

August 2, 2019

**Senior Director, Spectrum Licensing and Auction Operations**  
Innovation, Science and Economic Development Canada (ISED)  
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Re: **Gazette Notice SLPB-002-19**: Consultation on a Policy and Licensing Framework for Spectrum in the 3500 MHz Band

**Dear Sir/Madam,**

1. The BC Broadband Association (“BCBA”) is a group of telecommunications service providers, equipment suppliers and infrastructure constructors in Western Canada. We represent regional and local internet service providers who operate in both rural and urban parts of British Columbia and Alberta.
2. Broadly, the BCBA is pleased with ISED’s proposals for the 3500 MHz auction. The proposals to use smaller licence areas, and a simpler auction format, along with a set-aside and/or spectrum cap, will enhance the ability of small companies to participate in the auction and acquire spectrum.
3. ISED recognizes the importance of regional service providers and WISPs to competition in Canada (Consultation, par.28). Canada’s telecommunications market and rural Canadians in particular, will see the benefits of competition if these carriers are able to obtain spectrum.
4. We suggest that the proposed pro-competitive measures are not strong enough to build and sustain a level of competition in Canada that is broad, encompassing many companies, and deep, including companies of a variety of sizes and types.
5. In order to foster a telecommunications market that is varied and competitive, bringing a diversity of services to a diversity of Canadian regions, ISED should consider the following measures:
  - An in-band spectrum cap of 60 MHz will ensure multiple spectrum holders across Canada.
  - Set-aside eligibility in rural service areas (those not listed in Table G1) should be limited to companies with annual revenues under \$25 million. This will ensure strong regional markets.
  - Set-aside eligibility in urban service areas (those listed in Table G1) should be as proposed by ISED in this Consultation.
  - A spectrum set-aside should be established, consisting of 20 MHz in all service areas, and of 40 MHz in service areas with 80 MHz or more of un-encumbered spectrum available for auction.
  - Spectrum auctions should be conducted using smaller service areas (Tier-5). This will enable WISPs to participate meaningfully in the auction.

6. If ISED chooses to use intra-round bidding, then a set-aside for rural and regional operators is crucial. Smaller companies are especially disadvantaged through any complexity of an auction format. Meaningful use of intra-round bidding will require auction support and AI-driven simulations, which are inaccessible to many rural WISPs. In order to engage small players in an auction with intra-round bidding, it is vital to introduce a meaningful set-aside with both substantial spectrum available and eligibility limited to small regional WISPs.
7. The BCBA notes that some equipment available in this band, and some equipment deployed in this band, is not tunable to frequencies below 3500 MHz. This may result in higher valuations for blocks above 3500 MHz. In order to ensure continuity of existing rural fixed wireless services, existing licensees should not be required to compete for these over-3500 MHz blocks against NMSPs in the assignment round. Instead, existing set-aside-eligible licensees should be assigned blocks in the upper portions of the band prior to the assignment rounds.
8. The BCBA proposes that ISED set the date of the auction so that a window of three months is available between the release of the Decision following this Consultation, and the deadline to conduct any spectrum transfers (according to the 2019 Decision, 6 months prior to the deadline to submit an application to participate in the auction). This will enable companies to conduct any spectrum transfers in preparation for the auction.
9. The BCBA's responses to specific questions follow.

Q1A—ISED is seeking comments on its proposal to implement pro-competitive measures in the 3500 MHz auction.
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10. The BCBA supports the proposal to implement pro-competitive measures.
11. It is crucial for competition in Canada that ISED reduce the barriers to competition for Telecommunication Service Providers (TSPs) that are smaller than the National Mobile Service Providers (NMSPs). Access to spectrum is a significant barrier to competition.
12. The BCBA agrees with the observations of ISED that,

*“There is a risk that competition in the post auction marketplace could suffer without measures to facilitate regional service providers' and WISP's access to spectrum. Furthermore, the Competition Bureau concluded that the lower prices are caused by the presence of a strong regional competitor. The Competition Bureau has stated that the NMSPs have market power in the provision of retail mobile wireless services on several occasions, most recently in their intervention to the CRTC's proceedings on lower-cost data-only plans. Consistent with the above comments, ISED is of the view that these NMSPs likely have the means and incentive to prevent other service providers from acquiring spectrum licences in an open auction.” (Consultation, par.28)*

13. The use of pro-competitive measures supports competition in the Canadian telecommunications market.

Q1B—ISED is seeking comments on the use of a set-aside, an in-band spectrum cap, or a combination of both, including the amount of spectrum that should be applied for the use of a set-aside, and/or the amount of spectrum that should be subject to an in-band spectrum cap. Provide supporting rationale for your responses.

14. The BCBA believes that a combination of a set-aside and a spectrum cap will support competition in Canada. These two measures, combined, will support a depth and breadth of competition in Canada. With multiple spectrum holders, representing both small and large companies, both rural and urban Canadians will gain access to more connectivity options, sooner, and at lower prices.
15. The spectrum set-aside should consist of 20 MHz in all service areas, and of 40 MHz in service areas with 80 MHz or more of un-encumbered spectrum available for auction.
16. A spectrum cap should also be applied to this band. In the Decision on Revisions to the 3500 MHz Band to Accommodate Flexible Use and Preliminary Decisions on Changes to the 3800 MHz Band (SLPB-001-19), ISED established an effective spectrum cap of 60 MHz. It is appropriate for ISED to continue to use an in-band spectrum cap of 60 MHz for the spectrum auction.
17. Given that a further spectrum auction in the bands above 3700 MHz may be conducted in the future, this spectrum cap should not apply to bands above 3700 MHz, or this spectrum cap should be re-considered prior to that auction.

If a set-aside is to be applied:

Q1C—ISED is seeking comments on its proposal to limit the eligibility criteria to bid on set-aside spectrum licences to those registered with the CRTC as facilities-based providers\* that are not National Mobile Service Providers, and that are actively providing commercial telecommunication services to the general public in the relevant Tier 2 service area of interest, effective as of the date of application to participate in the 3500 MHz auction.

18. The use of a set-aside is crucial to enabling the provision of competitive services in rural service areas. The BCBA proposes that set-aside eligibility be different in urban service areas (Table G1) and non-urban service areas.
19. In non-urban service areas (not listed in Table G1), set-aside eligibility should be limited to companies with annual revenues less than \$25 million. These small operators are regional, and are likely to deploy services in rural communities. These small companies are not able to compete with Canada's large telecommunications companies for spectrum at auction.

20. Set-aside spectrum in rural areas should not be available to national mobile carriers, regardless of market share. National carriers, including Canada’s new wireless carriers, have demonstrated that urban investment is their priority. As noted by ISED “Regional service providers and WISPs could benefit from an opportunity to acquire access to additional spectrum to support network improvements to meet the wireless traffic demands of their growing subscribership” (Consultation par.37).
21. Limiting set-aside eligibility to small, regional companies and WISPs in non-urban areas will foster connectivity growth in rural Canada.
22. The BCBA supports the proposal to limit set-aside eligibility to non-NMSPs in urban (Table G1) service areas.
23. The BCBA supports the limitation of set-aside eligibility to those registered with the CRTC as facilities-based providers.
24. The limitation of set-aside eligibility to those that are actively providing commercial telecommunication services to the general public in the relevant Tier 2 service area is somewhat restrictive. Operators serving tier-4 areas that are adjacent to a provincial border should be permitted to bid on adjacent tier-4 areas that are in the neighbouring province.

Q1D—ISED is seeking comments on its proposal that any set-aside licences acquired by set-aside-eligible bidders would not be transferable to set-aside-ineligible entities for the first five years of the licence term.

25. The BCBA supports this proposal.

Q1E—ISED is seeking proposals for other eligibility criteria along with supporting rationale.

26. As described in our response to Q1C above, the BCBA proposes that, rather than limiting set-aside eligibility to companies that are not NMSPs, ISED limit set-aside eligibility to companies with annual revenues less than \$25 million, in rural service areas (those not listed in Table G1).

If a set-aside is to be applied:

Q1F—ISED is seeking comments on the inclusion of grid-cell and sub-divided licences towards the spectrum cap, and the proposal to allow the return of these licences in order to increase a licensee’s eligibility to bid on additional spectrum within the related licence area.

27. The BCBA believes that this proposal is inappropriate. Existing grid-cell and subdivided licence holdings should not be included in the spectrum cap for the purposes of bidding in the auction.

28. In a service area with encumbered, open, and set-aside products available, the set-aside product may be less expensive than the encumbered product. If this is the case, then set-aside-eligible bidders holding grid-cell licences should be able to bid on the set-aside block instead of the encumbered block. These set-aside-eligible bidders should not be obliged to compete with set-aside-ineligible bidders in order to complement or enhance their existing spectrum holdings. These set-aside eligible bidders should not be required to return grid-cell or subdivided licences prior to the auction in order to bid on set-aside-eligible blocks.
29. If a company holding grid-cell licences wins spectrum in that service area, leaving that company in excess of the spectrum cap in their grid-cell or subdivided licence area, then the company would be required to return the grid-cell or subdivided licence to ISED or transfer the grid-cell or subdivided licence to another entity, within one year of the auction.
30. This response is related to the responses to questions Q3E and Q3F below. As stated in those responses, the encumbered blocks should not be bundled, and should count towards the spectrum cap.

Q2—ISED is seeking comments on its proposal to use Tier 4 service areas for the 3500 MHz licensing process.

31. In order to enhance competition in Canada, ISED should use the smallest possible service areas for the licensing process.
32. The BCBA urges ISED to use Tier-5 service areas in the auction process.
33. The use of Tier-5 service areas will enhance the ability of small and regional companies to access spectrum through the auction process.
34. While some risk of interference arises through the use of smaller service areas, this risk is manageable through inter-operator co-ordination. Any risk of interference is far outweighed by the increased competition that is fostered through the use of smaller service areas.

Q3A—ISED is seeking comments on its proposal to include all remaining spectrum (including partially encumbered Tier 4 areas) as part of the auction as shown in table A1 of annex A.

35. The BCBA supports this proposal.

Q3B—ISED is seeking comments on its proposal to consider all spectrum acquired through the auction and only Tier 4 licences that will be issued through the transition process, simultaneously in the assignment round of the auction, in order to determine the specific frequency assignments of all licences in the 3500 MHz band.

36. The BCBA is concerned about potential harm to existing licensees that may result from this proposal.

37. Existing licensees may have deployed equipment that is not tunable through the entire 3450-3650 band. In particular, the BCBA is aware of equipment available on the market today that is not tunable to frequencies below 3500 MHz. For this reason, the frequency blocks between 3500 and 3650 may be more valuable.
38. Existing licensees who have deployed equipment that is not tunable below 3500 MHz will be faced with costly re-deployments, or the inability to re-deploy in the short term, if they are assigned channels below 3500 MHz.
39. Small regional operators and WISPs also use the 3.65 GHz (WBS) band extensively. Assigning channels adjacent to this band to WISPs will enhance the services available to rural Canadians.
40. If blocks above 3500 MHz are indeed more valuable due to equipment availability in the short term, then small regional existing licensees will not be able to bid against large companies and NMSPs for these blocks.
41. The BCBA proposes that existing licensees that are set-aside eligible be assigned contiguous blocks at the upper end of the band prior to the assignment round, so that these small companies are not required to compete against national carriers in the assignment round.
42. Failing that, the BCBA proposes a modification to this process, whereby existing non-NMSP licensees will not be assigned spectrum that falls in blocks below (lower frequency than) 3500 MHz.

Q3C—ISED is seeking comments on the proposal that licensees who acquire multiple flexible use Tier 4 licences in a given area, either as a result of the auction or as a result of the transition process, be assigned contiguous spectrum, and that this also apply to partial area licences acquired through the auction.

43. The BCBA supports this proposal.

Q3D—ISED is seeking comments on the proposal to classify all partial tier licences as encumbered blocks.

44. The BCBA supports this proposal.

Q3E—ISED is seeking comments on the proposal to bundle the remaining portions of the encumbered areas offered in the auction as a combined encumbered block of 20, 30, 40 MHz or more, depending on the number of 10 MHz blocks being bundled. In particular the bundle would include the tier areas where existing sub-divided or grid cell licenses are encumbering the majority of the tier. This would apply where the geography of the remaining portions is the same or similar, and/or the remaining area covers a relatively small population. Comments on the proposed list of encumbered service areas where multiple blocks may be combined for the purpose of the auction are also sought.

45. The BCBA believes that this proposal is inappropriate. A 10 MHz block is less valuable than a 20, 30, or 40 MHz block. Small companies may have the resources to bid on a single 10 MHz block, but may not be able to bid on a 20, 30, or 40 MHz block. Bundling encumbered blocks into large blocks will limit the ability of small companies to bid on encumbered spectrum.

If a spectrum cap is applied:

Q3F—ISED is seeking comments on the proposal that the bundled encumbered blocks would not count towards the spectrum cap during the auction, but that any transfers of the licences post-auction would be subject to the spectrum cap and the conditions of licence as described in section 11.2.

46. The BCBA believes that this proposal is inappropriate. Encumbered blocks should count towards the spectrum cap during the auction.

47. In many service areas, the encumbered blocks are affected only by small grid-cell holdings that do not affect more than 20% of the population of the service area. In Calgary, for example, the encumbered blocks account for 99% and 91% of the total service area population. Bidders on the encumbered Calgary products should have these bids count towards the spectrum cap.

48. The BCBA proposes that, where the encumbered product constitutes 75% or more of the population of the service area, then the encumbered block should count towards the spectrum cap. If the encumbered product constitutes less than 75% of the population of the service area, the encumbered block should not count towards the spectrum cap for that service area.

49. By contrast, as described in our response to Q1F above, existing grid-cell holdings should not count towards the spectrum cap.

Q4A—ISED is seeking comments on its proposal to use generic licences.

50. The BCBA supports this proposal.

If a set-aside is applied (with or without a spectrum cap):

Q4B—ISED is seeking comments on its proposal to categorize all blocks won by set-aside-eligible bidders as set-aside blocks.

51. The BCBA supports this proposal.

Q4C—ISED is seeking comments on its proposal to create separate categories for encumbered and unencumbered blocks, as well as open and set-aside blocks.

52. The BCBA supports this proposal.

If only a spectrum cap is applied:

Q4D—ISED is seeking comments on its proposal to create separate categories for unencumbered and for various encumbered block in a service area.

53. The BCBA supports this proposal.

Q5—ISED is seeking comments on the use anonymous bidding during the auction.

54. The BCBA supports the use of anonymous bidding during the auction.

### **Clock Auction Structure**

Q6—ISED is seeking comments on its proposal to use a clock auction format for the 3500 MHz spectrum auction.

55. In general, the BCBA supports the proposed clock auction format.

56. The proposed clock auction format is simpler than auction formats used in previous auctions. This enables smaller companies to participate in the auction. The BCBA applauds the choice of a simpler auction format.

Q7—ISED is seeking comments on the proposed structure of the clock stage and on the proposed methodology for calculating processed demands and posted prices after each clock round, as described in annex C.

57. The BCBA supports the proposed methodologies of the auction structure.

58. The BCBA is concerned somewhat by the complication introduced by the intra-round bidding process. The complex nature of the bidding options favours large companies with the capacity engage with external auction support and AI-driven simulations and strategies.

59. In order to engage small players in an auction with intra-round bidding, it is vital to introduce a meaningful set-aside with both substantial spectrum available and eligibility limited to small regional WISPs.

Q8—ISED is seeking comments on the proposed range of percentage increments.

60. If ISED chooses to use intra-round bidding, the BCBA agrees with the proposed range of percentage increments. If ISED does not choose to use intra-round bidding, the proposed range of percentage increments should be significantly less.

Q9A—ISED is seeking comments on the proposed structure of the assignment stage, including the order of the assignment rounds, treatment of existing holdings, the combination of service areas into a single assignment area and parallel bidding.

61. As described in our response to Q3B, the BCBA proposes a modification to the proposed assignment stage process, whereby existing licensees that are set-aside eligible be assigned contiguous blocks at the upper end of the band prior to the assignment round, so that these small companies are not required to compete against national carriers in the assignment round.

62. Failing that, the BCBA proposes a modification to this process, whereby existing non-NMSP licensees will not be assigned spectrum that falls in blocks below (lower frequency than) 3500 MHz.

63. Otherwise, the BCBA supports the proposed structure of the assignment stage.

Q9B—ISED is seeking comments on the proposal to apply bidder optimal core prices and to use the “nearest Vickrey” approach in determining the assignment prices.

64. The BCBA has no comment at this time.

Q10—ISED is seeking comments on the proposed affiliated and associated entities rules that would apply to bidders in the 3500 MHz auction.

65. The BCBA supports this proposal.

Q11—ISED is seeking comments on the proposed rules prohibiting collusion and other communication rules, which would apply to bidders in the upcoming 3500 MHz auction.

66. The BCBA supports this proposal.

Q12—ISED is seeking comments on its proposal to issue new flexible use spectrum licences in the 3500 MHz band with a 20-year licence term and the proposed wording of the condition of licence above. Licence terms for all flexible use licences, regardless of when they are converted from fixed to flexible use, will terminate on the same date as licences issued through the auction process.

67. The BCBA supports this proposal.

Q13—ISED is seeking comments on the proposals on the condition of licence related to transferability and divisibility, and the proposed wording above.

68. The BCBA supports this proposal.

Q14—ISED is seeking comments on the proposed deployment condition of licence as stated above as well as on the proposed levels of deployment.

69. The BCBA supports this proposal.

Q15—ISED is seeking comments on the proposed conditions of licence outlined in annex H that would apply to flexible use licences.

70. Licences that have not yet transitioned from fixed to flexible licences should not be subjected to mobile licence fees while they are still being used for fixed services.

Q16A—ISED is seeking comments on its proposal to amend all FWA conditions of licence based on the proposed conditions of licence in annex I.

71. The BCBA supports this proposal.

Q16B—ISED is seeking comments on its proposal to apply this amendment on June 5, 2019, plus one year—June 5, 2020.

72. The BCBA supports this proposal.

Q17—ISED is seeking comments on the proposed opening bids as presented in annex D.

73. The BCBA supports this proposal.

Q18—ISED is seeking comments on the proposed eligibility points for spectrum licences in the 3500 MHz as outlined in annex D, and pre-auction deposits as outlined above.

74. The BCBA supports this proposal.

Q19—ISED is seeking comments on the proposed renewal process for spectrum licences in the 3500 MHz band.

75. The BCBA supports this proposal.

The BCBA thanks ISED for the opportunity to provide these comments.

Kind regards,



**Bob Allen**  
President  
BC Broadband Association