

25 January 2019

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**Re: Gazette Notice No. DGSO-001-18 — Consultation on Licence Fees for  
Fixed Point-to-Point Radio Systems — Cogeco Reply Comments**

In accordance with the procedures set out in the above-noted consultation, please find attached the reply comments of Cogeco Communications Inc. (“Cogeco”).

Due to an illness with one key member of the Cogeco regulatory staff, we are filing this one day later than indicated in the above-noted consultation document. We apologize in advance and hope that ISED will accept these reply comments.

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

Yours very truly,

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c.c.: Nathalie Dorval, VP Regulatory Affairs and Copyright, Cogeco Inc.  
Luc Noiseux, Chief Technology and Strategy Officer, Cogeco Inc.

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

**Consultation on License Fees for Fixed Point to Point  
Radio Systems**

**Canada Gazette: November, 2018  
Gazette Notice DGSO-001-18**

**Reply Comments of  
Cogeco Communications Inc.**

**25 January 2019**

## **Introduction**

1. Cogeco Communications Inc. (“Cogeco”) respectfully submits these reply comments on the proposal by Innovation, Science and Economic Development Canada (ISED) to modify its methodology for charging licence fees for fixed point-to-point radio systems, in accordance with the procedures set out by ISED in *Consultation on Licence Fees for Fixed Point-to-Point Radio Systems*, DGSO-001-18, published 15 November 2018 (the “Consultation Document”).
2. Cogeco is pleased to note consensus among the parties who submitted comments that ISED’s current methodology for establishing and charging licence fees for fixed point-to-point (PTP) radio systems is outdated and must be reformed. Most parties supported the guiding principles proposed by ISED for new PTP licence fees (Consultation Document, par. 23) as well as the model proposed for charging the PTP licence fees.
3. Cogeco therefore urges ISED to complete the reform process as soon as possible after considering the comments submitted in this consultation. As ISED notes, existing and potential licensees may require time to adjust to the new fee approach (Consultation Document, par. 51). The earlier ISED issues a decision in this consultation, the sooner operators can begin planning networks taking the new fees into account.
4. A number of parties proposed changes or enhancements to ISED’s proposed PTP licence fee model. These include treating certain point-to-multipoint (PTMP) radio systems as PTP links for the purposes of calculating licence fees, applying lower base rates in rural areas, and establishing more granular frequency ranges for the purposes of calculating fees.
5. Cogeco addresses these points in the reply comments below. Failure to address any specific issue raised or position adopted by another party should not be considered by ISED or any other person as Cogeco’s agreement or disagreement with that issue or position.

### Application of PTP Licence Fees to PTMP Radio Systems

6. In Annex A to the Consultation Document, ISED proposes that “[t]he total fee for a fixed point-to-multipoint (PTMP) system would be the sum of the PTP fees for the individual links within the system.” A number of parties expressed concern with this proposal.

7. 5G networks are likely to require greater numbers of antenna locations to cover a given area than earlier generation networks, in particular if millimetre wave (mmWave) spectrum is used. This is largely due to the propagation characteristics of that spectrum.

8. There may be cases where a PTMP radio system might be the most efficient way to connect multiple transmitters located in a geographically restricted area. Indeed, a PTMP radio system might be the most spectrally-efficient approach in these circumstances.<sup>1</sup> Cogeco considers that these PTMP radio systems should be encouraged wherever this is the case.

9. ISED’s first guiding principle for its fixed PTP radio licence fee model is to reward spectral efficiency and encourage innovation. Cogeco agrees. Licence fees should not serve to discourage the efficient use of spectrum or efficient or innovative network design.

10. However, in Cogeco’s view ISED’s proposal to charge a separate licence fee to each link of a PTMP radio system does not satisfy this first guiding principle, to the extent that it might discourage spectral efficiency. Indeed, it risks perpetuating the situation noted by Canwisp that its members often use unlicensed links due to the cost and complexity of licensing, even if licensed links would provide a preferred solution.<sup>2</sup> Charging separate licence fees for each link, then, would not maximize the economic and social benefit that Canadians derive from the use of radio spectrum and would not promote the development of advanced wireless services and applications in this country.

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<sup>1</sup> See Bell Mobility Comments, par. 16.

<sup>2</sup> Canwisp Comments, par. 3.

11. A number of parties propose as a solution that ISED treat PTMP radio systems instead as a single PTP link for the purposes of calculating licence fees.<sup>3</sup> Cogeco supports these proposals in principle.

12. Cogeco recommends, however, that ISED establish criteria to determine the radio systems to which this approach will apply. Cogeco notes that the Radio Advisory Board of Canada (RABC) proposes that “*all single hop remote/slave stations, within the coverage of the PTMP master station, be considered a single PTP link.*”<sup>4</sup> Cogeco is of the view that this criterion is reasonable. It may also be easier to implement and provide more flexibility to operators than Rogers’ proposal that “*all individual hops ... within an 800 metre radius*”<sup>5</sup> be considered a single PTP system for licence fee purposes.

#### Lower Base Rates in Rural Areas

13. Cogeco notes that both urban and rural networks are likely to use fixed PTP radio links for backhaul. However, networks in rural and remote areas are more likely than urban networks to be dependent on radio backhaul, as fibre may not be available and the economics of the project might not justify deploying new fibre. Further, rural and remote networks are more likely to need to install radio links using lower frequencies, given that the operator may need to cover greater distances and lower frequencies propagate over greater distances.

14. However, ISED proposes to levy higher per-MHz licence fees on links using spectrum in lower frequency ranges. While ISED notes that smaller channels are used at these lower frequency ranges, Cogeco considers that this only partly mitigates these higher per-MHz fees, as more channels may be required depending on the operator’s data throughput requirements. This means rural and remote networks may face higher costs to deploy radio networks and have fewer alternatives available to them than urban networks, particularly when considered on a per-capita basis.

15. Cogeco is of the view that ISED should take all opportunities to remove unnecessary barriers to network deployment in rural and remote areas. While ISED

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<sup>3</sup> Alliance Comments, page 2; Bell Mobility Comments, par. 18; Canwisp Comments, par. 15; CEA Comments, page 3; CWTA Comments, par. 11; Québecor Média Comments, par. 12; RABC Comments, par. 32; Rogers Comments, par. 62; TeraGo Comments, par. 8.

<sup>4</sup> RABC Comments, par. 33.

<sup>5</sup> Rogers Comments, par. 63.

did not explicitly set this out as an objective in this consultation or include it in its guiding principles for establishing PTP radio licence fees, ISED has stated in the past its commitment to this goal. Most recently, ISED included it as its policy objective in its *Consultation on a New Set of Service Areas for Spectrum Licensing*:

*ISED's policy objective is to maximize the economic and social benefits that Canadians derive from the use of the radio frequency spectrum, including in rural and remote regions. In pursuing its policy objective, ISED is committed to ensuring that Canadian consumers, businesses and public institutions continue to benefit from access to high-quality wireless networks at competitive prices in urban as well as rural and remote communities. Wireless technology, whether through fixed or satellite broadband, is a key component for connectivity to rural homes and businesses, particularly in areas where wireline solutions are not feasible or cost prohibitive. ISED works to ensure that spectrum resources are available for the various services that provide broadband connectivity to rural Canadians.<sup>6</sup> [emphasis added]*

16. Cogeco agrees with the comments submitted by many parties in this consultation that licence fees for PTP radio links in rural and remote areas should be discounted compared to the fees applicable to equivalent links in urban areas.<sup>7</sup> Doing so would reduce the cost of deploying networks in rural and remote areas and help ISED achieve its goal of ensuring that Canadian consumers, business and public institutions benefit from access to high-quality networks at competitive prices in all communities in Canada.

17. Further, Cogeco considers it important that this rural discount apply to the base rates for all frequency ranges. Cogeco notes that SaskTel proposed that base rate discounts only apply to the middle ranges. In SaskTel's view, this would create incentive for network operators to use PTP radio links using frequencies above 4.2 GHz, which would help release lower bands for other uses in the future such as mobile services.<sup>8</sup> While Cogeco appreciates SaskTel's objectives in this

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<sup>6</sup> ISED, *Consultation on a New Set of Service Areas for Spectrum Licensing*, DGSO-002-18, published 27 November 2018, par. 22.

<sup>7</sup> Alliance Comments, page 2; BCBA Comments, par. 3; Canwisp Comments, par. 5; CWTA Comments, par. 8; ECOTEL Comments, par. 16; Québecor Média Comments, par. 13; RABC Comments, par. 35; SaskTel Comments, par. 12; Seaside Wireless Comments, par. 9; Telus Comments, par. 17; TeraGo Comments, par. 5.

<sup>8</sup> SaskTel Comments, par. 15-16.

circumstance, Cogeco notes that this proposal may nevertheless place an undue burden on rural and remote operators who may need to rely on lower frequency links because of their propagation characteristics. In light of the importance of ensuring all Canadians be able to access to high-quality networks at competitive prices, Cogeco recommends that the rural discount not be limited as proposed by SaskTel.

18. A key issue is how to determine which PTP radio links are considered “rural” and therefore able to benefit from the discounted licence fees. Cogeco agrees with the proposals submitted by several parties to define such rural links as those whose two end-points fall outside any Statistics Canada Census Metropolitan Area (CMA) or Census Agglomeration (CA), and which do not cross at any point a CMA or a CA.<sup>9</sup> The boundaries of CMAs and of CAs are well-defined and any radio link entirely outside these areas is certainly likely to be in rural areas.

19. Cogeco agrees with the parties who propose specific discounts that the discount for radio links in rural areas should be significant in light of the significantly lower average population density in areas outside CMAs and CAs. Cogeco recommends that ISED apply the same discount to all base rates, as this would be simpler to administer.

20. Telus proposes an alternative definition, namely, urban areas would be considered to be “large population centres” and “medium population centres” as defined by Statistics Canada.<sup>10</sup> Telus proposes that ISED levy a 50% premium over base rates if the link receiver is located in a large population centre and that ISED charge 30% of the large population centre rate if the link receiver is located in neither a large nor a medium population centre (i.e., what Telus calls the “other” area).<sup>11</sup>

21. The effect of Telus’ proposed approach is to extend the most discounted rates to more people and more land area, as 87.11% of Canadians and 3.93% of Canada’s land area are included within a CMA or CA, while 71.59% of Canadians and 0.14% of the land area are included in a large or medium population centre.<sup>12</sup> The proposed focus on link receiver only would also expand the number of links to which discounted rates would apply, as location of transmitter would not be relevant.

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<sup>9</sup> Canwisp Comments, par. 7; Québecor Média Comments, par. 14; RABC Comments, par. 37; SaskTel Comments, par. 18, Seaside Wireless Comments, par. 11 ; TeraGo Comments, par. 6.

<sup>10</sup> Telus Comments, par. 21.

<sup>11</sup> Telus Comments, par. 22.

<sup>12</sup> Figures derived from Statistics Canada data tables available at <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hlt-fst/pd-pl/comprehensive.cfm>

22. Cogeco considers that a focus on one location only (the link receiver) is likely to be administratively simpler to apply, compared to any alternative which looks at all locations along the link path. However, given the convoluted shapes of Statistics Canada's population centres, this approach may be more open to abuse or arbitrage, and it might not focus the benefit of discounted rates where it is most needed (i.e. areas that are not urban). Cogeco therefore recommends that ISED define rural areas, for the purposes of determining discounts for PTP radio licence fees, using Statistics Canada's CMA and CA boundaries.<sup>13</sup>

### More Granular Spectrum Bands

23. ISED proposes to group spectrum into seven frequency ranges for the purposes of calculating licence fees, based on the "*similar propagation characteristics of the bands, as well as categories of use and types of applications*" (Consultation Document, par. 32). Cogeco notes that Corridor Communications Inc. (CCI) expressly supports this proposal.<sup>14</sup>

24. A couple parties, however, submit that a few of the frequency ranges are unduly large and include spectrum with different propagation characteristics and applications within the same range. These parties propose that ISED modify some of the proposed frequency ranges and subdivide others.

25. RABC, for example, proposes that ISED adopt 11 frequency ranges and submits that these ranges better align with existing ISED and ITU-R bands, for example by ensuring that a licence fee frequency range does not split a band.<sup>15</sup> Cogeco notes that TeraGo<sup>16</sup> and Telus<sup>17</sup> support the RABC proposal.

26. Rogers proposes that ISED adopt a different set of 11 frequency ranges.<sup>18</sup> Cogeco notes, however, that the frequency ranges proposed by Rogers do not appear to be as closely aligned with existing ISED and ITU-R spectrum bands as the RABC proposal. For example, under Rogers' proposal, the V-band (57-64 GHz)

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<sup>13</sup> Cogeco's position here is limited to the issue of discounted licence fees, and is without prejudice to Cogeco's position, if any, with respect to Tier 5 service areas in ISED's *Consultation on a New Set of Service Areas for Spectrum Licensing*, DGSO-002-18.

<sup>14</sup> CCI Wireless Comments, page 3.

<sup>15</sup> RABC Comments, par. 5 and ff.

<sup>16</sup> TeraGo Comments, par. 9.

<sup>17</sup> Telus Comments, par. 16.

<sup>18</sup> Rogers Comments, par. 28 and ff.

would be split between the 30-60 GHz and 60-90 GHz frequency ranges, which means links using similar spectrum could be charged different licence fees.

27. Cogeco submits that a spectrum band should not be split between two licence fee frequency ranges. Doing so would not be consistent with ISED's second guiding principle, that the different frequency ranges reflect the relative utility of different spectrum bands. Cogeco therefore agrees with RABC's proposal for a frequency ranges between 4.2 GHz and 10 GHz.

28. Cogeco also supports RABC's proposal to modify the reference range and to create new ranges at higher frequencies. Cogeco considers that the frequency ranges proposed by ISED above 19.7 GHz are too broad, and that the RABC's proposed ranges appropriately reflect the propagation characteristics, the amount of spectrum available, the channel sizes available, and the usage of the various spectrum bands above 15.35 GHz.

### Conclusion

29. There is broad consensus in support of ISED's initiative to reform its licence fee model for fixed PTP radio systems. Cogeco recommends therefore that ISED issue a decision as soon as possible.

30. However, Cogeco also recommends that ISED adopt a number of changes to its initial proposal. Specifically, PTMP systems should be treated as single PTP links for licence fee purposes, licence fees for radio systems located in rural and remote areas should be discounted, and the number of frequency ranges in the fee schedule should be increased. These changes are consistent with the guiding principles established by ISED in the Consultation Document for reforming fixed PTP radio licence fees, and they will promote the deployment of high-quality wireless networks at competitive prices in urban as well as rural and remote communities across Canada.

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