR GENERAL OF CANADA

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## INTRODUCTION

According to the Office of the Auditor General of Canada (OAG), Canada’s rural and remote regions are not able to access the same quality of Internet service as urban centres, despite various public and private sector investments to do so.<sup>1</sup> For example, in 2016, “about 96% of urban Canadians had access to broadband Internet speeds of 50 megabits per second (Mbps) for downloading data and 10 Mbps for uploading data (50/10 Mbps),” compared to only 39% for those in rural and remote areas.<sup>2</sup>

Broadband—or “high speed”—Internet infrastructure includes both the “backbone,” which is the main data route, and the “last mile,” which connects homes and businesses to the backbone.<sup>3</sup> Backbone connectivity occurs through two “main data routes: wired, which delivers data via a fibre optic cable (also called a fibre line); and wireless, which delivers data via a microwave station to a fixed wireless tower or a satellite.” Thereafter, end-users “access the backbone through a ‘last-mile’ connection, which may be a wired connection—via fibre, a digital subscriber line (DSL), or cable—or a wireless connection to a fixed wireless tower. Wireless last-mile connections can also be provided by satellites.”<sup>4</sup>

In Canada, the administration of telecommunications is shared as follows:

- The Canadian Radio-television and Telecommunications Commission [the CRTC or the Commission] is an administrative tribunal that regulates and supervises Canadian broadcasting and telecommunications. It operates at arm’s length from the Government of Canada.

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1 Office of the Auditor General of Canada (OAG), [Connectivity in Rural and Remote Areas](#), Report 1 of the 2018 Fall Reports of the Auditor General of Canada, para. 1.1.

2 Ibid., para. 1.2.

3 Ibid., para. 1.3.

4 Ibid.



- Innovation, Science and Economic Development Canada [ISED or the Department] is the federal organization responsible for supporting access to the Internet, setting legislative and policy frameworks, and managing [radiofrequency] spectrum frequencies efficiently and effectively to maximize the public benefits.<sup>5</sup>

The CRTC posits that access to broadband is crucial for all Canadians to participate in the digital economy, especially given the role the Internet plays in Canada’s economic, social, democratic and cultural fabric; to that end, it established a universal service objective of 50/10 Mbps to be achieved by 2032, along with a \$750 million fund to help meet it, with a focus on disadvantaged areas.<sup>6</sup>

The Parliament of Canada has also studied this matter; for example, in April 2018, the House of Commons Standing Committee on Industry, Science and Technology presented a report entitled [Broadband Connectivity in Rural Canada: Overcoming the Digital Divide](#), which explains that “preventing Canadians in rural and remote areas from participating in the digital economy creates a ‘digital divide’ that increases the challenges those areas already face.”<sup>7</sup>

Additionally, in June 2018, “the government announced a review of the [Broadcasting Act](#), the [Telecommunications Act](#), and the [Radiocommunication Act](#). This review is intended to consider whether any changes are needed to the legislative framework for the digital age.”<sup>8</sup>

In the fall of 2018, the OAG released a performance audit whose objective was to determine whether ISED and the CRTC, “according to their respective roles and responsibilities, monitored the state of connectivity, and developed and implemented a strategy to meet the connectivity needs of Canadians in rural and remote areas.”<sup>9</sup> However, the Office “did not examine the availability of high-speed long-term evolution (LTE) mobile broadband.”<sup>10</sup>

On 12 December 2018 and 21 February 2019, the House of Commons Standing Committee on Public Accounts (the Committee) held hearings on this audit. In

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5        *Ibid.*, para. 1.4.

6        *Ibid.*, paras. 1.5 to 1.9.

7        *Ibid.*, para. 1.10.

8        *Ibid.*, para. 1.12.

9        *Ibid.*, para. 1.13.

10       *Ibid.*, para. 1.15.

attendance, from the OAG were Jerome Berthelette, Assistant Auditor General, and Philippe Le Goff, Principal.<sup>11</sup> From ISED were John Knubley, Deputy Minister; Lisa Setlakwe, Senior Assistant Deputy Minister, Strategy and Innovation Policy Sector; and, Michelle Gravelle, Director General, Audit and Evaluation Branch.<sup>12</sup>

## FINDINGS AND RECOMMENDATIONS

### A. National Broadband Strategy

Various reviews of Canada’s telecommunications policy have recommended the creation of a national information and communications technology (ICT) strategy, including calls from the 2006 Telecommunications Policy Review Panel, the recommendations of the CRTC and the House of Commons Standing Committee on Industry, Science and Technology (see above).<sup>13</sup> Moreover, these reviews concluded that such a strategy would be best realized through the co-ordinated participation of both the public and private sectors.<sup>14</sup>

The federal government’s position has been that “the market-driven approach had served Canadians well. However, it admitted that certain rural and remote areas continued to have limited broadband access because of the challenging business case for private-sector deployment in those areas, and it acknowledged that more needed to be done.”<sup>15</sup> Furthermore, the OAG found that “targeted funding initiatives were not part of an overall plan to improve broadband access to all Canadians, including residents of rural and remote areas. The Department defended the current approach to improving broadband access by explaining that it did not want to set an objective that could not be reached with available funding.”<sup>16</sup>

In 2018, ISED endorsed the CRTC’s “minimum service speed target of 50/10 Mbps, but only for 90% of Canada’s population. It believed that the private sector and current government funding programs could achieve that level. In 2016, 84% of Canadians

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11 House of Commons Standing Committee on Public Accounts, *Evidence*, 1<sup>st</sup> Session, 42<sup>nd</sup> Parliament, 12 December 2018, [Meeting No. 128](#).

12 Ibid.

13 OAG, [Connectivity in Rural and Remote Areas](#), Report 1 of the 2018 Fall Reports of the Auditor General of Canada, paras. 1.25 to 1.28.

14 Ibid.

15 Ibid., para. 1.31.

16 Ibid., para. 1.32.



already had access to Internet speeds of 50/10 Mbps. The Department expected 90% would have access to these speeds by 2020. However, this left out 10% of the population: 3.7 million Canadians living in rural and remote areas. For them, the government had no plan to deliver speeds greater than 5/1 Mbps. The government expected that current and future public- and private-sector initiatives would improve access for those Canadians, although progress might be uneven across the country.”<sup>17</sup>

According to the OAG, in 2016, ISED “estimated that connecting all Canadians through fibre (with virtually unlimited download and upload speeds) could cost between \$40 billion and \$50 billion. Other technologies, such as fixed wireless or satellite, could provide high-speed services at a reduced cost. Department officials [explained] that with those technologies, it might cost at least \$6.5 billion to achieve a speed target of 50/10 Mbps in all areas of the country.”<sup>18</sup>

Consequently, the OAG recommended that ISED should develop a broadband strategy that:

- defines the minimum level of reliable and high-quality Internet service to be made available to Canadians;
- sets clear timelines for achieving this level of service;
- estimates proper resourcing, including financial and technical resources, as well as analysis of technologies and preferred options for improving broadband deployment cost-effectively; and
- monitors whether the improved access leads to the adoption of those Internet services.<sup>19</sup>

In response, the Department stated in its Detailed Action Plan that it “will develop a strategy, particularly in light of the following:

- the [CRTC’s] decision in December 2016 declaring broadband as a basic service; and

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17 Ibid., para. 1.34.

18 Ibid., para. 1.36.

19 Ibid., para. 1.37.

- the June 2018 announcement in which the government committed to reviewing Canada’s communications legislation, including the legislative tools needed to promote universal access.”<sup>20</sup>

The action plan further explained that in the spring of 2018, “the Department established the Federal-Provincial-Territorial Connectivity Committee, which is working collaboratively to examine service levels, priorities, principles, and gaps, as well as to develop coordinated plans of action.”<sup>21</sup> Moreover, in June 2018, ISED “launched a national digital and data strategy consultation—of which connectivity is a foundational component—in order to drive innovation, prepare Canadians for the future of work, and ensure trust and confidence in the digital world.”<sup>22</sup>

When questioned about why there had been no national strategy in place, John Knubley, Deputy Minister, ISED, acknowledged this, but also explained that there is now a more co-ordinated effort to address rural broadband connectivity, in large part due to the CRTC declaration that broadband is a basic service;<sup>23</sup> he also provided the following historical background:

Because no one could agree on a common technological goal: provinces might have 30 [Mbps] as a goal, for five to one. Technology is always an issue. Various players don't always agree on the extent to which the private sector will go in and solve a situation or where they will invest. As the Auditor General pointed out, in terms of value for money, a big issue is, how do you balance public investment with private sector investment?

The nuance that I'm trying to bring to this is that all governments in the last 15 years, of whatever stripe, have taken the approach of identifying specific gaps. It's a staged approach. What are the specific problems that we're trying to address? Are we trying to do the last mile, where we hardwire two households? Are we trying to do more backbone-type activity, where we take the broadband to a community, to a school? What's the best solution to help the community and to provide the best service to these very remote areas that Canada encounters across the country?<sup>24</sup>

Notwithstanding this progress, the Committee recommends:

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20 Innovation, Science and Economic Development Canada, [Detailed Action Plan](#), p. 1.

21 Ibid.

22 Ibid.

23 House of Commons Standing Committee on Public Accounts, *Evidence*, 1<sup>st</sup> Session, 42<sup>nd</sup> Parliament, 12 December 2018, [Meeting No. 128](#), 0945.

24 Ibid.



### **Recommendation 1—Regarding a comprehensive connectivity strategy for rural and remote areas**

**That, by 31 July 2019, *Innovation, Science and Economic Development Canada* provide the House of Commons Standing Committee on Public Accounts with a report outlining its progress with regard to developing and implementing a national connectivity strategy that A) adequately defines minimum reliability standards and service quality; B) establishes clear timelines for achieving this level of service; C) estimates proper resourcing, including financial and technical resources, as well as analysis of technologies and preferred options for improving broadband deployment in rural and remote areas; and, D) monitors whether the improved access leads to the improved adoption of those Internet services.**

### **B. Connectivity Funding**

Since 2014, ISED implemented two broadband funding programs to expand Internet access in Canada’s rural and remote areas:

CONNECTING CANADIANS was launched in 2014. It was a five-year, \$240-million program. It allocated funding for projects to install the “last-mile” connection for 280,000 households that did not have access to Internet speeds of 5 megabits per second (Mbps) for downloading data and 1 Mbps for uploading data (5/1 Mbps).

CONNECT TO INNOVATE was launched in 2016. It was a five-year, \$500-million program. It focused on bringing high-speed Internet to 300 rural and remote communities in Canada. The program provided support for backbone infrastructure to institutions such as schools and hospitals. It also allocated funding for backbone upgrades and for last-mile connections to households and businesses that did not have access to Internet speeds of 5/1 Mbps.<sup>25</sup>

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25 OAG, [Connectivity in Rural and Remote Areas](#), Report 1 of the 2018 Fall Reports of the Auditor General of Canada, para. 1.42.

### Data Issue

The OAG noted that ISED had accurate and detailed data about the current state of connectivity in Canada for both wired and wireless services, including geographic coverage, speed, and technology. The Department used this information to better determine which areas of Canada were eligible for funding under its Connect to Innovate program; it also made it available to provincial and territorial governments while respecting privacy concerns.

Source: Office of the Auditor General of Canada, [Connectivity in Rural and Remote Areas](#), Report 1 of the 2018 Fall Reports of the Auditor General of Canada, para. 1.45.

According to the OAG, the Department used quality data to publish a coverage map showing areas eligible for Connect to Innovate funding, divided into hexagons of 25 square kilometres.<sup>26</sup> If none of the households in a hexagon had access to speeds of 5/1 Mbps or greater, it was deemed eligible; conversely, if some households did, the hexagonal area was not eligible for funding.<sup>27</sup> In such cases, “an applicant interested in this area would have had to demonstrate their eligibility for the program.”<sup>28</sup>

ISED claimed that this map was intended “to avoid infringing on expansion plans of existing Internet service providers [ISPs].”<sup>29</sup> However, per the OAG, “a map showing complete and detailed connectivity information in rural and remote areas would have been more useful. All funding applicants would have known directly whether their projects were eligible. With the information provided, some funding applicants had to demonstrate the eligibility of their projects. The lack of access to detailed data may have increased the workload for some potential applicants. In addition, detailed information would help to guide future public- and private-sector deployment of broadband Internet.”<sup>30</sup>

Thus, the OAG recommended that ISED, in collaboration with the CRTC, “should make a detailed connectivity map publicly available and update it regularly while respecting the confidentiality of service providers’ data.”<sup>31</sup>

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26 Ibid., para. 1.46.

27 Ibid.

28 Ibid.

29 Ibid., para. 1.47.

30 Ibid.

31 Ibid., para. 1.48.



Although it agreed with the recommendation, in its action plan, the Department explained that the “maps of [ISED] and the [CRTC] are as detailed as can be published at this time while respecting the commercially sensitive nature of Internet Service Providers’ network information. The Department and the Commission continue to work with Internet Service Providers to refine the published maps.”<sup>32</sup> ISED’s action plan also provided the following:

- The Department will continue to collaborate with the Commission on the ongoing collection and maintenance of up-to-date connectivity information. In consultation with industry, the Department will continue to evaluate what further refinements are possible while respecting the commercially sensitive nature of information being used in the maps.
- To demonstrate a commitment to maintaining data accuracy, updates to the above data and maps will be made on an annual basis, following the scheduled CRTC release of the Communications Monitoring Report and discussions with ISPs.<sup>33</sup>

The CRTC also agreed with this recommendation and in its Detailed Action Plan stated that it will:

- continue to collaborate fully with [ISED], to the extent permitted by the confidentiality provisions of the *Telecommunications Act*, in order for the publication of data on broadband service availability in Canada to be done using the highest possible detail level.
- continue to collect and publish data pertaining to broadband availability in Canada, including provincial breakdowns and emerging delivery methods (such as Fibre to the home).<sup>34</sup>

When questioned about this matter, John Knubley further elaborated as follows:

We have what’s called the national broadband Internet service availability map. You can go and access it. All Canadians can get into the map itself. It’s really a searchable map. As I mentioned, it’s a summary of the current services by area. An area is typically

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32 Innovation, Science and Economic Development Canada, [Detailed Action Plan](#), p. 3.

33 Ibid., pp. 3-4.

34 Canadian Radio-television and Telecommunications Commission, [Detailed Action Plan](#), p. 1.



defined as a 25 [km<sup>2</sup>] area. It shows population and communities, and then it shows ISP footprints.

The challenge with the sharing of information is that some of that actual ISP footprint aspect is commercially sensitive. In that particular area, we have to aggregate some of the data. Also on our maps—we've mentioned the connect to innovate program—is the 2014 program, connecting Canadians. People can go on our map and see where the projects are.

Last, if 50/10 is our goal, the thing we've done with our map more recently—and we've been working with CRTC on this—is to try to show where the gaps are in terms of 50/10 service.<sup>35</sup>

Given the importance this Committee places on sound data collection and use, it thus recommends:

#### **Recommendation 2—Regarding a connectivity map**

**That, by 31 July 2019, *Innovation, Science and Economic Development Canada* provide the House of Commons Standing Committee on Public Accounts with a report outlining its progress with regard to making, in collaboration with the *Canadian Radio-television and Telecommunications Commission*, a detailed connectivity map publicly available and ensuring that it is updated regularly while respecting the confidentiality of service providers' data.**

### **C. Program Design**

The OAG “found that the Department conducted extensive consultations on the design of the Connect to Innovate program for broadband expansion and coordinated with provincial and territorial governments. For example, in Quebec, there was one application form for both the federal funding program and a comparable provincial program. The Department aimed to double its investments by requesting provincial funding to support Connect to Innovate projects. However, this approach did not maximize taxpayers’ money, as both provincial and federal funding came from taxpayers.”<sup>36</sup>

Unlike previous programs, such as Broadband Canada and Connecting Canadians, ISED decided that the Connect to Innovate program “would primarily fund backbone projects,

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35 House of Commons Standing Committee on Public Accounts, *Evidence*, 1<sup>st</sup> Session, 42<sup>nd</sup> Parliament, 12 December 2018, [Meeting No. 128](#), 0955.

36 OAG, [Connectivity in Rural and Remote Areas](#), Report 1 of the 2018 Fall Reports of the Auditor General of Canada, para. 1.49.



and that only a small portion of the funding would be for last-mile projects. Stakeholders indicated that funding backbone projects was a good decision because backbone connections are crucial for feeding last-mile networks that bring connectivity to users.”<sup>37</sup>

Although ISED intended to allocate funding for projects in underserved communities in areas that would otherwise not benefit from independent, private-sector investment,” it instead “determined that communities were eligible for Connect to Innovate funding if they were more than two kilometres away from existing fibre backbone infrastructure.”<sup>38</sup>

According to the OAG, the program did not require applicants “to demonstrate that their projects would not be feasible without public funding. The ability to predict which projects were likely to proceed without public funding, or with less public funding, is important: It would enable the Department to get the most broadband improvement out of the public funds and maximize the value for tax dollars spent.”<sup>39</sup>

Therefore, the OAG recommended that for “future broadband Internet funding programs, [ISED] should adopt a program design that

- maximizes the outcomes of public spending, and
- minimizes negative commercial effects on existing Internet service providers.”<sup>40</sup>

In its action plan, the Department committed to the following:

[Consulting] with the Federal-Provincial Territorial Connectivity Committee on how to define maximum benefits that optimize public spending and minimize negative commercial impacts on existing ISPs (Spring 2019).

[Conducting] a program evaluation of the Connecting Canadians and Connect to Innovate programs that will assess the extent to which these programs achieved their expected outcomes. The evaluation will also assess program implementation and delivery, including work with partners. The findings will help to inform future program design (December 2019).<sup>41</sup>

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37 Ibid., para. 1.50. Broadband Canada was a \$225 million program announced in [Budget 2009](#).

38 Ibid., para. 1.51.

39 Ibid., para. 1.52.

40 Ibid., para. 1.54.

41 Innovation, Science and Economic Development Canada, [Detailed Action Plan](#), p. 5.

In response to questions about this matter, John Knubley emphasized the Department's approach:

[Every] time we do a project on broadband in rural and remote areas, the challenges, the balance, the public investment and the private sector investment...we try to do the project in a way that does not crowd out private sector investment that otherwise would have taken place.<sup>42</sup>

Additionally, although Philippe Le Goff, Principal (OAG), explained that "there was no mechanism in the design of the program to verify whether the project[s] would have been funded by the private sector at a lower cost,"<sup>43</sup> Lisa Setlakwe, Senior Assistant Deputy Minister (ISED), provided the following clarification about how the Department evaluated project proposals:

I think that what the Auditor General said in particular was that we didn't specifically ask companies or applicants why public funding was required. In our estimation, we assessed that. We didn't specifically ask them to pronounce on that, but we assessed those things when we were looking at the applications.<sup>44</sup>

Given that the Committee is concerned about the rural-urban digital divide, it thus recommends:

### **Recommendation 3—Regarding future broadband programs**

**That, for future rural and remote broadband deployment programs, *Innovation, Science and Economic Development Canada* include A) conditions that consider strategies that maximize the outcomes of public spending and minimize negative commercial effects on existing Internet service providers; and B) measures to consider such objectives when evaluating project proposals. Additionally, that the Department provide the Committee with a timeline regarding the next rural and remote broadband connectivity program.**

## **D. Transparency and Coordination**

Although the Connect to Innovate program had a funding envelope of \$500 million, it "received 892 applications, with funding requests totalling \$4.4 billion. In some cases,

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42 House of Commons Standing Committee on Public Accounts, *Evidence*, 1<sup>st</sup> Session, 42<sup>nd</sup> Parliament, 12 December 2018, [Meeting No. 128](#), 1025.

43 Ibid.

44 Ibid.



multiple projects covered overlapping areas.”<sup>45</sup> To evaluate proposals, ISED used a multi-step process that included an initial eligibility screening; assessments by officials from the Department and the Minister’s office; and, final approval from the Minister.<sup>46</sup>

The OAG found that the program’s “application guide did not specify the relative weight of each criterion used in the project selection process. Projects were less likely to be funded if they did not align with provincial and territorial priorities. However, these priorities were not made public,” but should have been.<sup>47</sup> Additionally, “the infrastructure built with program funding had to be available for rental by other service providers at a set price. Open access is important to support the use and upkeep of the publicly funded infrastructure, as well as to foster local competition.”<sup>48</sup>

Lastly, the OAG reported that ISED encountered delays pertaining to the due diligence work required prior to signing contracts; this affects local Internet services providers, as they need to know the “planned availability date, location, capacity, and price of the backbone to which they will have access.”<sup>49</sup> In fact, as of “30 June 2018, nine months after the Department announced the first project to receive funding, only three contracts had been signed.”<sup>50</sup>

Consequently, the OAG recommended that in a timely manner, ISED should “inform stakeholders of the planned availability date, location, capacity, and price of the backbone to which they will have access.”<sup>51</sup>

The Department stated in its action plan that given that the “Connect to Innovate program has announced the majority of projects selected and a number of contribution agreements are in place, ISED will make available information for third party ISPs and stakeholders interested in accessing Open Access backbone services available from Connect to Innovate projects. Details will be published on the Connect to Innovate

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45 OAG, [Connectivity in Rural and Remote Areas](#), Report 1 of the 2018 Fall Reports of the Auditor General of Canada, para. 1.55.

46 Ibid., para. 1.56.

47 Ibid, para. 1.57.

48 Ibid., para. 1.58.

49 Ibid., para. 1.59.

50 Ibid.

51 Ibid., para. 1.60.

Program website and will include planned date, location, capacity and price. Details for signed projects will be published” effective December 2018 and thereafter.<sup>52</sup>

In light of the fact that the Department appears to have already addressed the key tenets of the OAG’s recommendation, the Committee will not make its own recommendation on this matter.

## E. Radiofrequency Spectrum Management

The OAG explained that wireless Internet services providers “expressed concern that the government did not make adequate and sufficient spectrum available to provide reliable broadband services in rural and remote areas,” and found that ISED “did not analyze the spectrum needed by service providers to improve broadband deployment in these areas.”<sup>53</sup>

In June 2018, ISED began consultations on converting the 3,500 MHz spectrum band to flexible use from the fixed broadband service for which it had been used.<sup>54</sup> Although the OAG found that this would increase available spectrum for mobile use, some providers believed it would reduce the “spectrum available for fixed wireless broadband solutions in rural and remote areas.”<sup>55</sup>

ISED’s spectrum auctions usually cover large geographic areas composed of urban and rural regions.<sup>56</sup> And although licence holders are required to provide service coverage to a set percentage of the area’s population, this can be achieved “by providing services primarily in the main urban centres in the licensed area.”<sup>57</sup> As such, the OAG found that the spectrum “deployment conditions did not provide a strong enough incentive for licensees to offer services outside the major urban centres covered by their licences. This resulted in unused licensed spectrum in rural and remote areas of Canada.”<sup>58</sup>

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52 Innovation, Science and Economic Development Canada, [Detailed Action Plan](#), p. 6.

53 OAG, [Connectivity in Rural and Remote Areas](#), Report 1 of the 2018 Fall Reports of the Auditor General of Canada, para. 1.70.

54 *Ibid.*, para. 1.71.

55 *Ibid.*

56 *Ibid.*, para. 1.72.

57 *Ibid.*

58 *Ibid.*



Also in 2018, ISED announced the licensing framework for the 600MHz band for its 2019 auction, which will include flexible use licences to allow for the deployment of both mobile and fixed wireless Internet services.<sup>59</sup> However, while this band is suitable for addressing rural and remote Internet access it also has potential for 5G (the next generation) mobile wireless technology; thus, competition for these frequencies could adversely affect rural connectivity.<sup>60</sup>

Additionally, although the Department adopted more stringent deployment conditions for the 600 MHz auction to be held in 2019—including timely availability of services in rural and remote areas—providers will not be “required to meet deployment conditions in the smallest population areas until the end of the 20-year licence period. As a result, the new deployment conditions may leave many rural and remote households underserved at the end of the licence period.”<sup>61</sup>

Finally, ISED “chose to set aside 40% of the spectrum in the 600 MHz auction for regional telecommunications providers,” to help “improve competition in auctions that generally favour big telecommunications providers. However, small wireless Internet service providers generally do not have the financial resources to participate in auctions for licences that cover large geographic areas. In [the OAG’s] view, the set-aside alone may not be sufficient to bring high-quality broadband coverage to smaller rural and remote areas.”<sup>62</sup>

Thus, the OAG recommended that to “foster the provision of wireless Internet services in rural and remote areas, [ISED] should review the way it manages auctions of spectrum, including design and requirements such as

- size of geographic areas,
- deployment conditions, and
- subordinate licensing incentives for unused spectrum in underserved areas.”<sup>63</sup>

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59 Ibid., para. 1.74.

60 Ibid.

61 Ibid., para. 1.75.

62 Ibid., para. 1.76.

63 Ibid., para. 1.77.

In its action plan, the Department explained that in June 2018, it had published its five-year Spectrum Outlook, including “plans to release more spectrum for mobile, satellite and licence exempt services to support broadband networks in all areas of Canada,” as well as the start of consultations on various radiofrequencies “to make flexible use spectrum available for 5G services in all areas of the country. Considerations include measures to maintain existing fixed wireless and satellite services in rural areas.”<sup>64</sup>

Additionally, ISED stated that it will:

- continue to develop policies that encourage service into rural areas;
- continue to address the needs of rural and remote communities when developing licensing rules, including consideration of the geographic size of licences and measures to increase deployment outside urban areas;
- study unused spectrum in underserved areas and consider approaches to make that spectrum available when there is a demand;
- continue to make spectrum available through a variety of licensing methods; and
- continue to foster mobile wireless Internet services in rural and remote areas.<sup>65</sup>

Regarding this matter, John Knubley reiterated that for the 600 MHz auction (scheduled to take place in 2019), the government “has set aside 40% of the spectrum for regional service providers.”<sup>66</sup> Furthermore, Lisa Setlakwe added the following:

[The] 600 megahertz spectrum auction has deployment conditions. We consult on all of these before we go out. Basically, we understand the issue of the spectrum being acquired and not being implemented or used, so we are requiring deployment conditions. We hear the same things, and we are putting measures in place at the opportunities that we have to get past this.<sup>67</sup>

Therefore, the Committee recommends:

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64 Innovation, Science and Economic Development Canada, [Detailed Action Plan](#), p. 7.

65 Ibid.

66 House of Commons Standing Committee on Public Accounts, *Evidence*, 1<sup>st</sup> Session, 42<sup>nd</sup> Parliament, 12 December 2018, [Meeting No. 128](#), 0900.

67 Ibid., 1040.



#### **Recommendation 4—regarding spectrum auctions**

**That, by 31 July 2019, *Innovation, Science and Economic Development Canada* provide the House of Commons Standing Committee on Public Accounts with a report outlining what progress has been made with regard to reviewing the way it manages spectrum auctions, including design and requirements such as A) size of geographic areas; B) deployment conditions; and, C) subordinate licensing incentives for unused spectrum in underserved areas.**

### **F. Accessing Unused Spectrum**

The [\*Radiocommunication Act\*](#) requires that a third party hold a licence, meaning that “ministerial approval is required for every trade. The Department aimed at completing the approval process for subordinate licensing within 12 weeks in normal circumstances. [The OAG] noted that the United Kingdom aimed to complete similar requests within half the time.”<sup>68</sup>

The OAG found “cases in which wireless Internet service providers in need of spectrum to provide their services had difficulty sub-licensing unused spectrum from licensees. This difficulty was partly because the information on unused spectrum was not readily available to interested Internet service providers. For example, the Department did not maintain a user-friendly database on unused spectrum. In some cases, however, it was not in the interests of the primary licence holder to sub-license some of its spectrum, even though the primary licence holder’s deployment conditions could be met through subordinate licences.”<sup>69</sup>

According to the OAG, several countries—including Canada—face long-standing challenges related to the establishment of a secondary market for spectrum licences.<sup>70</sup> In fact, as of June 2018, Canada’s “three main telecommunications companies held 1,351 spectrum licences that could be sub-licensed. However, the three companies had issued only 108 subordinate licences to regional and small telecommunications providers.”<sup>71</sup>

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68 OAG, [Connectivity in Rural and Remote Areas](#), Report 1 of the 2018 Fall Reports of the Auditor General of Canada, para. 1.78.

69 Ibid., para. 1.79.

70 Ibid., para. 1.80.

71 Ibid.



Therefore, the OAG recommended that ISED “should foster secondary markets for unused spectrum in underserved areas by

- gathering additional information from rural and remote stakeholders about the challenges they face in accessing unused spectrum;
- reviewing spectrum licensing conditions that promote deployment and secondary markets; and
- providing public information that would help service providers in rural and remote areas seeking to access spectrum via sub-licensing.”<sup>72</sup>

The Department, in its action plan, explained that in mid-2018, an initial “outreach to small wireless Internet Service Providers was conducted to review issues related to access to spectrum including those related to secondary markets,” and that by February 2019, studies “will be completed and a plan developed to address licensing rules or information gaps that are impeding access to spectrum by rural operators and to improve web-based information for wireless Internet Service Providers.”<sup>73</sup>

When questioned about secondary markets, Michelle Gravelle, Director General, Audit and Evaluation Branch (ISED), provided the following:

I would start by saying that our rules do allow for some licensing, and it's relatively easy, but that being said, the providers don't license very much. We have been reaching out to better understand this issue, so for smaller service providers, we've been trying to figure out what the challenges are that they're experiencing, and for the bigger providers, we're trying to better understand why they're not licensing.

The consultations are under way, the outreach with the stakeholders. We're looking to identify specific obstacles to secondary market transactions.<sup>74</sup>

John Knubley also explained that although “the department doesn't mandate secondary market access to unused spectrum, it's increasingly trying, as it deploys the spectrum, to put conditions on the players to ensure there is this kind of use.”<sup>75</sup>

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72 Ibid., para. 1.81.

73 Innovation, Science and Economic Development Canada, [Detailed Action Plan](#), p. 9.

74 House of Commons Standing Committee on Public Accounts, *Evidence*, 1<sup>st</sup> Session, 42<sup>nd</sup> Parliament, 12 December 2018, [Meeting No. 128](#), 1035.

75 Ibid.



Therefore, the Committee recommends

**Recommendation 5—Regarding fostering secondary markets**

**That, by 31 December 2019, *Innovation, Science and Economic Development Canada* present the House of Commons Standing Committee on Public Accounts with a report outlining its progress with regard to developing strategies to better foster secondary markets for unused spectrum in underserved areas.**

**CONCLUSION**

The Committee concludes that although ISED and the CRTC dutifully monitored the state of connectivity, detailed information was not shared publicly. Moreover, ISED did not develop and implement a national strategy to improve broadband Internet connectivity to a specific service level in rural and remote areas. However, the Committee acknowledges that progress has been made with regard to the coordination of efforts, as well as plans to better use spectrum, pertaining to rural broadband deployment.

In this report, the Committee has made five recommendations to help ensure the Government of Canada continues to strive toward improving broadband access for Canada's rural and remote regions.

## SUMMARY OF RECOMMENDED ACTIONS AND ASSOCIATED DEADLINES

Table 1—Summary of Recommended Actions and Associated Deadlines

Recommendation	Recommended Action	Deadline
Recommendation 1	<p><i>Innovation, Science and Economic Development Canada</i> should provide the House of Commons Standing Committee on Public Accounts with a report outlining its progress with regard to developing and implementing a national connectivity strategy that A) adequately defines minimum reliability standards and service quality; B) establishes clear timelines for achieving this level of service; C) estimates proper resourcing, including financial and technical resources, as well as analysis of technologies and preferred options for improving broadband deployment in rural and remote areas; and, D) monitors whether the improved access leads to the improved adoption of those Internet services.</p>	31 July 2019
Recommendation 2	<p>ISED should provide the Committee with a report outlining its progress with regard to making, in collaboration with the <i>Canadian Radio-television and Telecommunications Commission</i>, a detailed connectivity map publicly available and ensuring that it is updated regularly while respecting the confidentiality of service providers' data.</p>	31 July 2019



Recommendation 3	That, for future rural and remote broadband deployment programs, ISED should include A) conditions that consider strategies that maximize the outcomes of public spending and minimize negative commercial effects on existing Internet service providers; and B) measures to consider such objectives when evaluating project proposals. Additionally, the Department should provide the Committee with a timeline regarding the next rural and remote broadband connectivity program.	N/A
Recommendation 4	ISED should provide the Committee with a report outlining what progress has been made with regard to reviewing the way it manages spectrum auctions, including design and requirements such as A) size of geographic areas; B) deployment conditions; and, C) subordinate licensing incentives for unused spectrum in underserved areas.	31 July 2019
Recommendation 5	ISED should provide the Committee with a report outlining its progress with regard to developing strategies to better foster secondary markets for unused spectrum in underserved areas.	31 December 2019

## APPENDIX A LIST OF WITNESSES

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The following table lists the witnesses who appeared before the Committee at its meetings related to this report. Transcripts of all public meetings related to this report are available on the Committee’s [webpage for this study](#).

<b>Organizations and Individuals</b>	<b>Date</b>	<b>Meeting</b>
<b>Office of the Auditor General</b> Jerome Berthelette, Assistant Auditor General Philippe Le Goff, Principal	2018/12/12	124
<b>Canadian Radio-television and Telecommunications Commission</b> Ian Scott, Chairperson and Chief Executive Officer Christopher Seidl, Executive Director, Telecommunications Ian Baggley, Director General, Telecommunications	2018/12/12	124
<b>Department of Industry</b> John Knubley, Deputy Minister Lisa Setlakwe, Senior Assistant Deputy Minister, Strategy and Innovation Policy Sector Michelle Gravelle, Director General, Audit and Evaluation Branch	2018/12/12	124
<b>Office of the Auditor General</b> Jerome Berthelette, Assistant Auditor General Philippe Le Goff, Principal	2019/02/21	128
<b>Canadian Radio-television and Telecommunications Commission</b> Ian Scott, Chairperson and Chief Executive Officer Christopher Seidl, Executive Director, Telecommunications Ian Baggley, Director General, Telecommunications	2019/02/21	128

Organizations and Individuals	Date	Meeting
<p><b>Department of Industry</b></p> <p>John Knubley, Deputy Minister</p> <p>Lisa Setlakwe, Senior Assistant Deputy Minister, Strategy and Innovation Policy Sector</p> <p>Michelle Gravelle, Director General, Audit and Evaluation Branch</p>	2019/02/21	128

## REQUEST FOR GOVERNMENT RESPONSE

Pursuant to Standing Order 109, the Committee requests that the government table a comprehensive response to this Report.

A copy of the relevant *Minutes of Proceedings* ([Meetings Nos. 124, 128 and 131](#)) is tabled.

Respectfully submitted,

Hon. Kevin Sorenson, P.C., M.P.  
Chair

