

Via email

26 October 2020

Innovation, Science and Economic Development Canada
c/o Director, Spectrum Regulatory Best Practices
235 Queen Street (6th Floor, East Tower)
Ottawa (ON) K1A 0H5

e-mail: ic.spectrumbauctions-encheresduspectre.ic@canada.ca

Re: Gazette Notice SLPB-002-20 – Consultation on the Technical and Policy Framework for the 3650-4200 MHz Band and Changes to the Frequency Allocation of the 3500-3650 MHz Band – Cogeco Comments

In accordance with the procedures set out in the above-noted Gazette Notice, as published in the Canada Gazette, Part 1 in August 2020, please find attached the comments of Cogeco Communications Inc. (“Cogeco”).

Cogeco thanks ISED for the opportunity to submit comments in this proceeding and remains available to answer any questions you may have regarding this submission.

Yours very truly,

Leonard D. Eichel
Senior Director, Regulatory Affairs, Telecommunications

cc.: Nathalie Dorval, Vice President, Regulatory Affairs & Copyright, Cogeco Inc.
Marie Ginette Lepage, Vice President, Wireless Services & Innovation
Marc Carrier, Senior Director, Strategic Initiatives

**Innovation, Science and Economic Development Canada
Spectrum Management and Telecommunication**

**Consultation on the Technical and Policy Framework for
the 3650-4200 MHz Band and Changes to the Frequency
Allocation of the 3500-3650 MHz Band**

Canada Gazette, Part I, August 2020
Notice No. SLPB-002-20

**Comments of
Cogeco Communications Inc.**

26 October 2020

1 Introduction

1) Cogeco Communications Inc. (“Cogeco”) is pleased to submit these comments on the proposals of Innovation, Science and Economic Development Canada (“ISED”) to release portions of spectrum in the 3650 to 4200 MHz band (“3800 MHz Band”) for the provision of broadband wireless services. As noted by ISED in its consultation document, the 3800 MHz Band is particularly important as spectrum regulators around the world are in the process of repurposing this band for 5G wireless services. ISED stated:

Promoting access to additional flexible use spectrum for mobile and fixed wireless services will enable telecommunication service providers (“TSPs”) and wireless Internet Service Providers (“WISPs”) to increase their network capacity to meet the traffic demands of increased data usage that is expected with 5G applications and services both urban and rural areas of Canada.¹

2) Cogeco is in entire agreement with ISED in this regard.

3) Cogeco is a diversified communications company headquartered in Montréal, Québec that provides video, Internet and telephony services through its affiliate Cogeco Connexion Inc. to residential and business customers as well as offering third party Internet access and transport services to Internet service providers on a wholesale basis in Ontario and Québec. As a competitive telecommunications service provider who has invested heavily in infrastructure in Canada for over 60 years and one who is making significant investments in mobile spectrum², Cogeco strongly supported, and continues to support, the development of a regulatory

¹ Consultation on the Technical and Policy Framework for the 3650-4200 MHz Band and Changes to the Frequency Allocation of the 3500-3650 MHz Band, SLPB-002-20, para. 7.

² Cogeco has made a number of spectrum investments in the 2300 MHz band, the 3400 MHz band and, most recently with its acquisition of iTÉract Inc., the 3500 MHz band.

framework that encourages investment in facilities and promotes competition among facilities-based carriers so that Canadian consumers benefit from greater choice, lower prices, and high-quality telecommunications services.

4) Cogeco also supports policies which maximize the use of scarce spectrum resources in all areas in Canada as well as regulatory measures which reduce barriers to entry by broadband service providers. Such a regulatory framework and corresponding policies enable ISED to achieve the over-arching objective of the Spectrum Policy Framework for Canada:

*To maximise the economic and social benefits that Canadians derive from
the use of the radio frequency spectrum resource.*

5) Cogeco notes however that the mobile wireless market continues to be dominated by the three incumbent National Mobile Network Operators (“NMNOs” or “National MNOs”), namely Bell, Rogers and Telus, who offer services through their core and flanker brands. In 2014, the National MNOs – with their respective flanker brands – held 92%³ and 89%⁴ of the total market share, measured in revenues and subscribers, respectively. In 2018, those figures were virtually the same, at 90.7%⁵ and 89.2%⁶ respectively, showing very little change, even with the presence of strong regional mobile wireless service providers, such as Freedom Mobile, Vidéotron and Eastlink.

6) The dominance of the National MNOs in the market is built in part upon a foundation of concentration of spectrum in their hands.

³ CRTC *Communications Monitoring Report 2015*, page 227.

⁴ *Ibid*, page 226.

⁵ CRTC *Communications Monitoring Report 2019*, Infographic 10.2, Highlights of the Retail Mobile Revenues, 2018.

⁶ *Ibid*, page 160.

7) Access to spectrum is an essential input for the provision of mobile wireless services and is one of the most significant barriers to entry in the Canadian mobile wireless market. Indeed, as noted in Industry Canada's *Policy Framework for the Auction for Spectrum Licences for Advanced Wireless Services*:

Radio frequency spectrum is a finite public resource essential to entry into wireless markets, and that resource is not readily available on the open market. Access to spectrum is a barrier to entry that only government can lift [...].⁷

8) Cogeco notes that, in 2016, the National MNOs controlled more than 76% of the available spectrum in Canada with Rogers holding a 30% share, Bell holding 21% and Telus holding 25%⁸. In light of the results of the 700 MHz and 600 MHz auctions, Cogeco estimates that this situation has not changed materially in the last few years⁹.

9) However, some information shows that the National MNOs are not using the entire available spectrum to provide wireless services to Canadians in all parts of the country, including in rural and remote areas. Cogeco has filed in the DGSO-002-19 proceeding, for example, evidence that the NMNOs have left large swathes of the

⁷ *Policy Framework for the Auction for Spectrum Licences for Advanced Wireless Services and other Spectrum in the 2 GHz Range*, November 2007, page 3.

⁸ Industry Canada, *National Holdings for Commercial Mobile Spectrum Licences*, 15 July 2016, available at <https://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11210.html>. As of 14 July 2016, Rogers held 30% of all available commercial mobile spectrum, Bell held 21%, Telus held 25%, MTS held 1%, SaskTel held 1%, Vidéotron held 7%, Wind held 5%, Eastlink held 1%, and others held 9%.

⁹ Bell, Rogers and Telus acquired the vast majority of available spectrum in the 700 MHz auction, while only two of five new entrants, namely Vidéotron and Eastlink, acquired this spectrum in the same auction (as illustrated in the colour chart available at [https://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/700MHz-colour-chart.pdf/\\$file/700MHz-colour-chart.pdf](https://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/700MHz-colour-chart.pdf/$file/700MHz-colour-chart.pdf)). In the 600 MHz auction, Rogers and Telus alone acquired 64 licences, while seven regional MNOs acquired only 40 licences in total.

Canadian territory without broadband or mobile wireless services of any kind riding on the BRS spectrum band.¹⁰

10) Cogeco submits that examples such as the one provided above act as a barrier in the deployment of telecommunication services to underserved Canadians and, further, inhibit the maximum use of spectrum holdings that would best serve the interests of Canadian consumers, thereby allowing ISED to achieve its objectives for the maximum use of spectrum bands.

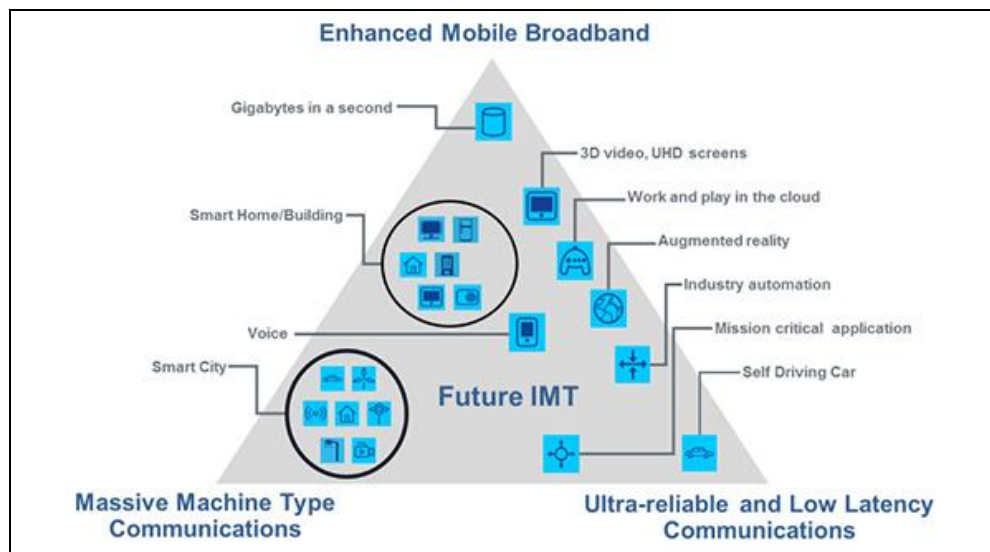
11) There are significant barriers to entry to the mobile wireless market, starting with the limited availability of cellular mobile spectrum. This scarce resource is essential to the provisioning of mobile wireless services but there are few options available to a prospective new alternative wireless service provider seeking its own spectrum in order to operate as an MNO and there is no wholesale market to which a new alternative wireless service provider can turn for radio access network services for the purpose of operating as a competitive wireless service provider. This issue is still before the CRTC and Cogeco is hopeful that the Commission will support the Hybrid Mobile Network Operator (“HMNO”) entry model.

12) The foregoing market and spectrum contexts serve to highlight the importance of making as much spectrum available for as large a number of service providers as possible. This will be critical to the future of broadband and to the success of 5G in Canada, and ultimately for Canadians in rural and underserved areas of the country, where there is the greatest evidence of a digital divide, with poor connectivity options compared to similarly placed consumers in urban markets.

¹⁰ Cogeco Reply Comments, par. 18-27 and Appendix A, filed 18 June 2019 in *Consultation on the Spectrum License Renewal Process for Non-Auctioned Broadband Radio Spectrum (BRS) Licenses*, DGSO-002-19, published 16 May 2019.

13) The figure below highlights the wide scope, breadth and reach of potential 5G technologies and applications. 5G is expected to impact every consumer, every business and every vertical segment of the Canadian economy, ranging from connected cars to smart home networking, automation and massive machine type communications and media, to name a few.

Figure 1 – Usage scenarios of IMT for 2020 and beyond¹¹



14) Cogeco submits that a wireless connection (via Wi-Fi) to a fixed wireline access network is the norm¹², and expects 5G to accelerate the convergence of today's fixed and mobile access networks towards one comprehensive type of "access network" using different and varying proportions of fixed and wireless technologies¹³.

¹¹ IMT Vision – Framework and overall objectives of the future development of IMT for 2020 and beyond, Recommendation ITU-R M.2083-0, September 2015, Figure 2.

¹² See for example. Cogeco Initial Comments, *Call for Comments Reconsideration of Telecom Decision 2017-56 regarding final terms and conditions for wholesale mobile wireless roaming service*, Telecom Notice of Consultation 2017-259, 8 September 2017, at paragraphs 19 and 26.,

¹³ Cogeco Initial Comments, *Call for Comments – Reconsideration of Telecom Decision 2017-56 regarding final terms and conditions for wholesale mobile wireless roaming service*, Telecom Notice of Consultation 2017-259, 8 September 2017, at paragraphs 15 – 21.

15) From a public policy perspective and in anticipation of 5G's far-reaching impact on consumers, businesses and the Canadian economy, it is imperative that the Canadian government ensure both strong competition for the offer of 5G services as well as rapid widespread availability of 5G services in all areas in Canada, not only in large urban centres.

16) Cogeco is firmly committed to robust, facilities-based competition and, as expressed on many occasions, is ready to enter the mobile wireless services market if the right conditions prevail. Cogeco can only do so if the conditions for entry support a viable business case by enabling the establishment of new facilities-based entrants. Cogeco wants the opportunity to provide Canadians with expanded mobile offerings.

2 ISED Objectives

17) In the Consultation Document, ISED notes it is guided by the policy objective of the *Spectrum Policy Framework for Canada*, as well as *Canada's Digital Charter: Trust in a Digital World*, and finally, Canada's commitment to deliver high-quality broadband services to rural and remote areas of the country, as expressed in *High-Speed Access for All: Canada's Connectivity Strategy*. Following from these, ISED states its specific policy objectives for the 3800 MHz Band are:

- to foster investment and the evolution of wireless networks by enabling the development of high-quality 5G networks and technology;
- to support sustained competition in the provision of wireless services so that all consumers and businesses benefit from greater choice and competitive prices; and
- to facilitate deployment and timely availability of services across the country, including rural, remote and Northern regions.

18) Given the particular challenge presented by the current use of the 3800 MHz Band (almost exclusively for the provision of Fixed Satellite Services (“FSS”)), ISED is not proposing a particular method of allocating this spectrum at this time.

19) Rather, ISED is seeking comments on a number of measures designed to clear the spectrum of its current users, as well as presenting two alternatives in order to make this newly cleared spectrum available to Canadian service providers. The first is a proposed auction of spectrum, tentatively in 2023. The second is a proposal by Telesat – the current anchor tenant of the 3800 MHz Band – to both liberate a portion of the band on an expeditious basis, with the rest to be auctioned in 2025.

20) Many of the almost 60 detailed questions posed by ISED in this consultation are of a technical nature relating to the provision of Satellite services, and the expected consequences of any plan to clear the band. While Cogeco is not a provider or user of FSS services, it does have an interest in how the 3800 MHz spectrum band is cleared and what mechanisms will be used to allocate the cleared spectrum. As such, Cogeco will focus its comments on issues related to its current use of the adjacent 3500 MHz band, ISED’s proposal to auction the 3800 MHz spectrum in 2023, and Telesat’s proposal to accelerate the clearing of the 3800 MHz band by running a spectrum allocation process via a secondary market mechanism.

21) The remainder of this submission addresses selected questions posed by ISED in the Consultation Document. Where Cogeco does not address a specific question, this should not be construed as agreeing or disagreeing with the proposal, as lack of interest in the subject matter, or as taking a position on the specific issue. Cogeco will be analyzing the submissions of other interested parties and reserves the right to comment on any matter contained in the ISED 3800 MHz consultation document in the reply phase.

3 Answers to Specific Questions

3.1 International Context

Question 1 - ISED is seeking comments on the timelines for the development of an equipment ecosystem using 5G technologies in the 3800 MHz band. In particular:

- a. the ecosystem maturity level and readiness of equipment under band classes n77 or n78 for the Canadian market
- b. the ability of existing or future base station radios to handle multiple technologies and band classes at the same time (i.e. whether all four band classes (B42, B43, n77 and n78) or a subset of these band classes are able to operate on the same base station radio) and how it may affect the adoption of 5G technologies in the 3800 MHz band

22) Cogeco has no comments on this question.

Question 2 - ISED is seeking comments on the potential linkages between the equipment ecosystems using 5G technologies in the 3500 MHz and 3800 MHz bands. In particular:

- a. whether contiguity between the 3500 MHz band and 3800 MHz band is preferred given that 3GPP specifications allows for non-contiguous carrier aggregation
- b. whether there are any technical or operational impediments (e.g. equipment limitations/challenges to support aggregated use of spectrum, or requirements for additional base station radios) that would be incurred if operators have a large frequency separation between frequency blocks in one or both bands, and at what point (i.e. how wide the frequency separation) such impediments would become significant
- c. whether the equipment ecosystem deployed for the 3500 MHz band will be able to operate in the 3800 MHz band, and whether this equipment could easily be extended to 3800 MHz after being deployed.

23) Cogeco has no comments on this question.

24) Cogeco does not see strong arguments in favour of contiguity between the 3500 MHz and the 3800 MHz bands. The only potential benefit is that a single

operator might be able to use a wider bandwidth extending over both bands in a very specific area. Cogeco does not believe that this potential benefit is material enough to promote contiguity between the two bands.

Question 3: ISED is seeking comments on how the difference in technical rules between the U.S. and EU could impact Canada's ability to leverage the economies of scale from the global 3800 MHz ecosystem. In particular:

- a. would the difference in technical rules (such as out-of-band-emission (OOBE) power limits) result in two distinct region-specific equipment ecosystems
- b. which equipment ecosystem would be more suitable in the Canadian environment (noting that Canada has, for the most part, aligned with the U.S. on low- and high-band spectrum for 5G but in the mid-band, Canada is more aligned with the EU in the 3500 MHz band (3450-3650 MHz)) and specifically, whether Canada should generally align its technical rules with the U.S. or the EU in the 3800 MHz band.

25) Cogeco notes that given the 3GPP band plan for 5G/NR, where equipment supporting the 3800 MHz in band n77 must also be supported in the 3500 MHz band, it is anticipated that an equipment ecosystem supporting both bands is expected to be available once the 3800 MHz band becomes available in different jurisdictions. Cogeco also notes that most U.S. operators will initially leverage the CBRS band for private LTE networks, before using it for 5G, whilst in many other jurisdictions, including Canada, operators are focusing on 5G for the 3500 MHz band. This will possibly lead to a fragmented ecosystem. These factors should be taken into account by ISED in order to decide on an alignment with the U.S. or European Union.

3.2 Changes to the Spectrum Utilization for the 3800 MHz Band

Question 4: ISED is seeking comments on the proposal to add a primary mobile service, except aeronautical mobile, allocation in the 3700-4000 MHz band to the CTFA and the specific changes shown in [annex B](#).

26) Cogeco agrees with ISED's proposal to add a primary mobile service, except aeronautical mobile, allocation in the 3700-4000 MHz band to the CTFA.

Question 5: ISED is seeking comments on developing a flexible use licensing model for fixed and mobile services in the 3650-4000 MHz band.

27) Cogeco agrees with the proposal to develop a flexible use licensing model for fixed and mobile services in the 3650-4000 MHz band.

Question 6: Given the proposal in [section 7.2](#) on developing a flexible use licensing model for fixed and mobile services in the 3650-4000 MHz band, ISED is seeking comments on the proposal that no new FSS earth stations be authorized in the 3700-4000 MHz band in the future and that the authorization of new FSS earth station licences be limited to the 4000-4200 MHz band.

28) Cogeco agrees with the approach outlined by ISED in this regard, i.e., that no new FSS earth stations be authorized in the 3700-4000 MHz band in the future, and that the authorization of new FSS earth station licenses be limited to the 4000-4200 MHz band.

Question 7: ISED is seeking comments on the proposal to implement a 20 MHz guard band between 3980-4000 MHz to protect FSS operations in 4000-4200 MHz band from proposed flexible use operations in the 3700-3980 MHz band.

29) Cogeco supports ISED in implementing a 20 MHz guard band between 3980-4000 MHz to protect FSS operations in the 4000-4200 MHz band from proposed flexible use operations in the 3700-3980 MHz band.

Question 8: ISED is seeking comments on the proposal to maintain a primary allocation to FSS in the entire 3700-4200 MHz band and the proposal that existing FSS earth stations in satellite-dependent areas remain licensed in the entire 3700-4200 MHz band.

30) Cogeco is of the view that the Tier 4 license areas listed in annex C of GL-10 or the Tier 5 license areas defined as remote are appropriate definitions of satellite-dependent areas where priority can be maintained for FSS in the entire band.

Question 9: ISED is seeking comments on the future demand for C-band in rural and remote areas such as the North, including the following:

- a. the trend towards using higher frequencies by FSS operations to provide broadband connectivity
- b. the ability of using higher frequencies to replace current C-band capacity and the potential timelines
- c. the possibility of a trend towards using 4000-4200 MHz in combination with other connectivity options (e.g. higher frequencies satellites or wireline solutions) and when it would be expected to be available for satellite-dependent areas.

31) Cogeco would only note that, for a LEO satellite service, this may be a more viable option and long term solution for certain communities. That said, the only LEO solution being contemplated at this time for these higher frequencies is the Telesat LEO project. Therefore, Cogeco submits that, if this is the only project being

contemplated for these higher frequencies, then perhaps it is premature to call this a trend given the paucity of options being contemplated.

Question 10: In addition to capacity requirements, ISED is seeking comments on other issues that should be considered in maintaining broadband connectivity in satellite-dependent areas.

32) Cogeco has no comments on this question.

Question 11: ISED is seeking comments on its proposal to remove the FSS allocation in the 3500-3650 MHz band and to suppress Canadian footnote C20 in the CTFA as detailed in [annex B](#). In addition, ISED is seeking comments on the proposed grandfathering of the existing earth station operations listed in [annex C](#), such that fixed or mobile stations in the 3500-3650 MHz band will be required to coordinate with these earth stations as specified in SRSP-520.

33) Cogeco agrees with this proposal.

Question 12: ISED is seeking comments on its proposal to remove the primary FSS allocation from 3650-3700 MHz and suppress Canadian footnote C33 in the CTFA as detailed in [annex B](#).

34) Cogeco agrees with this proposal.

3.3 Block Sizes in the 3650-3700 MHz band

Question 13: ISED is seeking comments on:

- a. establishing unpaired blocks of 10 MHz for the 3650-3700 MHz band
- b. establishing unpaired blocks of 10 MHz for the 3700-3980 MHz band

35) Cogeco is supportive of the creation of unpaired blocks of 10 MHz for both the 3650-3700 MHz band and the 3700-3980 MHz band.

3.4 Treatment of Existing Users & Technical Considerations

Question 14: Subsequent to changes to the spectrum utilization described in [section 7](#) and recognizing the need to change the current WBS licensing model, ISED is seeking comments on its proposal to displace the existing WBS licensees and designate 80 MHz of spectrum available for the development of a new shared licensing process in the 3900-3980 MHz band as described in Option 2. Specifically, ISED is seeking comments on:

- a. the amount of spectrum proposed (80 MHz) under a shared spectrum licensing process
- b. whether there should be a provision that allows certain users (e.g. existing WBS licensees) priority licensing (e.g. an initial application window before accepting applications from others)

36) Cogeco submits that the benefit of displacing existing WBS licensees is that, at most, a single operator in a specific Tier 4 area would have the potential to extend 3500 MHz spectrum holdings into the 3650-3900 MHz band to have a contiguous range of spectrum. At the conclusion of the 3500 MHz auction, there would be a single known operator in a specific Tier 4 area at the top of the 3500 MHz band that would be capable of exercising this option. For all the other operators who will have been outbid in the 3500 MHz assignment stage, there would be no benefit. The 3500 MHz auction licensee that holds the 3640-3650 MHz high block would also need to win the low blocks in the assignment stage of a 3650-3900 MHz auction or there would be no benefit either for that single operator of having displaced WBS.

37) Cogeco also notes that another benefit of Option 2, and of displacing the existing WBS licensees in the 3800 MHz band, is that ISED is suggesting that a total of 80 MHz additional bandwidth could be made available for shared use to allow operators the opportunity to deliver 50/10 Mbps wireless broadband access. Cogeco notes that ISED could implement this same benefit of increasing shared licensing bandwidth by extending the existing WBS band from 3650 MHz to 3730 MHz without

imposing an equipment swap on every WBS operator. WBS operators, with a software upgrade of their current gear, could comply with ISED's new interference minimisation measures and could continue to operate with little disruption of services to their customers and no additional capital expenditures. To take advantage of the additional bandwidth, the WISP would need to swap gear made for 5G n77 or n78 capable bands.

38) In addition, avoiding the displacement of WBS licensees to the 3900-3980 MHz range also eliminates the need for a displacement period and makes more of the 3800 MHz band available sooner for 5G deployments.

39) Whether Option 1 or Option 2 is adopted, Cogeco concurs with ISED's analysis that many existing WBS band users will likely need to upgrade equipment to meet any new interference minimisation coordination imposed by ISED or make use of any additional bandwidth, if any.

40) Finally, because only a single operator may benefit from a contiguous 3500 / 3800 MHz spectrum ownership at the expense of considerable displacement costs and delays from the displacement period, Cogeco is of the preliminary opinion that Option 1 provides more benefits to more operators compared to Option 2. Cogeco notes that ISED can still expand the amount of shared-use spectrum without displacing existing WBS licensees and with little impact to mobile 5G deployments.

Question 15: Given the proposal to implement Option 2, ISED is seeking information on potential costs such as upgrading equipment, which may be incurred by WISPs that are displaced from 3650-3700 MHz to provide services using the 3900-3980 MHz band.

41) Cogeco has no comments on this proposal.

Question 16: Based on the proposal to implement Option 2, ISED is seeking comments on the proposed displacement deadlines, with WBS operations in urban areas being displaced by December 2023 and all others by December 2025. Respondents are invited to propose other protection and displacement options for consideration, provided they include a strong rationale.

42) Cogeco submits that the implementation of Option 1 and the extension of the WBS band allows ISED to achieve the objectives of providing more shared use spectrum, minimize equipment replacement costs for WBS operators and make all 3800 MHz spectrum available sooner than 2023 in non-urban areas. The only drawback is that ISED would eliminate the opportunity for a single operator to have contiguous 3500 MHz and 3800 MHz spectrum holdings.

43) Cogeco submits that, should Option 2 be retained, the proposed maximum displacement periods are reasonable. However, for licence areas with a displacement deadline of 2025, the licence term should be a firm 20 years from 2025 and not be reduced to be co-terminus with licence areas made available in 2023.

Question 17: ISED is seeking comments on the Tier 4 service areas that would be considered urban as defined above and as listed in [annex D](#).

44) Cogeco does not object to the list of proposed Tier 4 service areas as listed in Annex D as long as the licence term for non-urban areas is not reduced. If ISED prioritises the maintenance of co-terminus licence end-dates for all licences in the band, as is the case with the 3500 MHz band, then the list of Tier 4 service areas qualified as urban should be extended to all areas with a population of 50,000 or more.

45) That said, Cogeco submits that Tier 5 license areas should be used instead. Thus, Tier 4 service areas covering the areas that would be considered urban, especially the ones with a population of 50,000 or more, should be divided into the Tier 5 service areas that nest within them.

Question 18: ISED is seeking comments on whether the moratorium should be extended to include all Tier 4 service areas.

46) Cogeco agrees with a moratorium on issuing new WBS licences to avoid encouraging a rush of requests and deployments for the sole purpose of gaining priority in requesting licences in the 3900-3980 MHz range, should ISED retain Option 2. However, the need for a moratorium on new stations for existing licensees is, in our view, not required and detrimental to the need to increase service for underserved areas in this time of the COVID-19 pandemic. WBS operators are now informed by virtue of this consultation of the risk they could be displaced by 2023 and this becomes a financial imperative to manage this risk should they choose to add or move stations. An increased number of stations in a given Tier 4 do not cause any additional harm or delay to the future auction winner and licensee of these blocks. The incumbent WBS operator has the same displacement obligations and deadline.

Question 19: ISED is seeking preliminary comments on the future spectrum licensing process for 3900-3980 MHz, including the following:

- a. what type of applications are envisioned for this spectrum
- b. what type of shared licensing process ISED should consider (e.g. database approach, licensee to licensee coordination)
- c. what additional measures ISED should consider employing to manage access to the band in high demand areas, such as major metropolitan centres
- d. what technical restrictions should be considered (e.g. technical rules similar to adjacent 3500 MHz flexible use band with reduced power levels, a guard band between new flexible use systems below 3900 MHz, shared use above 3900 MHz, etc.)
- e. what type of eligibility criteria, if any, should be established

47) In response to these questions, Cogeco submits these licenses should also be flexible use and it envisions that the 3900-3980 MHz spectrum would be used in applications for: (i) mobile wireless services in any Tier 4 areas and (ii) fixed wireless access (“FWA”) services in Tier 4 areas considered rural.

48) That said, Cogeco views the 3900-3980 MHz band as a unique opportunity to utilize Tier 5 license areas in any allocation of this part of the 3800 MHz band. Cogeco recommends, therefore, that in all Tier-5 licensing areas with a census population centre greater or equal to 30,000, that spectrum be made available at auction following a consultation on the auction rules and its framework. For all remaining licences, Cogeco recommends that ISED's approach to the licensing framework for this 80 MHz of spectrum be the least burdensome possible, particularly for those service providers who require greater spectrum/capacity resources in rural and underserved areas of Canada. The existing approach for 3650 MHz licensing could be maintained but with additional licence conditions to improve interference coordination. Cogeco also views favourably a database-driven dynamic spectrum allocation similar to the United States' CBRS for these rural Tier-5s.

49) In terms of eligibility criteria, Cogeco would support that existing 3650 Mhz licensees be granted a priority to redeploy in the 3900-3980 MHz block in Tier-5 areas outside urban and city centres. After this priority period expires then all operators should be eligible to obtain 3900-3980 MHz flexible-use licences in these areas after demonstrating to ISED that the operator is already making efficient active use of all of its existing low and mid band licensed spectrum.

Question 20: ISED is seeking comments on its proposal that existing FSS earth stations licensed in 3650-3700 MHz after June 11, 2009, be permitted to continue to operate on a no-protection basis with respect to proposed new flexible use operations.

50) Cogeco has no comments on this proposal.

Question 21: ISED is seeking comments on whether the Tier 4 service areas identified for exemption of certain provisions in GL-10 for mmWave bands as listed in [annex E](#) would be appropriate to apply for FSS operations in the 3700-

4200 MHz band. ISED invites alternative proposals for areas that would be considered satellite-dependent (e.g. based on Tier 5 categories)

51) Cogeco has no comments on this proposal.

Question 22: ISED is seeking comments on whether certain remote industry operations, for example offshore oil drilling platforms, should be included in the definition of satellite-dependent areas.

52) Cogeco has no comments on this proposal.

Question 23: ISED is seeking comments on its proposal to modify the existing FSS satellite authorizations to limit FSS operations in 3700-4000 MHz in non-satellite-dependent areas of Canada to a no-interference basis. ISED is also seeking comments on the proposal to adjust the conditions of licence for FSS operations to reflect the proposals as of the FSS transition deadline, including the possible removal of a high expectation of renewal for the 3700-4000 MHz portion of the band.

53) Cogeco agrees with ISED's proposal to modify the existing FSS satellite authorizations to limit FSS operations in the 3700-4000 MHz band in non-satellite-dependant areas of Canada to a no-interference basis. Further, Cogeco also supports ISED's proposal to adjust the conditions of license for FSS operations to reflect the proposals of the FSS transition deadline, including removal of the high expectation of renewal for the 3700-4000 MHz portion of the band.

Question 24: ISED is seeking comments on its proposed date of December 2023 as the Canadian FSS transition deadline.

54) Cogeco submits that the proposed date of December 2023 as the Canadian FSS transition deadline is subject to a number of unknowns, namely, the disposition of ISED with respect to which method they will choose to allocate cleared spectrum in the 3800 MHz band as part of this consultation.

55) If ISED moves forward with the Telesat Proposal (more comment and detail is provided below), then the transition deadline may have to be accelerated, or changed, as a result.

56) Alternatively, if ISED moves forward with an auction in 2023 as proposed in the Consultation Document, then Cogeco submits that the proposed transition deadline of December 2023 is feasible, and appropriate.

Question 25: ISED is seeking comments on how the U.S. transition will impact the availability of FSS capacity in Canada.

57) Cogeco has no comments on how the U.S. transition will impact the availability of FSS capacity in Canada.

Question 26: ISED is requesting information to assist with the consequent decision following this consultation. This information includes satellite transponder migration plans, frequencies, and how satellite operators serving the Canadian market will accommodate all Canadian customers, and on which frequencies. Requested information could include, but is not limited to:

- the names and number of satellites that will need to migrate to the 4000-4200 MHz band
- the number of new satellites that may be required to serve the Canadian market
- the locations of earth stations communicating with these satellites
- the number of antennas and locations of associated earth stations that will need to be retuned and/or repointed
- the flexibility of existing satellites to modify operations according to the different areas of Canada

This information should be submitted on a confidential basis, as instructed in [section 13](#).

58) Considering it is not a satellite operator in Canada, Cogeco will not be responding to this request for information.

Question 27: ISED is seeking comments on its proposed transition deadline of December 2023 for FSS earth stations, in which existing FSS earth station licences would be modified to 4000-4200 MHz in the relevant areas.

59) Cogeco would refer ISED to its response to Question 24.

Question 28: ISED is seeking comments on making amendments to the relevant conditions of licence and technical rules in the 3700-4200 MHz band as well as the 3450-3700 MHz band in order to implement the following proposals with respect to protection from interference:

- a. prior to the transition deadline, existing licensed FSS earth stations may operate in the entire 3700-4200 MHz band in all areas and be protected from interference from flexible use operations both in-band (3700-3980 MHz) and the adjacent 3450-3700 MHz band
- b. after the transition deadline, existing licensed FSS earth stations may continue to operate in the entire 3700-4200 MHz band in satellite-dependent areas and be protected from interference from in-band flexible use operations in 3700-3980 MHz, but would not be protected from flexible use operations in the adjacent 3450-3700 MHz band; however, ISED also proposes that flexible use licensees deploying stations in the 3450-3700 MHz band within 25 km of an existing licensed FSS earth station in the 3700-4200 MHz band be required to provide a notification to these operators, one year prior to the deployment of fixed or mobile stations
- c. after the transition deadline, FSS earth stations would only be licensed to operate in the 4000-4200 MHz band in non-satellite-dependent areas and would be protected from flexible use operations in the adjacent 3700-3980 MHz band
- d. after the transition deadline, FSS earth stations operating in 3700-4000 MHz, in all areas, which are not eligible for licensing could continue to operate as a licence-exempt station without protection from flexible use operations both in-band and adjacent band(s)

60) Subject to our responses to Questions 24 and 27, Cogeco generally agrees with the proposed changes to conditions of license and technical rules in the 3700-4200 MHz band, as well as the 3450-3700 MHz band, as noted above.

Questions 29 to 42.

61) Cogeco has no comments on the proposed changes in any of these questions.

Question 43: ISED is seeking comments on the proposal to rely on technical limits and coordination procedures rather than mandate specific technology solutions (e.g. TDD synchronization between systems) to address interference issues between TDD flexible use systems in the 3650-3980 MHz band.

62) Cogeco notes that interference between LTE TDD systems can be mitigated efficiently through RAN synchronization and alignment on uplink / downlink patterns. However, Cogeco understands that smaller operators use technologies that differ from LTE, in which case alignment between uplink and downlink is not always possible, and can cause severe interference (e.g. uplink path of operator A being interfered by the downlink path of operator B). ISED should consider this cross-technology aspect when designing its policy.

Question 44: ISED is seeking comments on whether any additional measures should be taken to limit potential interference issues between flexible use systems in the 3650-3980 MHz band.

63) Cogeco has no comment on the issue of additional measures to be taken to limit potential interference issues between flexible use systems in the 3650-3980 MHz band.

Question 45: ISED is seeking comments on whether specific technical measures should be adopted to address potential interference issues between flexible use systems and WBS systems until the displacement deadline.

a. For co-channel flexible use and WBS operations in the 3650-3700 MHz band, what specific measures may be needed to protect WBS? For example, should new flexible use stations be required to coordinate with WBS stations within a specified distance prior to deployment? Alternatively, should a technical parameter such as a power flux density (pfd) trigger for coordination measured at the WBS receive antenna be adopted? Are there other more appropriate measures that ISED should consider? Should multiple measures, such as a combination of distance and pfd trigger for coordination, be adopted? How would these requirements impact the deployment of new flexible use stations?

b. For adjacent band flexible use systems, is there a need to adopt any additional measures, beyond what is currently specified in RSS-192 and SRSP-520, to further address coexistence between these flexible use and WBS systems? If so, what should they be? How many flexible use frequency blocks (or MHz) immediately adjacent to the 3650-3700MHz band could potentially affect WBS systems? How would these requirements impact the deployment of flexible use stations?

64) Cogeco has not comments on these proposed technical measures regarding potential interference issues between flexible use systems and WBS systems.

Question 46: Until the transition deadline, in all areas for flexible use in the 3650-3700 MHz band: ISED is seeking comments on the proposal that until the transition deadline, those flexible use licensees deploying stations in 3650-3700 MHz within 25 km of a licensed FSS earth station (not including interim FSS authorization) in the 3700-4200 MHz band will be required to coordinate with the operators in these earth stations.

65) Cogeco agrees with the proposal of ISED to maintain coordination efforts between licensees of FSS earth stations and holders of flexible licences deploying stations in the 3650-3700 MHz band.

Question 47: After the transition deadline, in all areas for flexible use in the 3450-3650 MHz band: ISED is seeking comments on its proposal that the current SRSP-520 coexistence requirements for flexible use operations in the 3450-3650 MHz band to protect FSS operations in the adjacent band 3700-4200 MHz be removed.

66) Cogeco agrees with this proposal.

Question 48: For FSS earth stations licensed in the 4000-4200 MHz band and flexible use in the 3800 MHz band, in all areas: ISED is seeking comments on adjacent band coexistence measures, taking into account the coexistence measures adopted by the EU (i.e. a stringent OOB limit) and the U.S. (i.e. a combination of guard band, a typical OOB limit, pfd limits, and baseline minimum filter specifications for earth station operations) and the current Canadian requirements (i.e. a typical OOB limit and coordination distance):

a. What are the benefits and technical limitations associated with the above coexistence measures?

b. Which set of coexistence measures above (i.e. EU, U.S., Canada) is preferred? If applicable, comments are sought on the values of the limits in relation to the supported measures

c. Given the proposal in [section 9.1](#) to displace WBS in 3650-3700 MHz and identify 3900-3980 MHz for shared use, are there any additional considerations that may impact the response to a) and b) above?

d. Which portion of the 3800 MHz band should the above measures be applied to in order to protect FSS in the 4000-4200 MHz band (i.e. how many frequency blocks or MHz)?

67) Cogeco has no comments on this proposal.

Question 49: ISED is seeking comments on what technical requirements should be imposed to ensure co-channel protection of FSS earth stations from flexible use systems, in the relevant scenarios and timeline as stated in sections [9.5](#) and [9.6](#). For example, could the pfd limit of -124 dBW/m²/MHz measured at the earth station antenna proposed by FCC above be used to protect co-channel FSS earth station? Alternatively, should other measures be adopted, such as a separation distance as described in [section 7.3](#)? Or should a combination of measures be adopted? If applicable, what are the specific values that should be adopted?

68) Cogeco has no comments on this proposal.

Question 50: ISED is seeking comments on whether the assumptions made by the FCC about earth stations, including baseline minimum filter specifications for earth station operations as stated above, are applicable to Canadian operations. Is there any additional information that ISED should consider in the development of appropriate technical rules to enable coexistence both co-channel and in adjacent bands?

69) Cogeco has no comments on this proposal.

Question 51: ISED is seeking comments on its proposal to not implement any technical requirements for the coexistence between flexible use operation in the 3650-3980 MHz band and radionavigation operations in the 4200-4400 MHz

band, noting the 220 MHz frequency separation between the bands of operation. If this is not sufficient for coexistence, what other measures would be appropriate?

70) Cogeco has no comments on this proposal.

3.5 Licensing Process for the New Flexible Use Licenses

Question 52: ISED is seeking comments on the use of an auction as the licensing process for the flexible use spectrum that would be considered as the 3800 MHz band, noting a separate consultation process would be issued, if required, to determine the licensing framework for the range 3900-3980 MHz

71) Cogeco is generally favourable of an auction as the preferred licensing process for the flexible use spectrum that would be considered as the 3800 MHz band.

72) However, as with previous auctions, Cogeco would submit that several considerations need to be taken into account when designing an auction framework for this spectrum band.

73) As has been pointed out at the beginning of our comments, spectrum in this band is essential for service providers for rolling out small cells as part of the 5G ecosystem. As such, Cogeco submits that it is incumbent upon ISED to ensure that spectrum is broadly available to existing and new service providers who are prepared to offer wireless services in rural and underserved areas of the country.

74) While ISED will issue a separate consultation to determine the licensing framework for both the 3800 MHz band, as well as the 3900-3980 MHz band, Cogeco provides the following broad recommendations for ISED's consideration in their design of an auction framework for this band.

75) **First**, Tier 5 license areas should be used. In comments related to the upcoming auction of 3500 MHz spectrum, Cogeco made a hybrid proposal for the use of both Tier 4 and Tier 5 license areas, summarized as follows:

- (a) In previous ISED consultations, Cogeco proposed that licensing spectrum on the basis of Tier 5 services areas would generate competitive benefits, and allow new smaller regional players to acquire spectrum in a manner that is economically sound and realistic.
- (b) While Cogeco saw benefit in implementing Tier 5 licensing for the entire 3500 MHz auction, Cogeco limited its proposal to specific regions. As ISED recognizes in its recent New Service Areas Decision, “*the cities of greater Vancouver, greater Toronto and greater Montreal, represent exceptional outliers ... compared to other medium and large population centres*” and the high concentration of the Canadian population in these three centres affects the ability of smaller service providers to access spectrum¹⁴. Cogeco recommended therefore that the Tier 4 service areas covering these three large metropolitan centres be divided into the Tier 5 service areas that nest within them. ISED would then licence 3500 MHz spectrum on the basis of Tier 5 service areas in these metropolitan areas and on the basis of Tier 4 service areas elsewhere.
- (c) Dividing these three Tier 4 service areas into Tier 5 service areas would only add 27 licence areas to the auction process, i.e. there would be 199 licence areas instead of 172. That said, doing so would have significant benefits, by allowing smaller service providers to access more spectrum, as well as non-traditional spectrum users who may not want to deploy across an entire larger tier. It would reduce barriers to entry, enable new

¹⁴ ISED Decision, *Decision on a New Set of Service Areas for Spectrum Licensing*, DGSO-006-19, 23 July 2019 (“New Service Areas Decision”), par. 107.

service providers and would be in line with the objectives set out by ISED for 3500 MHz spectrum.

76) Similar to the 3500 MHz auction, Cogeco submits that the approach outlined above should be taken with any auction of the 3800 MHz band.

77) **Second**, pro-competitive measures should be favoured. Given the amount of spectrum that potentially could be auctioned (depending on the successful implementation of spectrum clearing measures noted in this ISED consultation), Cogeco recommends that any auction for the 3800 MHz band include pro-competitive measures.

78) Again, in comments submitted to ISED regarding the 3500 MHz auction, Cogeco recommended the use of two measures: a set-aside, and a cap within the set-aside. Cogeco proposed the use of a cap for the simple reason that the 3500 MHz auction must take into account how much spectrum is offered, its importance to the development of the industry as well as how many bidders there are likely to be. This reinforced ISED's statement that, as the 3500 MHz spectrum would be in high demand, any set-aside would have to be applied in a balanced manner. Also, since many WISPs will be affected by any 3650-3700 MHz reallocation, these smaller operators may also need to participate in the auction to assure the continued use of their existing equipment. The opportunity cost of obtaining exclusive use licence spectrum in the 3650-3700 MHz range may be lower than the cost of migrating the network and end-users to the 3900-3980 MHz range. The use of Tier 5 areas enables this for these smaller operators and pro-competitive measures must therefore allow more than one large regional set-aside eligible operator to foreclose smaller peers.

79) Cogeco submitted that, in order to ensure a fair playing field for bidders, and in light of the significant incumbency and limited amount of spectrum available in a

strategically important 5G band, ISED would need to put in place pro-competitive measures for this auction. Cogeco noted in particular that:

- a. Insufficient spectrum was available for multiple bidders to acquire 100 MHz each¹⁵;
- b. Incumbents had a major competitive advantage in the 3500 MHz auction – Rogers and Bell typically have 20 to 30 MHz each and Xplornet has 20, 50 or 60 MHz in 93% of the Tier 4 areas¹⁶. All current mobile operators could also rely on carrier aggregation with existing bands to offset the operational need for 3500 MHz spectrum.

80) Further, Cogeco noted that the presence of Inukshuk, Xplornet and other incumbent licensees limits supply, with some markets having as little as 30 MHz available for this auction, so measures need to apply to all bidders to ensure that markets cannot be foreclosed.

81) The spectrum landscape in the 3800 MHz band is not the same as the 3500 MHz band. The former has one principal licence holder today who uses the spectrum for the provision of FSS services, and would not necessarily have a use for that same spectrum licensed as flexible use. On the other hand, the 3500 MHz band has many incumbent licensees who would continue to use the spectrum, post-auction, as licensed as flexible use. Therefore, the supply and demand conditions are not necessarily the same.

¹⁵ The requirement for bandwidth to support 5G is 100 MHz, per the ITU. However, with carrier aggregation, 100 MHz of bandwidth can be supported by a single or multiple radio frequency (RF) carriers. See: Minimum requirements related to technical performance for IMT-2020 radio interface(s), Draft New Report ITU-R M.[IMT-2020.TECH PERF REQ], Working Party 5D, ITU Document 5/40-E, 20 February 2017, Section 4.13

¹⁶ The discussion in this response to Questions Q1A through Q1F is based on the application of Tier 4 service areas as currently proposed. ISED has also asked for comment on its proposal to use Tier 4 areas (see par. 50 and Question Q2, Consultation Document). Please see our responses to Question Q2 below for Cogeco's comments on the appropriate licence service areas for this auction.

82) That said, Cogeco continues to submit that the NMNOs in general have a poor record of ensuring the deployment and timely availability of services across the country, especially in rural areas, and that without a variety of smaller, regional operators having access to this band, the sustained competition that would allow consumers and businesses to benefit from greater choice and the widespread availability of 5G services is unlikely to emerge.

83) As a result, Cogeco submits that pro-competitive measures should be applied to any allocation mechanism for spectrum in the 3800 MHz band. Cogeco will be prepared to comment further on the measures, and how they could be implemented, once ISED issues its final consultation for the 3800 MHz band.

84) **Third**, an important element of a set-aside is the definition of the entities that should be eligible to bid for the set-aside spectrum. ISED proposed in the consultation on the licensing framework for the 3500 MHz band that, if it adopted a spectrum set-aside, eligibility for that spectrum would be limited to entities which are:

- a) registered with the CRTC as facilities-based carriers;
- b) not NMNOs; and
- c) actively providing commercial telecommunications services to the general public in the relevant Tier 2 area of interest.

85) Cogeco agreed with the first two criteria. Facilities-based carriers are best positioned to compete with the NMNOs. Allowing the NMNOs or their affiliates or associates to bid on set-aside spectrum would defeat the purpose of having pro-competitive measure and would allow the NMNOs to control this valuable spectrum.

86) Cogeco however has reservations regarding the proposed third criterion. Cogeco submitted that eligibility for set-aside spectrum should be based on actively

providing services in the Tier 4 area in which the entity wishes to bid as a set-aside-eligible entity, not the entire Tier 2 service area in which the Tier 4 service area is situated. Cogeco submitted that Tier 2 service areas are simply too large: having facilities and actively providing services somewhere in a Tier 2 service area is not a reliable indicator of the ability to compete in a specific Tier 4 service area elsewhere in that Tier 2 area, nor are they a good indicator a particular service provider's ability to serve rural and underserved Canadians. For example, being an existing facilities-based service provider in Kamloops is a reasonable indicator that the entity is better able to compete with the NMNOs in Kamloops, but does not mean the entity in question is better able to compete with them in Vancouver or Comox (i.e. other locations in the same Tier 2 area) where the entity in question has neither network nor customers.

87) Given that Cogeco anticipates that the spectrum in the 3800 MHz will be in high demand, and that – potentially – a significant amount of spectrum could be made available, it is appropriate for ISED to consider – at a minimum – the use of a set-aside in any auction for this band, as well as modified criteria for which entities are eligible for set-aside spectrum. Depending on the structure of any future auction, Cogeco will reserve its opinion on whether or not a spectrum cap is required, either on incumbent NMNOs or on any potential bidders for set-aside spectrum.

3.6 Proposed Accelerated Spectrum Clearing Approach

Question 53: ISED is seeking general comments on the proposal submitted by Telesat found in [annex H](#), including whether such an approach would be in the best interest of Canadians and more specifically, whether it would result in the faster deployment of 5G services in the affected frequencies; more efficient use of spectrum and what the implications of this repurposing plan would be for other users of the band.

88) Cogeco has read Telesat's proposal, entitled *Fast tracking affordable, Canada-wide 5G and universal connectivity with 3800 MHz spectrum* ("Telesat Proposal").

89) Telesat proposes the following measures to accelerate the clearing of the 3800 MHz band:

a) As the lone occupant and licensee of the 3800 MHz band in Canada, Telesat is uniquely positioned to lead a process to clear the band to make way for the issuance of flexible use licenses for 5G;

b) Telesat is therefore proposing that it be granted a Tier 1 flexible use license for 200 MHz of this spectrum in the 3700-3900 MHz band;

c) Following this, Telesat would then seek to allocate that 200 MHz spectrum to other service providers via a secondary spectrum market in June 2021 – the same time as the 3500 MHz auction begins – via license subdivisions and transfers, or subordinations in accordance with ISED's existing policies for commercial radio spectrum;

d) Telesat would then use the proceeds of this re-allocation process to cover all the costs associated with the transition of Telesat's FSS service out of this band, including funding investments in Telesat LEO, a venture to deploy 300 low earth orbit satellites for the provision of broadband services around the globe.

90) Telesat further states that ISED's existing policies and procedures – including CPC 2-1-23 – provide for case-by-case approval of such transactions, providing a ready mechanism for the Minister and the Department to ensure that secondary market transactions do not distort the competitive landscape.

91) Telesat also takes no position on the issue of whether or not pro-competitive measures should be imposed in their proposed process of allocation, but does state that, if a set-aside is to be implemented, no spectrum cap be applied.

92) In terms of the process that Telesat would take in allocating spectrum via the secondary market, Telesat seems to be proposing some kind of expedited clock auction process, where eligible bidders, a reserve price and a time limit are all proposed by ISED, and then Telesat would proceed with negotiations with the highest bidder regarding the commercial terms of the spectrum to be transferred. If any block transfer fails for any reason, Telesat would proceed with the next highest bidder and so on until all the bids that met the reserve price are exhausted.

93) Finally, Telesat is also proposing to clear an additional 200 MHz of 3800 MHz spectrum in the 3900-4100 MHz band, and return that spectrum to ISED for them to allocate on the basis of a future auction, which they say should occur in 2025.

94) Cogeco would like to commend Telesat for proposing such an accelerated spectrum clearing operation in the first place. In general, Cogeco finds there are some appealing characteristics to the proposal, namely:

- a) Telesat has identified that more spectrum, 100 MHz beyond what ISED has initially proposed, can be cleared for flexible use and in a faster timeframe, given adequate financial incentives to do so. Telesat would then use this compensation to enhance broadband internet service to satellite dependent areas. Making more 5G mid-band spectrum available and enhancing service to satellite dependent areas is clearly to the benefit of all Canadians.
- b) It would be possible to enter into collaborative arrangements with other bidders that could result in more effective allocation of spectrum to non-dominant service providers in the market.

95) While the advantages noted above could be the result of the secondary market allocation process proposed by Telesat, Cogeco submits that the lack of detail in the Telesat Proposal is such that serious questions are raised:

- a) It is unknown on what basis Telesat intends to allocate the spectrum across the country. Is it by Tier? Is it a SMRA, CA or CCA auction format? Are there packages and is package bidding permitted? If by Tier, what Tier size is appropriate, and why? Is there any mechanism to make suggestions as to the appropriate license area and auction format?
- b) The reserve price is unknown. While it is possible that the allocation method proposed by Telesat could result in lower spectrum costs for any beneficiaries, it is entirely dependant on what the reserve price will be, and further, what that reserve price will be based on. Thus far, there is no indication whatsoever in this regard. For that reason, it is difficult to firmly conclude that such an allocation mechanism is in the best interests of all potential eligible bidders.
- c) Lack of support for pro-competitive measures. As has been noted above, the importance of pro-competitive measures – in the context of a highly concentrated Canadian spectrum market where the bulk of the spectrum is owned by the NMNOs – cannot be stated strongly enough. The fact that Telesat makes no real commitment to such measures suggests to Cogeco that there is a serious threat that spectrum will again be consolidated in the hands of the NMNOs, given their size and access to considerable financial resources.
- d) Cogeco has concerns with the fact that bidders who successfully win spectrum may, in the end, lose it should negotiations with Telesat fail post-auction as indicated in paragraph 46 of the Telesat Proposal. In government-run auctions, the qualification of bidder deposits and payment terms, transition dates, and all licence award conditions and obligations are known ahead of the auction start

process. As long as a winning bidder makes its financial payment by the specified deadlines, there are no reasons whatsoever for that winning bidder not to obtain its licences. The process proposed by Telesat has significantly more risks for bidders and ultimately requires a transfer or subordination request to be submitted to the ISED and the Minister which could be denied. It is also not clear if the Minister will be able to review all negotiated transactions simultaneously to holistically assess if spectrum ownership concentration issues arise.

- e) Are there anti-collusions rules and, if yes, how are these to be enforced?
- f) Although Telesat may be able to rapidly conduct a fair secondary market auction that respects any ISED imposed conditions and pro-competitive measures, this process implies that a series of transfer or subordination requests be submitted to ISED following negotiations. Considering the secondary market auction itself, multiple parallel negotiations between Telesat and winning bidders, and preparation, submission and approval of subordination requests by ISED, Cogeco submits that the overall process may not be any faster than if ISED conducted the auction of the first 200 MHz block following the 3500 MHz auction. Cogeco submits that ISED is efficient at awarding spectrum licences following reception of payment and the time for ISED to conduct a consultation on the process and framework is likely comparable to the time for bidders to negotiate the agreement with Telesat, prepare subordination proposals and wait for ISED for their assessment and approvals.
- g) Last, as indicated by Telesat, the proceeds of the secondary market allocation are supposed to fund two initiatives – defraying the costs associated with clearing the band, and funding their new Telesat LEO venture. As such, Telesat

has the financial incentive to wring the maximum financial value out of the spectrum they intend to allocate, in order to raise the maximum amount of funds for their purposes. Cogeco submits that this element alone raises serious questions around the impartiality of the process, fairness for all potential eligible bidders in this process and ultimately, the cost of spectrum to any winning bidders.

96) Given these concerns, Cogeco would not recommend moving forward with the Telesat Proposal. Rather, Cogeco favours the use of an ISED auction to allocate this spectrum. Cogeco does encourage ISED to discuss and negotiate with Telesat the opportunity to clear 400 MHz in total to be returned to ISED in two blocks of 200 MHz on the timelines suggested by Telesat, plus a commitment by Telesat to enhance service in satellite dependent areas.

Question 54: ISED is seeking comments on whether the Telesat proposal meets ISED's policy objectives outlined in [section 3](#), including:

- a. supporting rural/remote connectivity**
- b. promoting competition in mobile services**
- c. making more mid-band spectrum available to support 5G services**

97) In light of the comments noted in our response to Question 53, Cogeco would submit that the Telesat Proposal – in its current form – is not sufficiently detailed to respond to the questions noted by ISED regarding rural/remote connectivity, promotion of competition in mobile services, and making more mid-band spectrum available to support 5G services.

98) Cogeco submits that the Telesat Proposal could meet all three of these objectives, particularly the last one regarding making more mid-band spectrum available to support 5G services. However, until such time as the issues noted above are addressed, it is frankly difficult to make any assessment on whether or not it will

support the narrowing of the digital divide in Canada, or promoting more competition in the provision of mobile services.

Question 55: ISED is seeking comments on what elements from sections 7 to 10 of this consultation would still apply or need to change if ISED were to implement the Telesat proposal, in particular:

- a. the proposal for maintaining the primary allocation for FSS in the 3700-4200 MHz band
- b. the proposed implementation of an exemption to transition for satellite-dependent areas and the proposed changes to satellite licenses to apply it
- c. the proposal for treatment of WBS incumbents
- d. the proposal to issue interim authorizations for certain existing licence-exempt earth stations in the 3700-4200 MHz band
- e. technical considerations for coexistence between FSS and flexible use
- f. technical considerations for coexistence between FSS and aeronautical radionavigation systems
- g. the overall impact on existing users in the 3700-4200 MHz band.

99) Cogeco has no comments on these elements as applied to the implementation of the Telesat Proposal.

Question 56: If ISED were to implement the Telesat proposal, ISED would need to consider the licensing framework for the 3700-3900 MHz band. Thus, ISED is seeking comments on:

- a. whether it should, as proposed by Telesat, issue flexible licences in the 3700-3900 MHz band using the same conditions of licence as those contained in [annex H](#) of the 3500 MHz Framework, noting that some conditions may need to be adjusted to reflect the differences in the two bands and the decisions resulting from this consultation process
- b. whether it should issue a single Tier 1 flexible use licence as proposed by Telesat or align with the 3500 MHz band and issue Tier 4 licences
- c. what deployment conditions should apply to these licences including Telesat's proposal that the deployment requirements would only come into force after the Minister approves a transfer
- d. any additional conditions of licence that should apply given the nature of the proposal

100) Cogeco has the following comments on each of the questions posed by ISED in this section, namely:

- a) If ISED issues a flexible use licence to Telesat as a result of the process outlined in the Telesat Proposal, it should have the same conditions of licence as those contained in Annex H of the 3500 MHz framework, with any changes particular to the specificity of the 3800 MHz band. Furthermore, in the event that ISED does not conduct the auction itself, ISED should nevertheless dictate all elements of Telesat's auction process including auction format and rules, pro-competitive measures, anti-collusion rules, payment terms, etc. as would be found in an auction framework. ISED should conduct a consultation on these before issuing a flexible licence to Telesat. Adherence to this process should result in an expedited approval of licence transfer or subordination requests following a secondary market auction, should this have been retained by ISED.
- b) With regards to the licence area size, Cogeco submits that, for any allocation of the 3800 MHz band, it should be at a Tier 4 level, with the exception of the three major urban markets of Vancouver, Toronto and Montréal, which should be on a Tier 5 level, consistent with our recommendations in the 3500 MHz consultation.
- c) Cogeco agrees with the proposition that the licence deployment obligations should commence on the date the transfer or subordination is approved by the Minister.
- d) Cogeco has no comments on this aspect of this question.

Question 57: In its proposal, Telesat indicates that it takes no position on ISED imposing a pro-competitive measure such as a spectrum cap or set-aside on the 3700-3900 MHz licences. ISED would review any request for transfer in

accordance with provisions related to commercial mobile spectrum through section 5.6 of CPC-2-1-23, [Licensing Procedure for Spectrum Licences for Terrestrial Services](#). However, ISED would also consider the competitive implications on the 3500 MHz and 3800 MHz bands and consider pro-competitive measures in accordance with the Framework for Spectrum Auctions in Canada. As such, ISED is seeking comments on:

- a. the need for a pro-competitive measure (e.g. spectrum cap or set-aside)
- b. the type of competitive measure that should be applied
- c. the amount of spectrum that should be considered under any such competitive measure

101) Cogeco has already indicated its support for pro-competitive measures in its response to Question 52 above, as well as the type of measures that Cogeco recommends.

102) With respect to the issue of how much spectrum should be considered under any pro-competitive measure, Cogeco does not have specific recommendations to offer until the industry knows just how much spectrum is planned to be made available. This question should be specifically addressed as part of a consultation on the auction framework.

103) That said, given that the minimum amount of spectrum that is expected to be made available under either an auction or the Telesat Proposal is 200 MHz, and taking into account the amount of spectrum to be made available in the upcoming 3500 MHz auction, plus the amount of spectrum to be made available when the rest of the 3800 MHz band is cleared, Cogeco submits that a minimum of 100 MHz of spectrum should be made available under any pro-competitive measure. Allocating two blocks of 200 MHz via separate independent processes as suggested under the Telesat Proposal will make reserving 100 MHz for set-aside difficult and would likely result in fragmented blocks for operators. The only approach to allow more operators to obtain contiguous 200 MHz blocks is to auction the entire 3800 MHz band in a single allocation and assignment process. Cogeco suggests that the 200 MHz Telesat proposes to clear by the 3500MHz transition timelines and the subsequent

200 MHz block could be auctioned as separate products in a single 3800 MHz auction. This approach has the following benefits:

- a) It still makes an initial 200 MHz available faster than ISED's Option 1;
- b) It provides an opportunity for more operators to have contiguous blocks of 100 MHz by 2025 as opposed to a two-step approach;
- c) Its associated larger amount of spectrum provides ISED with more flexibility to accommodate 100 MHz or more for pro-competitive measures.

Question 58: ISED is seeking comments on Telesat's proposals for the transition of FSS earth stations and whether any additional measures are required to ensure a smooth transition.

104) Cogeco has no particular comments to make regarding this proposal, other than to note that the measures proposed by ISED in this regard appear to be adequate.

Question 59: Telesat's proposal includes ISED allocating an additional 80 MHz for flexible use in the 4000-4100 MHz band. ISED is seeking comments on the feasibility of making this extra spectrum available, specifically:

- a. whether there would be standardized 5G equipment available for this 80 MHz, given that it does not align with the U.S. band plan
- b. whether there would be FSS filters available, given the reduced amount of FSS spectrum and that it would not align with the U.S. band plan
- c. whether there would be enough capacity to continue FSS services in Canada with the proposal to reduce the amount of FSS spectrum to 100 MHz
- d. to what degree would the requirement to protect U.S. FSS earth stations in the border areas have an impact on the ability to deploy flexible use stations near the border and to what degree would this impact the value of this spectrum

105) Cogeco has no specific comments to make on this issue.

4 Conclusions

106) Cogeco welcomes ISED's initiative in consulting with the public on the potential availability of valuable, mid-band spectrum. Making more spectrum available for the deployment of the next generation of mobile broadband services is key in continuing Canada's lead in deploying modern wireless networks, but also, in addressing the digital divide that separates urban from rural Canadians in many parts of the country.

107) The opportunity to make available a potential 400 MHz of spectrum in the 3800 MHz band is a unique moment for ISED to not only enhance the spectrum positions of current regional service providers, but also, to encourage new entrants that have opportunities to serve Canadians in areas where the NMNO's have traditionally been late in deploying advanced wireless services.

108) In response to some of the technical questions raised by ISED regarding the clearing of the 3800 MHz band, Cogeco has made a number of observations and recommendations relating to some of the key technical aspects of clearing this spectrum band of incumbent licensees.

109) Once cleared of incumbent licensees, Cogeco has recommended that ISED's approach of auctioning off spectrum in the 3800 MHz band is preferable to the Telesat Proposal. The Telesat Proposal – while laudatory in its novelty – lacks considerable detail in how spectrum will eventually be allocated and appears oriented more to maximizing a windfall for Telesat than in the equitable allocation of spectrum in adherence to ISED's spectrum allocation policies and more general connectivity objectives.

110) In addition, Cogeco is recommending that competitive measures be used in any planned auction of spectrum in the 3800 MHz band, in order to ensure equitable

access to spectrum and to mitigate the consolidation of spectrum in the hands of the NMNOs.

111) Lastly, Cogeco is recommending that, if ISED decides to not conduct the auction itself, that it – at a minimum – dictate all terms and conditions to Telesat regarding auction format and rules, pro-competitive measures, anti-collusion rules, payment terms, etc. as would be found in a typical ISED auction framework.

112) Cogeco would like to thank ISED for the opportunity to provide comments in this Consultation and we look forward to adding additional comments in the Reply phase.

***** End of document *****