

# **Canwisp's Reply Comments to**

## **Revisions to the 3500 MHz Band to Accommodate Flexible Use and Preliminary Consultation on Changes to the 3800 MHz Band**

SLPB-004-18

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## Canwisp Submission: Responses to Questions and Reply to Comments

In light of its review of comments submitted to ISED's Consultation on the 3.5 and 3.8GHz, Canwisp notes that the larger, spectrum- rich incumbents are battling over spectrum necessary to enable 5G mobile services and neglecting the need for spectrum required to deliver current and new services in rural areas. The danger of this approach is further support for an urban-rural divide in availability of affordable broadband services to rural citizens.

When urban and rural spectrum is bundled together and allocated using the same mechanisms, as we see today, rural services become collateral damage in the battle for the highly profitable urban mobile customers. Broadband connectivity in rural communities is sacrificed in order to ensure competition in large cities. However, it is possible for spectrum to benefit both urban and rural consumers, if spectrum policy can be built to address the diverging needs of rural and urban markets.

Canwisp urges ISED to consider the unique demands of rural markets in developing a policy for the 3500 and 3800 MHz bands. In particular, we encourage ISED to build upon the widespread success of the 3650-3700 MHz model that is in place, and to protect existing 3500 MHz spectrum that is currently being used to bring broadband services to rural communities.

In the text below, Canwisp presents its reply to comments by the other submitting parties. Our submission contains a synopsis of original (*italics*) arguments followed by new arguments.

**Q5 — ISED is seeking comments on the expected impacts of the following options with regards to the continuation of existing services, competition in the Canadian marketplace and availability of new 5G services for Canadians.**

### **Option 1**

**For each licence area, existing licensees would be issued flexible use licences for one third of their current spectrum holdings rounded to the nearest 10 MHz, with a minimum of 20 MHz.**

### **Option 2**

**For each licence area, existing licensees would be issued flexible use licences for a fixed amount of spectrum. Any licensee that holds 50 MHz of spectrum or more would be licensed for 50 MHz, and all other licensees would be licensed for 20 MHz**

*Canwisp noted that Option 2 provides better supports to continuation of existing services while allowing the Department to recuperate a sufficient amount of spectrum to promote competition in the Canadian marketplace and availability of new 5G services.*

1. While some respondents (Enbridge, Seaside, and majority of agencies, MPs and associations) support option 2 on similar grounds as Canwisp, others noted that Option 1 would be a more appropriate choice given it balances the objectives of service continuation, competition in the provision of 5G services.

2. Canwisp would like to point out that in its response, Telus stated that Option 2 would have profound deleterious effects on the state of 5G mobile service availability and competition in Canada, probably because Telus laid focus on urban areas alone. Canwisp reiterates that rural and urban areas should not be treated alike, and policies be tailored accordingly.

**Q6 — ISED is seeking comments on alternative options for licensees to return spectrum to the Department to make available for a future licensing process. Respondents are asked to provide a rationale for any alternative proposals, including how they would meet ISED's policy objectives as stated in section 3.**

*Canwisp proposed Option 3 with the following formulation:*

*For each licence area, existing licensees would be issued flexible use licences for a fixed amount of spectrum. Any licensee that holds 40 MHz of spectrum or more would be licensed for 40 MHz, and all other licensees would be licensed for 20 MHz.*

3. Canwisp notes that ABC communications in its submission has proposed subordination of unused spectrum while stating that emphasis be laid on preserving spectrum holdings of carriers who are offering services or sub-licensing spectrum in rural communities. Telus Communications proposed to follow the Department's proposed Option 1 while recalling all spectrum within the 5G initial deployment zones. Rogers suggested that incumbent licensees should also be eligible to participate in any competitive licensing process given the substantial investments that have been made in this band by incumbent licensees (Inukshuk) whereas Bell extended concern that if the Inukshuk Wireless Partnership is treated as a single licensee, then under return of spectrum Option 2, Bell and Rogers would be uniquely and unfairly penalized.
4. Canwisp also notes that while some incumbent licensees have complied with the statutory licensing obligations, they have not deployed to a significant number of subscribers. There are notable exceptions to this including Xplornet, ABC and others. Refarming spectrum from those companies who are delivering services to end users will have significant negative implications to the services many rural Canadians depend on.

**Q10 — ISED is seeking preliminary comments on the importance of price discovery in a licensing process for flexible use licences in the 3500 MHz band.**

*Canwisp submitted that, "complex auction formats and large geographic areas for competitive licensing only serve larger service providers. In order to safeguard the interests of smaller carriers and service providers the Department must contemplate mechanisms like Tier 6 or census tract licence area for competitive licensing, spectrum aggregation limits for large operators in rural areas, preventing operators with large quantities of unused rural spectrum from bidding, long transition periods in rural areas for existing users, etc. "*

5. Canwisp reiterates that ISED should define and use Tier 6 or census tract licence areas for competitive licencing. This would have the effect of unbundling rural and urban licence areas and enable participation of smaller rural service providers in the auction. Canwisp also supports spectrum aggregation limits for large operators in rural areas.

**Q11 — ISED is seeking comments on the proposed protection and notification provisions for incumbent licensees as outlined below.**

**Protection period:**

**For Tier 4 service areas that include a population centre of 30,000 people or more:**

- a minimum protection period of 6 months for sites within large urban population centres and the 10 km buffer zone surrounding those centres
- a minimum protection period of 2 years for all other sites

**For all Tier 4 service areas that include a population centre of less than 30,000 people, a minimum protection period of 3 years**

**Notification period:**

- a minimum notification period of 6 months in large urban population centres and in the 10 km buffer zone surrounding those centres
- a minimum notification period of 1 year in all other areas

*In its original submission, Canwisp proposed to reduce the buffer zone to 3 or 4 Km instead of the proposed 10 Km. Canwisp believes a protection period of 6 months near large urban centers is not sufficient to implement an alternate solution (at least 12 months are required) and that the proposed 10 Km buffer zone contradicts the Department's transition plan principle of "where and when necessary", given the propagation characteristics of the 3500 MHz band.*

6. Canwisp notes that ABC Communications supports Canwisp's argument that proposed protection period is too short and proposed buffer zone is too large. Canwisp is surprised to see that Bell, Rogers and Telus generally concurred with the Department's proposed timelines for protection and notification, given the fact that a protection period of 6 months is generally not sufficient to deploy an alternate solution to provide service.

**Q12 — ISED is seeking comments on alternative transition plans, or variations to the times proposed. Respondents are asked to provide a rationale for any alternative proposals.**

*Canwisp stated that the Department needs to increase the minimal protection period in any given circumstances to 1 year to allow existing users to transition to a new technology.*

7. Canwisp notes that most respondents suggested to increase the transition period, especially when option 1 or 2 is implemented. If the Department choose TELUS' Option 3, Canwisp supports its suggestion of elimination of the surrounding 10 km buffer of large urban population centres.
8. It must be noted that TELUS proposed to accept 6-month joint protection/notification period for large urban population centres and the surrounding 10 km buffer, if Option 1 is chosen. Since 79 WISP towers will be involved, Canwisp believes that TELUS failed to consider the propagation characteristics of the 3500MHz band and time needed by existing users to a new technology. Therefore, Canwisp urges the department to increase the joint protection/notification period to 1 year and reduce the 10 Km buffer zone to 3 or 4 Km or eliminate it completely.

**Q14 — ISED is seeking preliminary comments on how to optimize the use of the 3650–3700 MHz band, including the potential use of a database access model.**

*Canwisp noted that FWA and 5G usage are compatible in this band; however, active measures must be taken in applying the Spectrum Access Systems (SASs) or a similar database to optimize the use of limited spectrum in the WBS band and also to ensure that FWA services continue to be available to rural citizens and are not inadvertently crowded out by incumbents capturing the spectrum in order to provide 5G services in urban areas.*

9. Canwisp notes that most respondents did not recommend a database access model, especially CBRS-type regime, to the department. The main concern of the respondents was the complexity and the high cost of implementing a database system. Other respondents (Rogers, Huawei, Nokia, Cogeco) believed there was a possibility to adopt dynamic or database-driven sharing of spectrum. Canwisp also notes that the FCC is committed to the development of a database access model. The use of a database (locally and or nationally) to facilitate coordination for the introduction of new services without disruption to established services will be a practical way to enable additional usage of spectrum resource. It will also be helpful when multiple operators seek to use the spectrum in the same area. TELUS, in addition, suggested two alternatives with a longer transition to sustain WBS operations within truly rural and remote communities, which would benefit wireless broadband Internet access provided by small WISPs.
10. Canwisp would like to emphasize that requiring existing WBS users to move to another band, as suggested by Telus, would require some companies to replace their deployed equipment with equipment suitable to the new band(s). As also suggested by Telus, Canwisp supports a longer transition in rural and remote areas.
11. Canwisp notes that the incumbents have the ability to provide fixed services over mobile spectrum under a flexible use policy. A comprehensive flexible use policy - involving coordination

of ISED and CRTC, would consider both the use of spectrum for truly flexible use and the necessity of roaming agreements to offer mobile services acceptable to the market.

12. Canwisp urges the Department to fully consider SAS in a future consultation, In the interim period, Canwisp suggests that ISED:
  - a. establish a policy and licencing framework that enables small regional entities to acquire or utilize spectrum at a reasonable price; and
  - b. follow the FCC decision to allocate a further 120MHz of spectrum to meet the needs of service providers in rural areas.
13. Canwisp suggests that ISED consult with stakeholders with regards to the advisability of including a licence condition on all new licences that they may be subject to spectrum-sharing requirements in the future.

**Q15 ISED is seeking comments on the importance of the 3700–4200 MHz band to future FSS operations.**

*Canwisp could envision a framework where 5G is given priority over 160 MHz of spectrum, FWA over another 160 MHz and FSS over a third block of 160 MHz, but the full 500 MHz would be available to anyone if there is no demand from the primary service.*

14. Canwisp notes that most respondents believed that the mid-range spectrum is an important element of the race to 5G and is not so important to the future of FSS operations. Rogers proposed that the Department should distinguish the importance of this band depending on the geographic area, since for northern and remote parts of Canada, FSS operations in this band are essential to providing telecommunications services.
15. Therefore, Canwisp urges the Department to conduct consultation to determine how to maximize the use of the band with priorities (5G, FWA, etc.) and whether protection mechanisms are required. Canwisp also suggests the Department collect more information on unlicensed FSS users before any decision.

**Q17 — ISED is seeking comments on which steps Canada should take to optimize the use of the 3700–4200 MHz band in consideration of the current services being provided and the developing technologies that would permit the use of new services in this band (e.g. exclusion zones).**

*Canwisp noted that the first step in optimizing the use of the 3700-4200 MHz band is to understand its current use, including the number, location and technical characteristics of unlicensed FSS, TVRO and Cable head end users. Canwisp believes the Department also needs to quantify the benefits on the rural economy of the adoption of a licensing framework similar to FCC's 2015 CBRS SAS framework, that would enable access to inexpensive spectrum by small cost-efficient WISPs and correspondingly, roll out of high speed internet connectivity in rural and remote areas.*

16. Canwisp notes that while most respondents supported the establishment of exclusion zones, Quebecor Media suggested there is no need to establish exclusion zones in urban areas. Bell, Nokia, Quebecor, emphasized the importance to ensure mobile operators have access to 3700-4200 MHz for 5G deployments. Ericsson proposed a survey of 3700-4200 MHz spectrum band to understand how much spectrum can be repurposed for commercial mobile broadband, which Canwisp supports.
17. Exclusion zones or not, Canwisp urges the Department to increase its understanding of where the demand for 5G services will likely be and where the demand for FWA service is today. The policy objectives of the Department need to support telecommunications services in both rural and urban areas to ensure citizens of rural locations are not left out of the global economy as a side effect of the race to deploy world-leading mobile wireless infrastructure in urban zones.

**Q18 — ISED is seeking comments on the challenges and considerations related to the coexistence of other services, such as mobile and/or fixed wireless access, in the 3700–4200 MHz band.**

*Canwisp stated that there are no reasons why urban 5G and rural and remote FWA systems (some of which will undoubtedly use 5G technology) would not be able to coexist, if a policy and licencing framework that is supporting their co-existence is established by the Department.*

18. Canwisp notes Nokia’s belief that coordination of the 5G mobile systems with any fixed wireless access systems may prove to be a challenge if there are many fixed wireless systems also deployed. However, as stated in Canwisp’s comments, if a policy and licencing framework that is supporting their coexistence is established, urban 5G and rural and remote FWA systems are able to coexist. The Department could also consider mandating interference mitigation techniques, such as Dynamic Spectrum Allocation, GPS sync features, etc. Therefore, Canwisp believe 5G mobile system and fixed wireless access systems can co-exist based on GAA licensing and cooperation of incumbents.

Thank you for the opportunity to participate in this Consultation.

Canwisp