



**Submission to Innovation, Science and Economic Development
Canada**

by

SSi Canada

In Response to SLPB-006-21

***Consultation on a Policy and Licensing Framework for Spectrum in the
3800 MHz Band***

Reply Comments

March 21, 2022

Introduction

1. SSi Micro Ltd., doing business as SSi Canada ("SSi"), is pleased to submit these reply comments to Canada's Minister of Innovation, Science and Economic Development ("ISED" or the "Department") concerning *Canada Gazette* notice SLPB-006-21, *Consultation on a Policy and Licensing Framework for Spectrum in the 3800 MHz Band* (the "Consultation").
2. As we stated in our initial comments, SSi's main interest in the present Consultation is to ensure that the policy and licensing framework for the 3800 MHz band does not undermine key policy determinations reached after extensive consultation in the Department's Notice No. SLPB-002-21, *Decision on the Technical and Policy Framework for the 3650-4200 MHz Band and Changes to the Frequency Allocation of the 3500-3650 MHz Band*, released on May 21, 2021 (the "3800 MHz Framework").
3. The 3800 MHz Framework established ISED's plan for the partial transition of spectrum in the 3700-4000 MHz band away from its current use as part of the space-to-Earth segment of the Fixed Satellite Service ("FSS") C-band, towards a potential new use as part of the mid-band spectrum available for 5G mobile telecommunications services. The remaining portion of the space-to-Earth segment, 4000-4200 MHz, remains available for FSS use.
4. In the 3800 MHz Framework, however, ISED stated clearly that the partial transition of C-band spectrum would not apply to FSS operations in satellite-dependent areas. Indeed, existing licensed FSS earth stations in satellite-dependent areas are to be protected from flexible use operations in the 3700-3980 MHz band – the band that is the subject of the present Consultation.
5. In making this determination, ISED recognized the likelihood that "rural, remote and northern communities will continue to have a strong reliance on satellites to deliver essential communication services in the long term". Propagation characteristics and existing infrastructure will continue to make the band important as a path to provide telecommunications, media and internet services to such communities.¹ This is true especially in view of the economic and physical challenges of providing affordable service using other backhaul facilities, whether based on existing technology, such as fibre, or new systems, such as Low Earth Orbit (LEO) satellites.
6. Implicitly, however, the 3800 MHz Framework also reflected another reality – and one made explicit by comments from others in response to this Consultation.

¹ 3800 MHz Framework, paragraph 82.

7. Given the expected level of demand for 5G services in sparsely populated parts of Canada, the fact is that it could be a long time until the 3800 MHz band is required to support this generation of mobile telecommunications.
8. 5G services, as SaskTel is at pains to point out in response to the present Consultation, can be offered using lower-band frequencies, such as the 600 MHz band auctioned in 2019, and other frequencies in the mid-band, such as 3500 MHz, which ISED auctioned in 2021.²
9. These factors – the necessity of the continuing use of C-band in satellite dependent areas, including Canada’s strategically vital North, and the availability of alternative bands with which to meet any demand for 5G that might materialize in such areas in the foreseeable future – make it both important and reasonable to delay making any unnecessary decisions now that will undermine the 3800 MHz Framework’s determination.
10. The Consultation proposes two such premature and irrevocable decisions:
 - **First**, the proposal to limit commercial users of the C-band to the two gateway facilities in Southern Canada to those identified by the Department in the Consultation, namely Weir, QC and Allan Park, ON, without making provisions to ensure fair, transparent and reasonable rates and terms, and to protect those users against anti-competitive behaviour and excessive pricing; and
 - **Second**, the proposal to extend aggressive deployment Conditions of Licence to flexible licensees in the 3800 MHz band without due consideration of the implications for encumbered areas.
11. We call on ISED to revise both these proposals as the Department finalizes its policy and licensing framework for the 3800 MHz band. They will impose significant harm in the name of dubious potential benefits. And they will impose those harms on the Canadians least able to afford prices that permit existing FSS operators to continue to offer vital telecommunications services including the internet access that is the measure of Canada’s Connectivity Strategy.

² For instance, SaskTel notes that it has both 600 MHz and 3500 MHz available to serve the satellite-dependent communities in area 4-130, Northern Saskatchewan, in support of the objection this ILEC states to extending the deployment obligations established for 3500 MHz spectrum to the 3800 MHz band. SaskTel, Comments in Response to SLPB-006-21, February 15, 2022 (“SaskTel Comments”), at paragraphs 127 and 132.

C-band Gateways Must Not Become Anti-Competitive Chokepoints

12. In our initial comments, we observed that the Department's decision to limit C-band gateways to two commercial sites, plus a third reserved exclusively for the use of the federal government, "puts existing users of C-band spectrum at risk of prejudicial or anti-competitive behaviour" from the operators of those commercial sites. We called on the Department to subject commercial operators of designated gateway locations to "rules constraining their ability to engage in discriminatory or otherwise anti-competitive pricing and other behaviour."³

13. We outlined the baseline rules that ISED should impose and enforce to protect FSS licensees and their customers from being held to ransom by commercial operators at these two designated gateways:

34. We urge ISED to impose requirements of non-discriminatory, just and reasonable behaviour upon the operators of these consolidated gateway sites. It would also be advisable to make all gateway service contracts available for public review. While not a complete solution (again, we believe pricing and terms should be publicly available to ensure non-discrimination), we note that the mandatory antenna and site sharing Condition of Licence currently applicable to PCS licensees provides a precedent for the type of supervision we believe ISED must provide in consequence of its decision to designate these two consolidated gateway sites.

14. Iristel raised a similar concern:

Iristel cautions ISED that a regime whereby only two sites are permitted to continue to operate as FSS gateways in certain bands may create a government mandated monopoly. While Iristel is not opposed to limiting the number of such sites for practical reasons, ISED should also mandate open access such that smaller community run networks may benefit from these sites at equitable cost.⁴

15. Like SSi, TELUS noted the statement in ISED's discussion of the gateways decision that protection of operations in the 3700-4000 MHz band at the consolidated gateway sites would continue only until "the end of life of existing satellites."

16. Whereas we raised the concern that this statement constituted a new temporal limitation on rights previously guaranteed in the 3800 MHz Policy and queried whether ISED had selected

³ SSi Canada, Comments in Response to SLPB-006-21, February 15, 2022 ("SSi Comments"), paragraphs 20-21.

⁴ Iristel, Inc., on behalf of itself and its subsidiaries Ice Wireless Inc. and i-MobileCA Inc., Comments in Response to SLPB-006-21, February 15, 2022 ("Iristel Comments"), paragraph 24.

specific existing satellites as the measure of the new limitation, TELUS' comments illustrate the danger that such statements do, in fact, undermine a policy determination intended to protect the access of people in satellite dependent areas to essential communications services.

17. Expressing gratitude for the "clarity" offered in this statement, TELUS then goes on to express its expectation that the new policy means that the 3700-4000 MHz block will be cleared early, even in satellite dependent areas:

TELUS also appreciates the clarity offered by ISED by stating that 'the protection of operations in the 3700-4000 MHz band at these sites will only continue until the end of life of existing satellites.' TELUS expects that this means that at some point in the not-too-distant future, as FSS use in general continues to decline, use of the 3700-4000 MHz frequency range for satellite services will come to an end and encumbered service areas will become fully unencumbered. This may presumably take place sooner for satellite-dependent areas (if/when all existing sites choose to transition to operations in the 4000-4200 MHz frequency range), but would certainly take place for protection of consolidated gateways once all satellites authorised in 3700-4000 MHz are no longer operating.⁵

18. While TELUS clearly reads into this statement a promise that even more spectrum will be made available for its 5G operations, others make the more practical observation that co-existence between designated gateways and the operations of flexible use licensees in the 3800 MHz band will continue in the long run, which will require ISED to clarify non-interference measures.

19. Rogers observes:

With the currently identified consolidated gateways in Allan Park and Weir, as well as any legacy gateways operating in 4000-4200 MHz, we again recommend the Department work with the fixed satellite services (FSS) operators to maximize the use of protection measures on earth-stations (e.g. installing filtering) and to do this as quickly as possible, so as to limit potential interference and any constraints on flexible use. To the extent feasible, similar measures should be taken by the Government's earth-station in North Bay to ensure FSS protection without unduly penalizing flexible use customers in impacted areas.⁶

⁵ SSi Comments, paragraphs 35-36; TELUS Communications Inc., Comments in Response to SLPB-006-21, February 15, 2022 ("TELUS Comments"), paragraph 30.

⁶ Rogers Communications Canada Inc., Comments in Response to SLPB-006-21, February 15, 2022 ("Rogers Comments"), paragraph 71.

20. While we agree with Rogers that ISED has a role to play in assisting FSS operators to guard against interference, we note that Rogers' proposal implies that all the cost and complication of installing filtering and other protection measures should be borne by the FSS operators. If this is indeed Rogers' intention, we believe such a policy would be inappropriate. Instead, we call upon the Department to balance the interests of FSS operators and their customers against the wishes of potential flexible use licensees so that any additional cost burden is shared in a more appropriate fashion. We suggest that, since FSS operators including FSS earth station licensees are bearing the cost and administrative burden of the prescribed transition for the benefit of potential flexible use licensees that it is the latter, not the former, who should meet the onus of protecting themselves against interference from users that were long established before the beneficiaries of this transition initiated their use of the spectrum band.
21. We also urge the Department to issue a strong statement that FSS operations in the full 3700-4200 MHz range in satellite dependent areas, together with the gateway sites required to continue to serve customers in those areas in an efficient and cost-effective way, will continue to be protected for so long as the C-band remains "important for providing telecommunications, media and Internet" to rural, remote and northern communities that "have a strong reliance on satellites to deliver essential communication services in the long term", as stated in the 3800 MHz Framework (paragraph 82).
22. We further urge the Department to revise its proposal to not identify additional consolidated gateway sites beyond Allan Park and Weir. Instead, ISED should state clearly that it has not foreclosed the possibility of establishing further gateway sites in southern Canada, authorized to use the entire C-band, once policies and procedures have been established that will guard against harmful interference between the C-band space-to-Earth segment and flexible use licensees in the 3800 MHz band.⁷

It is Inappropriate to Accelerate Deployment Requirements in Encumbered Areas

23. The second aspect of the Consultation that risks undermining the Department's own 3800 MHz Framework policy is the possibility that ISED will attach aggressive deployment requirements as conditions of the new flexible-use licences issued for this band.
24. In our submission, any deployment conditions attached to 3800 MHz flexible-use licences must take into account the ongoing use of the full 3700-4200 MHz band in satellite dependent areas – and the reality that to implement new, terrestrial mobile services using the 3700-

⁷ Consultation, paragraph 35 and question 2.

4000 MHz band requires, first, the completion of a prescribed transition from C-band elsewhere in Canada.

25. Many other commentators recognize this reality.

26. A number argue that deployment and other conditions of licence should not apply until the spectrum is actually available to the new licensee. For instance, several comments recommend that the licences accorded following the auction for 3800 MHz spectrum should benefit from a full 20-year initial term, but the term should not commence until after the transition date for 3700-4000 MHz in non-satellite dependent areas and consolidated gateway locations.

27. Bell, for instance, states “due to the well-known and planned delay in incumbent satellite licensees vacating the 3800 MHz spectrum to be auctioned, [20-year] licence terms should only begin when a licensee is able to deploy and not when the licence is issued.”⁸

28. Cogeco makes a similar point, proposing that the 20-year term should “begin when the spectrum is actually available for a [flexible use] service provider to use.”⁹

29. Rogers offers an interesting variation on this argument. Rogers proposes a no head start rule:

*[N]o matter when a licence holder’s frequencies are cleared, no 3800 MHz spectrum may be used before March 31, 2025. The initial 20-year term of the licences should reflect this no-head start date.*¹⁰

30. Rogers’ proposed no head start rule would also delay the requirements to deploy service in the band.¹¹ Rogers observes that for the 3700-3900 MHz band to be usable anywhere for 5G, the existing use of these frequencies must be discontinued by satellite operators – and earth stations must be equipped with filters “so that they no longer listen at frequencies below 4000 [MHz].”¹²

31. Similarly, SaskTel advocates that deployment obligations should not begin to apply until after the transition period applicable in the relevant Tier 4 licence area has elapsed.¹³

⁸ Bell Mobility, Comments in Response to SLPB-006-21, February 15, 2022 (“Bell Comments”), paragraph 77.

⁹ Cogeco Communications Inc., Comments in Response to SLPB-006-21, February 15, 2022 (“Cogeco Comments”), paragraph 95.

¹⁰ Rogers Comments, paragraph 244.

¹¹ Rogers Comments, paragraphs 245 to 249 and 272.

¹² Rogers Comments, paragraph 279.

¹³ SaskTel Comments, paragraphs 125-128.

32. In SSi's view, the deployment conditions established for this spectrum must reflect not only ISSED's established policy for transition, including the continued use of the full 3700-4200 MHz band in satellite dependent areas and consolidated gateways, but also the fact that significant elements of the Department's deployment policy, including the potential consequences for failure to meet ambitious deployment targets, remain unresolved.¹⁴
33. The fact is, as the numerous parties advocating a delay in the commencement of licence terms, licence payment, and deployment obligations recognize, there is no urgency to establish aggressive deployment conditions for the repurposed 3800 MHz spectrum.
34. Deployment conditions must reflect existing use of the spectrum – as well as the realities of the areas to be served.
35. In our comments, we outlined the likely impact of aggressive flexible-use licence deployment targets even where far more than 30% of the population continues to be served by FSS earth station licensees. It is highly foreseeable that existing FSS earth station licensees will come under pressure to scale back their use of the C-band to accommodate flexible-use licensees' deployment targets whether or not a viable, and affordable, alternative to C-band is available.¹⁵
36. Rogers' two preconditions to the use of the 3700-3900 MHz spectrum for 5G, quoted above, give an indication of the sort of pressure FSS earth station licensees are likely to experience if this spectrum does become desirable for 5G use. We agree with the following recommendation from Rogers:

*All 43 encumbered tiers identified in annex A which have potential encumbered populations of 10% or more should have lower deployment levels. The reduction of the population coverage requirement should be weighted to the potentially encumbered population, i.e., the larger the encumbered population, the greater the population coverage requirement should be reduced.*¹⁶

¹⁴ In particular, two outstanding Consultations propose consequences for failure to deploy according to timetables established long after the initial licensing process that certain parties have described as "expropriation": Notice No. SLPB-004-21, *Consultation on New Access Licensing Framework, Changes to Subordinate Licensing and White Space to Support Rural and Remote Deployment* (the "Access Licensing Consultation"); and Notice No. DGSO-003-21, *Consultation on Amending Cellular and Personal Communications Services (PCS) Licence Conditions*.

¹⁵ SSi Comments, paragraphs 42 to 44.

¹⁶ Rogers Comments, paragraph 288.

37. In a similar vein, but more specific to the satellite dependent areas most reliant on ongoing C-band access, TELUS proposes:

TELUS recommends one other exception to the rule for satellite-dependent Tier 4 services areas which are 'significantly encumbered'. ISED notes in Paragraph 68 of the Consultation that there are multiple satellite-dependent areas which are more than 90% encumbered. TELUS proposes that these service areas should not have deployment requirements for the time being. TELUS expects there is a likely path to clear these areas over time as the needs of earth station operators evolve. Should sound engineering assessment principles confirm that these service areas have become sufficiently unencumbered, the deployment requirements could be revisited at an appropriate time of the band's development.¹⁷

38. If these deployment requirements are not modified as proposed by Rogers and TELUS, customers whose telecommunications needs are currently supported by C-band FSS could suffer service reductions or price increases – driven, not by natural market conditions, but by an artificial and unnecessarily aggressive deployment schedule not geared to the realities of the remote or rural markets in which they live and work.
39. ISED must be careful not to sacrifice the interests of such customers, and the telecommunications service providers most dedicated to meeting their needs, for the sake of large operators that consider they can profit from additional mid-band spectrum to support their plans for 5G mobile service.
40. Finally, we note that comments made in connection with this Consultation absolutely highlight the need for ISED to refrain from imposing unnecessary and impractical deployment obligations for the 3800 MHz spectrum band until the Department has determined what the consequences are for licensees of failure to meet such aggressive targets.
41. Numerous parties made the point that ISED has already initiated many policies intended to further the achievement of Canada's Connectivity Strategy. The Department should be giving these policies an opportunity to bear fruit before focusing on imposing aggressive, and perhaps destructive, deployment obligations on 3800 MHz licensees in the very remote areas that are considered "encumbered".
42. We agree with TELUS that in order to achieve Canada's Connectivity Strategy, "ISED has an opportunity to implement mechanisms via the allocation of spectrum that provide incentives

¹⁷ TELUS Comments, paragraph 126.

to connect areas which are not currently connected versus simply focusing on minimum requirements and penalties.”¹⁸

43. However, in common with a number of other commentators in the current Consultation,¹⁹ SSi strongly believes that market mechanisms, such as improved incentives and procedures to facilitate the subordination of unused spectrum by primary licensees, are far preferable to more coercive mechanisms, including the “use it or share it” process that TELUS advanced in the Access Licensing Consultation and repeats here.

44. We urge the Department to recognize the contributions that existing smaller and regional operators, including FSS earth station licensees, already make to achieving Canada’s Connectivity Strategy, and to permit these operators to continue to contribute rather than undermining them by imposing unachievable deployment obligations on licensees promising the “next great thing”. As Cogeco notes, “the goal of rural and unserved area network expansion investments should be complementary to the networks that already exist in these areas, rather than applying a blanket coverage requirement across all licence areas.”²⁰

45. We appreciate the opportunity to participate in this Consultation.

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¹⁸ TELUS Comments, paragraph 135.

¹⁹ See, for instance: Iristel Comments, paragraph 71; ECOTEL, Comments in Response to SLPB-006-21, February 15, 2022, paragraph 113; and Xplornet Communications Inc., Comments in Response to SLPB-006-21, February 15, 2022, paragraph 115.

²⁰ Cogeco Communications Inc., Comments in Response to SLPB-006-21, February 15, 2022, paragraph 113.