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**Subject:** *Comments to Notice No. SMSE-002-17 — Consultation on the Technical and Policy Framework for Radio Local Area Network Devices Operating in the 5150-5250 MHz Frequency Band; Publication date in the Canada Gazette: January 28, 2017*

Dear Sir / Madam,

### Executive Summary

1. ABC Communications ("ABC") is a communications service provider based in Quesnel BC, serving markets throughout the interior of British Columbia. ABC has offices in Burns Lake, Vanderhoof, Prince George, Quesnel, 100 Mile House, Kelowna, Penticton and Vancouver.
2. Throughout our trading area, ABC provides broadband services to customers in remote and rural areas using fixed wireless access.
3. ABC makes extensive use of the unlicensed 5 GHz bands in rural markets, primarily as point-to-point links to bring backhaul connections to last-mile distribution systems in rural and remote communities.
4. ABC uses the licensed 3.5 GHz (FWA) and lightly-licensed 3.65 GHz (WBS) band in LTE last-mile distribution systems in rural and remote communities across BC.
5. Like many small rural wireless operators across Canada, ABC serves many customers who do not otherwise have access to terrestrial high-speed internet connections.
6. ABC supports the authorization of higher power and outdoor RLAN devices or "HPODs" for the purpose of facilitating point-to-point microwave links in this band. The power levels authorized for point-to-point devices in the 5725-5850 MHz band should be applied to this band as well.
7. In order to protect satellite systems, antenna mask restrictions consistent with standard-performance 2' (60cm) parabolic antennas would be appropriate.
8. Further, we suggest that HPODs be authorized for point-to-multipoint use in situations where there is minimal risk of interference to satellite systems.



9. ABC supports the use of the existing framework for light-licensing, as currently in place for the 3650-3700 MHz band, for administering the use of this band.
10. ABC is pleased to provide comments on the licensing framework for these bands.

**A. the demand for and benefit, if any, of allowing HPODs in the 5150-5250 MHz frequency band before WRC-19.**

11. In Telecom Regulatory Policy 2016-496, the CRTC set a universal service objective of 50 Mbps download and 10 Mbps upload to all Canadian residential and businesses.
12. In practice, we see the demand in our market increasing steadily towards that goal, as customers demand more from their broadband connections.
13. In order to deliver 50 Mbps connections to remote and rural customers, access to spectrum for backhaul links and last-mile distribution networks is crucial.
14. In many rural communities, the business model does not support the cost of licensed frequencies for microwave links. Small carriers such as ABC depend on unlicensed frequencies to provide backhaul connections. These frequencies are increasingly congested.
15. Spectrum for last-mile distribution systems is, for many operators, limited to 50 MHz in the WBS band, and the 5725-5850 MHz band. The un-licensed 2.4 GHz band is so congested as to be impractical for commercial last-mile systems.
16. Without additional spectrum available for small operators, Canadians in small rural communities will not gain access to the broadband goals established by the CRTC.
17. By allowing HPODs in the 5150-5250 MHz band, ISED will enable small businesses to continue to meet demand for broadband services in rural and remote communities.

**B. the potential impacts on domestic and foreign satellite systems in the 5150-5250 MHz frequency band of authorizing HPODs use prior to WRC-19 on the basis of a maximum e.i.r.p. of 4 W.**

18. The use of HPODs in this band should not have a significant impact on satellite systems, provided directive antennas are used, as with point-to-point links.
19. In ABC's experience operating in the mountainous terrain of BC, point-to-point links with an antenna elevation angle of more than 3° are rare.
20. We suggest that an antenna mask restriction consistent with standard-performance 2' (60cm) parabolic antennas would be appropriate, together with a maximum e.i.r.p. of 4W.
21. As in the 5725-5850 MHz band, ISED should authorize higher e.i.r.p. where the additional power is achieved through the use of a more directional antenna.



22. In situations where the risk of interference to satellite systems can be mitigated, ABC supports the authorization of point-to-multipoint systems through antenna down-tilt or other means.
23. For example, in several communities that we serve, our customers are unable to access satellite connections due to mountainous terrain to the south, mitigating any potential interference to satellite systems.

**C. what regulatory approach would best ensure a balance of timely deployment and the protection of other existing and future services in the 5150-5250 MHz frequency band?**

24. The lightly-licensed approach, currently used for the 3650-3700 MHz band, provides ease of use, encourages user compliance, and facilitates frequency co-ordination between users. This approach would be appropriate for use in the 5150-5250 MHz band.
25. By having users upload their deployment information, ISED will be able to flag any potential issues, for example, antennas that may be up-tilted enough to potentially interfere with satellite systems.
26. ABC would like to thank ISED for giving our group an opportunity to present our perspective on these issues.

Sincerely yours,



Chris Allen  
President  
ABC Communications

