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By email

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300 Slater Street
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Subject: SMSE-18-10 - Consultation on a Policy and Technical Framework for the 700 MHz Band and Aspects Related to Commercial Mobile Spectrum

1. Pursuant to the procedures established in *Consultation on a Policy and Technical Framework for the 700 MHz Band and Aspects Related to Commercial Mobile Spectrum* (“the consultation document”) the Ontario Telecommunications Association (“the OTA”) hereby submits its comments. These comments are filed on the behalf of the OTA members listed in the Attachment to this letter.

2. The OTA will not be addressing each of the questions posed by Industry Canada in the consultation document. These comments will focus on the questions raised in sections 7 and 8, namely issues surrounding promoting competition and service deployment in rural areas.

The Small Incumbent Local Exchange Carriers

3. At the outset, the OTA would like to provide some background information on the SILECs. These companies have been key players in the telecommunications industry in Ontario for as long as the large ILECs, in many cases for over 100 years, and are fully engaged experts in providing state-of-the-art communications services in rural and northern Ontario.

4. SILECs are structured variously as community owned co-operatives (e.g. Mornington Communications Co-operative Limited), municipally owned companies (e.g. Cochrane Telecom Services and the Dryden Municipal Telephone System) or privately held/share corporations (e.g. North Frontenac Telephone Corporation Limited and Wightman Telecom Ltd.).

5. SILECs operating in rural Ontario today have developed a workable business model and are well run and highly efficient systems that provide cutting-edge and high-quality telecommunications services in rural areas to the benefit of all customers in their rural operating territories. As such, SILECs are an economic and social linchpin in rural and northern Ontario.

6. Any overview of SILECs must begin first with their serving territories. SILEC operating territories range in size from a single exchange (e.g. the Roxborough Telephone Company serves the Moose Creek exchange) to six exchanges (i.e. Wightman Telecom Ltd). SILECs serve rural and northern areas of Ontario where population densities are very low.

7. Proof of low population density in areas of the province served by SILECs is available through the Federal Government's Ministry of Human Resources and Skills Development Canada. HRDC reports that in 2006, 80%¹ of Canadians lived in urban areas.² This same

¹ <http://www4.hrsdc.gc.ca/.3ndic.lt.4r@-eng.jsp?iid=34>.

² "Urban Areas" are defined as centres with a population of 1,000 or more and within areas with at least 400 persons per square kilometer.

webpage goes on to note that a higher than national average of Ontarians – 85% - live in urban areas. When this information is combined with the fact that SILECs serve rural and northern parts of the province, it is a simple matter to picture the types of geographic areas served by the SILECs and the associated population density. These areas are dominated by agriculture and very small communities.

8. SILECs have no large, lower cost urban centres in their operating territories. The villages or small communities that do exist in SILEC operating territories, while representing a large percentage of a SILEC's customer base, typically contain no more than 100 to 200 hundred houses and typically only small businesses. This inability to cross-subsidize between highly dense and profitable urban and rural operations has a direct impact on the positions taken by the OTA in response to the questions in the consultation document.

9. Despite the fact that they operate in rural, northern and low density areas, SILECs have not “rested on their laurels” as far as developing their networks and service offerings is concerned. Today, each SILEC operates a fully digital network and most if not all have made significant investments in switching technologies in order to provide advanced services to their customers.

10. The network modernization has not been limited to digital switching, however, as SILECs continue to push new technologies, such as fibre optics, into their operating territories. Many SILECs have installed fibre optic transmission systems deep into their operating territories to service remote switches for the provision of broadband Internet services. Some have even pushed this technology further into their networks via fibre to the home projects guaranteeing customers world-class quality and speed.

11. Industry Canada's *Spectrum Policy Framework for Canada*³ states that the department must act with due regard to the objectives of the *Telecommunications Act*. Section 7.(a) of the *Telecommunications Act* ("the Act") states that one of the Canadian Telecommunications Policy Objectives is to:

... facilitate the orderly development throughout Canada of a telecommunications system that serves to safeguard, enrich and strengthen the social and economic fabric of Canada and its regions.

SILECs contribute to the achievement of this objective by virtue of the fact that in their rural operating territories, customers have access to a truly cutting-edge suite of services. SILEC customers, however, are not penalized for living in rural or northern Canada, nor do they find themselves in a "no man's land" of inferior service.

12. SILECs not only offer all of the standard local telephony services, their customers also enjoy near universal access to broadband Internet services. Close to 100% of SILEC customers already have access to broadband. In addition, numerous SILECs offer their own television service either through purchased coax facilities or IPTV.

13. SILECs also have a unique ability to safeguard, enrich and strengthen the social fabric of Canada which supports section 7.(a) of *the Act*. They are embedded in their local communities by virtue of the fact that they are small, community-based, high-tech businesses that employ residents from their serving territories. They maintain high-technology businesses in northern and rural Canada in an age where the vast majority of Canadians now live in cities. SILECs maintain key working relationships with municipal governments and are often sponsors of local community teams and civic events. Individual SILECs have received recognition from their local communities in the form of "Customer First" and "Employer of the Year" awards.

³ DGTP-001-07, section 4.2.

14. These local relationships are uniquely characteristic of SILECs and are not matched by the large service providers that are generally indifferent to these outlying areas. SILECs also reinvest company profits back into their local economies and back into their systems. This ensures that the profits stay linked to the communities from which they are generated and are not funneled to interests with no stake in the community.

15. Once again SILECs have an excellent track record in providing service to their customers in all areas of their rural and northern serving territories. They contribute significantly to the achievement of the Policy Objectives in *the Act*. In many cases, SILEC are examples of what is possible in rural and northern areas given the correct conditions.

16. The SILECs have excelled in the provision of not only reliable Primary Exchange Service for their customers but in the advancement of new technologies and retail services for the benefit of their customers. The delivery of these levels of service were, and continue to be, motivated by the fact that the SILECs are deeply rooted in and committed to their local communities.

17. This excellent track record of service in rural Ontario should also not be lost on Industry Canada as it considers how to set conditions to ensure that all Canadians – both urban and rural – have access to the services provided over this spectrum. The large national service providers are not and will not be focussed on providing service in rural areas. Ensuring that SILECs have a realistic possibility of participating in this auction process will be one way that Industry Canada demonstrates its due consideration of the Policy Objectives found in the *Telecommunications Act*.

The Benefits of the 700 MHz Spectrum

18. The availability of 700 MHz spectrum is highly anticipated by all players in the market. 700 MHz spectrum will be an essential vehicle for delivery of high-speed, state of the art wireless broadband services in Canada not only in urban but in rural areas of Canada. The propagation characteristics of this band are better than any other currently licensed band. 700 MHz spectrum will travel farther and penetrate more obstructions even when using very low power devices and small antennas. As a result, 700 MHz networks require fewer antennas and towers to deliver service. These signals are less dependent on line-of-sight and so provide an ideal spectrum for rural and dispersed applications.
19. 700 MHz spectrum is not prone to interference and is more resilient to changes in weather conditions. These combined advantages would allow holders of 700 MHz spectrum to deploy more powerful wireless systems in areas that are hard to reach and at measurable cost savings. With higher power fixed devices and outdoor high gain antennas it would be quite feasible to design a network that could give unsurpassed coverage to rural customers.
20. For all of these reasons, 700 MHz spectrum is a valuable resource for all carriers in the Canadian market, including the SILECs.

Promoting Competition

21. In section 7 of the consultation document, Industry Canada seeks comments regarding the need to promote competition. Specifically, the consultation document focuses on spectrum aggregation limits (i.e. spectrum caps) and a spectrum set-aside. The OTA is in favour of the continued use of a spectrum set-aside for the up-coming 700 MHz auction. The set-aside should be limited to new and/or small non-national service providers.

22. A survey of the companies identified in Figure 4.3a of the consultation document confirms that all of the successful bidders in the AWS auction are significantly larger than the members of the OTA represented by these comments. Furthermore, as mentioned earlier in these comments, SILECs do not have large operating territories that encompass significant population centres by which they can cross-subsidize the roll-out of these services into rural areas. The population density of SILEC operating territories necessitates the availability of spectrum in smaller tier areas.

23. These smaller providers could extend the reach of services through this spectrum to Canadians that are currently unserved or underserved by leveraging their local presence and focus and their existing on-the-ground network footprint. However given the relative size of OTA Member companies and the prized nature of the 700 MHz spectrum it is obvious that without a set-aside, OTA member companies and other SILECs will be shut out of the bidding process on this basis alone, thereby frustrating the achievement of the Policy Objectives in the *Telecommunications Act* discussed earlier in these comments.

Promoting Service Deployment in Rural Areas

Question 8.1 [T]he Department seeks comments on challenges and specific problems affecting the deployment of broadband mobile services to low-density and remote areas.

24. Given that OTA member companies operate exclusively in low-density and remote areas they have a wealth of experience concerning the challenges and specific problems affecting the deployment of broadband mobile services to these areas. First of all, depending on the propagation characteristics frequency in use, deployment over a large sparsely populated area may require a disproportionate number of towers to ensure continuity of service and reliable service. The requirement to install a large number of towers to reach a comparatively small customer base is one factor that could dissuade a small service provider from deploying broadband mobile services to these areas. Although this would less of an issue with 700 MHz spectrum than with some other alternatives, generally speaking population density and large service areas typically increase costs for the small rural service provider.

25. Second, small rural service providers are typically landlocked by larger incumbent service providers. They cannot avoid the need for a roaming arrangement with the larger carriers that have more extensive coverage areas. The carrier seeking the roaming arrangement is typically at a disadvantage over and against the incumbent carrier. Smaller service providers who acquire 700 MHz spectrum will require economic roaming rates from the larger incumbent service providers. This cannot be left to market forces alone.

26. Third, as noted in these comments, SILEC are small carriers when compared to the large incumbent national carriers or even some of the new entrant wireless providers now in the market after the AWS auction. SILECs have limited access to capital and must ensure that these scarce resources are used to maximum effect.

27. Finally, rural service providers often encounter obstacles with regard to the availability of equipment tailored to the characteristics of their serving territories. It is often the case that transmission equipment (e.g. base stations) are designed for use in high-density urban areas and are standardized for those applications. Finding equipment for use in rural areas often requires equipment manufacturers to customize the equipment or decline to do so based on the business opportunity.

Question 8.2 Is there a need for further regulatory measures or changes to existing regulatory rules (e.g. RP-19) to facilitate service deployments in rural and remote areas that remain unserved and/or underserved?

28. The OTA would like the opportunity to address the RP-19 Policy. As the OTA understands it, the *Policy for the Provision of Cellular Services by New Parties* was published in 1998 and relates specifically to cellular services (i.e. 824-849 MHz and 869-894 MHz). In the context of this consultation process, the first step would be to broaden the scope of the services/frequencies covered by the Policy. Furthermore, the policy would have to be significantly revised if Industry Canada were to use it as a tool to further the roll-out of services to rural Canada.

29. As an aside, the OTA believes that successful bidders in the 700 MHz auction may be loath to give up any of this likely to be very expensive spectrum. Industry Canada will have to carefully consider the fact that this spectrum will have been won at auction. The members of the OTA can attest to the fact that wireless spectrum licences are a valuable asset. It is difficult to conceive of a situation in which a successful bidder in the up-coming auction would relinquish its rights to this spectrum without a fight.

30. The OTA notes that other parties have commented publically on the RP-19 process in the past. For example, in its comments regarding Gazette Notice DGRB-002-09 – *Consultation on the Renewal of Cellular and Personal Communications Services (PCS) Spectrum Licences*, dated 29 May 2009, Lynx Mobility Inc. submitted the following comments on the RP-19 policy. The OTA generally agrees with the following views as expressed by Lynx Mobility Inc. regarding the RP-19 policy:

31. RP-019 was initiated in an era of station licensing (as opposed to the current spectrum licensing) where every channel at every cell site required a separate authorization. More importantly, at the time it was unrealistic for a new entrant to be capable of affordably offering service in a small market or group of small markets on a stand-alone basis without almost complete reliance on a national incumbent. In addition, the way the Department licensed spectrum at the time was to give notice that a licence was becoming available and to initiate a comparative review if more than one entity expressed interest. Finally, cellular licensing had been around for a dozen years while PCS was in its infancy.

32. RP-019 reflects all of the above. It requires a separate process for each community, in line with station licensing, it encourages franchisee arrangements with an incumbent and includes a notice period inviting competitive applications. Finally, it applies to cellular and not PCS.

...

34. Thus, while RP-019 has the potential to result in a licence, the way is fraught with unnecessary risk and costly delays and runs counter to the interests of residents of these areas and ultimately counter to the Government's own objectives.

35. We would submit, therefore, that reclaiming unused spectrum and re-issuing it to bona fide new entrants on a first come first served basis is the best way to facilitate the introduction of wireless service in unserved areas in Canada's north.

The Alternative to Spectrum Reclamation – Redesign RP-019

36. From the foregoing, it is clear that our preference is for Industry Canada to reclaim spectrum unused in any complete Tier-4 area. However, should the Department for whatever reason decide that this is not its preferred course of action, we would suggest that Industry Canada consider making the following changes to RP-019 and thereby bring the licensing interval in line with other FCFS licensing processes such as land mobile.

37. As noted above, RP-019 is an archaic process sorely in need of updating. We identified four problem areas that lead to risk and delay; following are some suggestions for eliminating or at least mitigating these difficulties.

a. **Wide area applications should be permitted.** The current process requires a separate application and thus a separate process for each community. Consistent with spectrum licensing, a new entrant should be permitted to apply for an entire Tier 4 area, should it choose to do so, instead of having to submit a Letter of Intent for each individual community. In this way, information requests between new entrant, incumbent and Industry Canada would be minimized, reducing unnecessary bureaucracy and shortening delays;

b. **Prior negotiations with the incumbent should be eliminated in certain circumstances.** The current process requires prior (failed) discussions between the incumbent and the entrant. Once it has been established that no deal is possible, the Department then clarifies with the incumbent whether it has imminent plans for the community or area. This two-stage query, where the entrant attempts to negotiate first and then the Department clarifies the incumbent's intention can cause delays of up to three months. This is absolutely unnecessary, especially if, based on past discussions, it is known that the incumbent is not interested in working with a particular entrant. In such a case, the process should be permitted to move directly to the clarification stage.

c. **Timelines should be established and enforced for each stage including:**

- the interval from when the Letter of Intent is received by Industry Canada to when a letter is sent from the Department to the incumbent requesting clarification of its plans;
- The interval between the Department's letter requesting clarification and the incumbent's response.

d. **The notice period should be eliminated altogether or at least limited to the extent possible:** The current process requires 45 days notice in newspapers local to the community in question. The delay caused by this requirement can be upwards of double or more of the actual notice period itself since it involves the Department of Public Works which has its own set of procedures and timelines. In our view, the notice is completely unnecessary. The Department should declare that forthwith, any applications received under RP-019 will be considered on an FCFS basis, obviating the need for any notice whatsoever and eliminating close to three months or more from the process. Should the Department feel that some notice is required, it should be limited to the Canada Gazette, which is predictable, less costly and has minimal delays.

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38. With the above changes implemented, significant delay will be eliminated while many more options will be available to entrants who wish to use RP-019 to obtain spectrum in order to provide badly-needed service.

31. As an alternative to major reform of the RP-19 process and as briefly suggested by Lynx in its 2009 comments, the OTA proposes that Industry Canada should establish a transparent process whereby companies could apply to Industry Canada to reclaim licensed spectrum, in any frequency, not just 700 MHz, that is unused within a specified period of time after the licensing date. The OTA would like to suggest that that period be five years. The OTA is aware of the fact that in many rural areas surrounding its member companies' SILEC operating territories licensed spectrum is not being used and is simply lying fallow, even though the licensee may technically be compliant with its deployment conditions.

32. In this way, all industry players would have a set period in which to deploy spectrum in rural areas. Failing that, the spectrum would be available on a first come, first served basis for service providers to use in those areas.

33. For greater clarity, the OTA is proposing that this mechanism be employed only in the rural areas of existing Tier 4 local service areas. It would not be applicable to major national or regional population centres. In this way, Industry Canada would incent and promote the roll-out of advance wireless services by the party that has the most motivation to do so.

Question 8.3 Should the Department decide that measures are necessary, comments are sought on specific measures that could be adopted within the 700 MHz spectrum auction process to ensure further deployment of advanced mobile services in rural and remote areas (e.g. roll-out conditions, tier structure, etc.).⁴

34. At page 29 of the consultation document, Industry Canada identifies a number of key considerations for small service providers such as OTA members:

Licensing based on smaller tier sizes provides additional flexibility to bidders, who can concentrate on the geographic markets of most interest, or aggregate smaller service areas into larger regions corresponding to their business needs. This may result in potential lower costs for bidders, if the smaller markets (rural and remote areas) are unbundled from the high-density, high-revenue areas. It may enable smaller local service providers to afford the less expensive licences and provide services in their communities. (emphasis added)

35. The OTA agrees with this perspective and submits that in order to assist smaller rural providers to provide services in their communities, Industry Canada should adopt a mixture of tier sizes for different spectrum blocks. Additionally, two 10+10 blocks should be set-aside in rural areas for use by smaller local providers. These blocks could be split from a larger tier which would permit larger national providers to use the spectrum in urban areas.

36. For example, the Tier 4 area currently defined as London/Woodstock/St. Thomas includes a large rural component and a population of over 607,000. The London/Woodstock/St. Thomas Tier 4 area is home to the SILEC operating territories of Amtelecom and Execulink which serve the areas surrounding these cities. It is unlikely that either of these two companies would be able to afford the auction fees for an entire Tier 4 individually but given their SILEC

⁴ Although the OTA has not specifically addressed the questions posed in section 5 of the consultation document, its response to this question is also relevant to questions 5-12 and 5-13.

operating territory, they would be interested in this spectrum to serve outside the major population centres where the larger national carriers quickly lose interest.

37. Accordingly, the OTA submits that Industry Canada should create an additional tier of smaller rural areas outside the major population centres found in the existing Tier 4 areas in order to permit smaller service providers the opportunity to bid on 700 MHz spectrum in their operating territory.

38. Finally, Tier 3 areas are all much larger than Tier 4 and are simply out of the reach of any OTA member company, leaving only a subdivided Tier 4 as a viable option.

Conclusion

39. In conclusion, the OTA members represented by this submission have been key players in the telecommunications industry in Ontario for as long as the large ILECs, in many cases for over 100 years. They are fully engaged experts in providing state-of-the-art communications services in rural and northern Ontario. The OTA is in favour of the continued use of a spectrum set-aside for the up-coming 700 MHz auction. The set-aside should be limited to new and/or small non-national service providers.

40. Industry Canada should undertake a major reform of the RP-19 process. Alternatively, the OTA proposes that Industry Canada should establish a transparent process whereby companies could apply to Industry Canada to reclaim licensed spectrum, in any frequency, not just 700 MHz, that is unused within a specified period of time after the licensing date. Finally, Industry Canada should create an additional tier of smaller rural areas outside the major population centres found in the existing Tier 4 areas in order to permit smaller service providers the opportunity to bid on 700 MHz spectrum in their operating territory.

Yours truly,

Jonat
Holmes

Jonathan Holmes

Attachment

ATTACHMENT

Members of the Ontario Telecommunications Association Represented By These Comments

Brooke Telecom Co-operative Limited
Bruce Telecom
Cochrane Telecom Services
Dryden Municipal Telephone System
Execulink Telecom Inc.
Gosfield North Communications Co-operative Limited
Hay Communications Co-operative Limited
Huron Telecommunications Co-operative Limited
The Lansdowne Rural Telephone Company Limited
Mornington Communications Co-operative Limited
Nexicom Telecommunications Inc.
Nexicom Telephones Inc.
North Frontenac Telephone Corporation Limited
North Renfrew Telephone Company Limited
Ontera
Quadro Communications Co-operative Inc.
Roxborough Telephone Company Limited
Tuckersmith Communications Co-operative Limited
Westport Telephone Company Limited
Wightman Telecom Limited