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Via email: ic.spectrumoperations-operationsdsuspectre.ic@canada.ca

Mr. Eric Parsons
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235 Queen Street (6th Floor, East Tower)
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Re: Canada Gazette Notice No. DGSO-001-18 — Consultation on Licence Fees for Fixed Point-to-Point Radio Systems

Attached, please find the Reply Comments of Rogers Communications Canada Inc. (Rogers) in response to *Canada Gazette*, Part I, December 1, 2018, *Consultation on Licence Fees for Fixed Point-to-Point Radio Systems* (DGSO-001-18).

Rogers thanks the Department for the opportunity to provide input on this important issue.

Yours very truly,



Howard Slawner
Vice President – Regulatory Telecom
HS/pg

Attach.

Consultation on Licence Fees for
Fixed Point-to-Point Radio Systems
DGSO-001-18

Reply Comments of
Rogers Communications Canada Inc.
January 25, 2019



Executive Summary

- E1. Spectrum costs in Canada are amongst the highest in the world, for both acquisition and annual fees, which reduces capital for network investments to continue expanding coverage in rural areas or deploy innovative 5G wireless equipment. Rogers believes this consultation is an opportunity to foster both innovation and competition between facilities-based networks, rebalancing the playing field between those operators that may experience a much greater need for wireless backhaul and those that emerged from local telephone monopolies. It is telling that the sole participant in the consultation proposing any increase of rates, which would apply largely only for their urban competition, is a legacy telephone monopoly.
- E2. Stakeholders participating in this consultation process generally support either moving to a cost-recovery fee regime or are proposing lower effective fees to the Department's proposed consumption-based fee model. We continue to view a cost-recovery regime for all spectrum fees as the optimal policy outcome for Canadians. In order for wireless backhaul to provide a true alternative to fibre and provide wireless carriers and rural wireless internet service providers with a real ability to compete with the former telecom monopolies' infrastructure, ISED must significantly amend its proposed band and fee structures.
- E3. However, should the Department elect to proceed with a consumption-based regime, it should modify and add more frequency range categories to better reflect bands' distinct propagation characteristics, amounts of available spectrum, and innovative new uses of spectrum. The Department should also listen to all the stakeholders – large, regional, and rural – that recommend the base rates of all frequency ranges be reduced to align with the expected massive increase in deployments for 5G and the economic challenges of rural deployments. The Department should also adopt all the proposed mechanisms which incentivize innovative use of point-to-multipoint links. Without such changes, the full potential of point-to-point backhaul will not be realized and Canadians will not enjoy the maximum benefits of greater coverage, increased network capacity, and quick, widespread adoption of advanced new services like 5G.

Introduction

1. Rogers Communications Canada Inc. (Rogers) welcomes the opportunity to reply to comments filed by other parties in response to *DGSO-001-18: Consultation on Licence Fees for Fixed Point-to-Point Radio Systems*¹ (the Consultation), published on Innovation, Science and Economic Development Canada's (ISED or the Department) website on January 10, 2019.
2. Rogers stated its position on all of the issues raised in the Consultation in its comments of January 4, 2019. This reply is limited to comments on proposals made by other parties. Failure to address any specific issue raised by other parties should not be taken by the Department as Rogers' acquiescence with the position.

Rogers' Reply to Comments of Other Parties

Q1: ISED invites comments on the proposed consumption-based fee model for the radio licence fees under consideration.

3. There is unanimous support for moving away from the previous capacity-based fee model for fixed service spectrum amongst the Consultation comments. However, most commenters identify that the Department's proposed fee regime would still be too expensive for both current and future fixed service deployments, particularly to support 5G and rural builds. The lone outlier is Telus, a legacy monopoly telephone operator, who adopts an anti-competitive position by proposing an increase of 50% in the Department's proposed rates for urban areas, while ensuring that it will not face higher than proposed costs if it chooses to deploy new high band systems.²
4. Several stakeholders echo Rogers' recommendation for the industry to adopt a cost-recovery model similar to the one in the U.S.³ Shaw also highlights that costs are lower in the U.S.⁴ As Xplornet states, "Such a model would provide dramatically lower rates for Canadian carriers, enabling them to increase the impact of their investments. This would have important benefits for both rural and urban consumers." Bell recommends "that aggregate radio and spectrum licence fees should be set to recover the cost associated with managing spectrum resources, i.e., they should be set to the minimum amount needed to cover administrative costs

¹ ISED, DGSO-001-18: Consultation on Licence Fees for Fixed Point-to-Point Radio Systems (*Consultation*); <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11445.html>.

² Telus Comments, para 22-23.

³ Bell Comments, para 9; Xplornet Comments, para 5; Alliance Corporation Comments, pg 1; CWTA Comments, para 7.

⁴ Shaw Comments, para 11.

rather than generate licence fee profits for Government.”⁵ Upon reviewing all submissions, we continue to view the optimal solution for the Department is to adopt a cost-recovery fee regime for all spectrum, including mobile and fixed services.

5. While there is support for adopting a cost-recovery model, there is even broader support for modifying the proposed consumption-based model in order to make costs more aligned with current and expected deployments. Similar to Rogers, the RABC proposes additional frequency ranges be added and that the Department implement decreasing base rates to the new and modified ranges.⁶ TeraGo supports the RABC’s proposal of additional frequency ranges and corresponding decreasing base rates to each of the modified and new frequency ranges, while Telus provides general support of the RABC’s proposed modified ranges between 10 and 56 GHz.⁷
6. The proposed RABC frequency ranges differ slightly from Rogers’ proposal, aligning with both ITU-R and current Canadian SRSP frequency assignments. Rogers supports these adjustments to our proposed ranges, while maintaining our proposed base rates as seen below in Table 1.

⁵ Bell Comments, para 9.

⁶ RABC Comments, para 4-6.

⁷ TeraGo Comments, para 9; Telus Comments, para 16.

(Updated) Table 1. Rogers' proposed fee schedule of frequency ranges & base rates

Rogers' Range Proposal	Rogers Proposed Frequency Range	RABC Proposed Frequency Range	Base Rates (\$/MHz)
No Change	≤ 890 MHz	≤ 890 MHz	688
No Change	> 890 and ≤ 960 MHz	> 890 and ≤ 960 MHz	35
No Change	> 960 and ≤ 4200 MHz	> 960 and ≤ 4200 MHz	11
No Change	> 4.2 and ≤ 10.55 GHz	> 4.2 and ≤ 10 GHz	9
Modified Range	> 10.55 and ≤ 17.8 GHz (reference band)	> 10 and ≤ 15.35 GHz (reference band)	6
New Range	> 17.8 and ≤ 30 GHz	> 15.35 and ≤ 30 GHz	4
New Range	> 30 and ≤ 60 GHz	> 30 and ≤ 56 GHz	1
New Range	> 60 and ≤ 90 GHz	> 56 and ≤ 90 GHz	0.25
New Range	> 90 and ≤ 130 GHz	> 90 and ≤ 130 GHz	0.10
New Range	> 130 and ≤ 178 GHz	> 130 and ≤ 178 GHz	0.05
New Range	> 178 GHz	> 178 GHz	0.01

Source: Updated Rogers Comments, Table 1, to include RABC proposed frequency ranges.

7. As noted above, various stakeholders share Rogers' view that the frequency ranges and base rates as proposed by the Department pose a very real risk that Canadian spectrum resources will continue to be used inefficiently, remain underutilized or, in worst-case scenarios, never be deployed. The end result of an ineffective fixed service spectrum fee regime will be that Canadian consumers and businesses will not be able to fully enjoy all the benefits of competition, including enhanced network coverage and capacity, the rapid deployment of advanced services in rural and urban areas, and improved affordability.
8. Bell highlights their concern about the impact the Department's proposed rates may have on 5G and recommends that the proposed base rates be reduced by half to ensure costs, "do not escalate to a level where they negatively impact innovation and the efficient use of spectrum".⁸ Shaw states, "Under the Department's proposed model, the licence fees for these ultra high-frequency bandwidths could be excessively high, which could discourage the use of microwave technology in these

⁸ Bell Comments, para 11 & 13; Xplornet Comments, para 29; RABC Comments, para 5.

ranges and deny Canadians the benefits that would otherwise result.”⁹ Shaw supports adopting the Department’s proposed base rates and, to mitigate the risk to future deployments, further proposes a review of the fee calculation methodology every 3 years.¹⁰ However, a review every 3 years would subject both the Department and industry to an unnecessary regulatory and administrative burden, and inject a substantial amount of uncertainty into long-term network planning that could slow deployments. Instead, the Department should adopt a more future proof fixed fees regime with additional frequency ranges with reduced base rates and no escalator to provide facilities-based operators with greater cost-certainty. While Rogers does not object to fixed fee reviews per se, they should be conducted no less than every 10 years unless exceptional circumstances justify an earlier review.

9. Rogers continues to share concerns around the impact to future 5G deployments but believes that neither Bell nor Shaw have fully identified the true scope of the potential risk to Canadian operators – and by extension, Canadians’ ability to fully benefit from 5G technologies and services. We also believe that our own cost estimates could, potentially, be too low. As Shaw notes in their submission, globally, 40% of backhaul connections are expected to utilize microwave technology by 2023.¹¹ Accordingly, we have updated our Table 2 to show the potential larger costs impact on 5G small cell deployment of setting rates too high.

(Updated) Table 2. Cost of deploying 2GHz E-Band wireless backhaul links for Canadian 5G Small Cells

% of expected 5G Small Cells Deployed	Current Canadian Regime	ISED proposed Base Rates	Rogers Proposed Base Rates	Cost under U.S. Regime (Canadian Dollars)	Bell Proposed Base Rates
1%	\$179M	\$5.4M	\$1.4M	\$367K	\$2.7M
5%	\$900M	\$27M	\$6.8M	\$1.8M	\$14M
10%	\$1.8B	\$55M	\$14M	\$3.7M	\$27M
15%	\$2.7B	\$82M	\$20M	\$5.5M	\$41M
20%	\$3.6B	\$109M	\$27M	\$7.3M	\$55M
25%	\$4.5B	\$137M	\$34M	\$9.2M	\$68M
40%	\$7.2B	\$218M	\$55M	\$15M	\$109M

Notes: Updated Table 2 from Rogers Comments to include impact of a 40% 5G small cell deployment and proposed Bell rates.

⁹ Shaw Comments, para 14.

¹⁰ Shaw Comments, para 14.

¹¹ Shaw Comments, para 4.

10. Bell's proposed rates are 644% higher than the comparable costs under the U.S. cost-recovery regime. Further, at Bell's proposed rates it requires just 15% of future small cell deployments using the example wireless backhaul link (2x1000 MHz E-Band link transmitting with a 5 Gbps capacity) to equal all the fees collected today by the Department for fixed service links in every band. Clearly, Rogers' proposed base rates – which are still significantly greater (272%) than the U.S. cost-recovery regime and thus ensures the Government and Canadians receive a fair return for spectrum – are better suited to account for potential growth and properly incent efficient use of spectrum. Higher rates than Rogers is proposing will only slow network capacity growth, limit deployment of innovative technologies, and create more costs that are ultimately paid by Canadian consumers and businesses. Only through setting base rates at a level that makes wireless backhaul truly comparable to fibre will Canadians benefit from true competition between all types of facilities-based carriers.
11. Many of the Consultation responses also propose additional discounts for use of fixed service spectrum in uncongested or rural areas.¹² Although there is some variance in the discount amount and whether the discount would apply to all bands, the general recommendation is to provide a percentage discount. Alternatively, Xplornet proposes reducing the base rate of the reference band and adjusting all other frequency ranges accordingly.¹³ Rogers is a strong proponent of all stakeholders paying a fair share amount for spectrum and any discount for using spectrum in uncongested areas should apply to all uncongested areas, whether urban or rural. As congestion tracking and management is likely to remain quite dynamic, and thus burdensome for the Department with less predictability for operators, reducing base rates as proposed by Xplornet appears to be the most fair to all spectrum users, including rural. However, Xplornet's base rate reduction proposal, similar to Bell's, may not be substantial enough in light of potential future deployments and we again recommend the Department adopt rates as proposed by Rogers in Table 1. All operators, urban and rural, would equally benefit from our proposed base rates reductions. If the Department instead elects to provide a discount for rural links only, these discounts should be available to all facilities-based operators, as the economic challenges to deployments in rural areas applies to all networks.
12. The CWTA also supports the reduction of rural rates, with the explicit stipulation that discounted fees for low density areas, “does not result in adding premiums to rates for more congested areas.”¹⁴ Conversely, Telus calls for higher rates in urban areas

¹² Quebecor Comments, para 13; SaskTel Comments, para 16; TeraGo Comments, para 5; Alliance Corporation Comments, pg 2; BCBA Comments, para 5; Ecotel Comments; para 16; Seaside Communications, para 9; RABC Comments, para 37.

¹³ Xplornet Comments, para 29.

¹⁴ CWTA Comments, para 8.

than the Department has proposed in order to make discounts for rural areas “revenue neutral”.¹⁵ However, this claim to revenue neutrality is only tacked on in Telus’ conclusion and does not appear in their main argument, which simply aims to incent rural deployments by being “subject to a lower licence fee than an urban deployment in the same range”.¹⁶

13. The anti-competitive nature of Telus’ proposal is magnified by their proposal not to increase base rates for bands above 60 GHz. While they provide statements of coordination and sharing issues with other licensees, these conditions also apply to other bands. It can be presumed that Telus may wish to deploy new systems above 60 GHz and thus are proposing not to increase base rates for these bands in order to shield themselves from potential future fixed service spectrum costs. The Department should categorically reject Telus’ proposals to increase urban base rates. Wireless backhaul can provide an effective alternative to fibre in both urban and rural areas but only if the rates reflect the number of links 5G will require. If they do not, the point-to-point fee regime will aggravate the competitive disadvantage some carriers already face.
14. In addition to making base rates more aligned with expected deployments, many commenters also share Rogers’ views on adopting a mechanism to account for innovative new applications, such as the use of very large bandwidth point-to-multipoint (PTMP) links being deployed over very short distances or PTMP links in general. Stakeholders sharing this view include national and regional wireless carriers, fixed service operators, rural wireless internet service providers, and electrical utilities,¹⁷ with the most common suggestion to treat all legs of PTMP systems as a single point-to-point (PTP) link.
15. Although we focus on 5G small cell examples in our comments, Rogers supports the more expansive RABC proposal, “that in PTMP clusters all single hop remote/slave stations, within the coverage of the PTMP master station, be considered a single PTP link”.¹⁸ Further, we also support Bell’s position to treat PTMP systems that reuse the same frequency pair over chained, multiple hops as a single PTP link.¹⁹ For clarity, we support these adjustments to the PTMP fee regime as additions to our original recommendation of how to treat PTMP small cell deployments, even if not limited to frequency reuse for these very short links. In small cell PTMP systems,

¹⁵ Telus Comments, para 31.

¹⁷ Quebecor Comments, para 12; Bell Comments, para 15; SaskTel Comments, para 31; TeraGo Comments, para 8; Alliance Corporation Comments, pg 2; CanWISP Comments, para 15; CEA Comments, pg 3; CWTA Comments, para 11.

¹⁸ RABC Comments, para 33.

¹⁹ Bell’s Comments, para 18.

the optimal consumption-based fee regime would still set the fee based on bandwidth consumed by the single, largest channel within the PTMP system.

16. Adopting all these adjustments to a PTMP fees for a consumption-based fixed service spectrum fee regime would allow for massively increasing the capacity and efficiency of these systems without materially increasing the consumption of spectrum. In turn, this incents operators to deploy innovative fixed service technologies to provide better service to Canadians.
17. Alternatively, we still support the option for an area spectrum licence that would cover all end points in a geographically-contained PTMP system. This alternative is also supported by CanWISP and the RABC.²⁰
18. Finally, both Quebecor and Ecotel encourage the Department to implement changes to the fixed service spectrum fee regime as quickly as possible, potentially as soon as April 1, 2019.²¹ We continue to support the earliest implementation of the new regime as is feasible for the Department. However, regardless of how quickly the new regime can be finalized and implemented, the Department should announce their decision as early as possible in order to provide facilities-based operators with more cost certainty and clarity as they develop plans for network deployments and expansion, including to support innovative 5G services.

Q2: ISED invites proposals for a fee escalator that takes into account fee predictability for the radio licence fees under consideration.

19. Most stakeholders are reserving their comments for the future standalone *Service Fees Act* consultation.²² For those who do provide comment in the Consultation, only a limited number give general support to the use of CPI as an escalator.²³ In contrast, most of those who provide comment in this consultation propose alternative escalators that are significantly less than the potential future CPI.²⁴
20. While Rogers will also provide additional comments in the future standalone consultation, we continue to support not applying an annual CPI escalator to fixed spectrum fees, nor any spectrum fees. Any periodic adjustments that must be made to comply with the legislation should be done in a way to have minimal impact on

²⁰ CanWISP Comments, para 16; RABC Comments, para 34.

²¹ Quebecor Comments, para 15-16; Ecotel Comments, para 25;

²² Bell Comments, para 20; Telus Comments, para 26; Quebecor Comments; para 17; Xplornet Comments, para 31; Cogeco Comments, para 23; CWTA Comments, para 12

²³ SaskTel Comments, para 25-26; CCI Comments, pg 3; CEA Comments, pg 3.

²⁴ Rogers Comments, para 71; Xplornet Comments, para 30; TeraGo Comments, para 11; CanWISP Comments, para 17; Ecotel Comments, para 23; Seaside Communications Comments, para 17; E-Comm Comments, pg 2.

facilities-based operators and Canadian consumers and businesses that rely on them.

21. Shaw states their general support for a CPI-related escalator but also recommend that the fixed service fee regime, including frequency ranges and base rates, should be reviewed periodically (e.g. every 3 years).²⁵ As noted above, Rogers believes a review every 3 years would create an unnecessary regulatory and administrative burden and uncertainty into long-term network planning that could slow deployments. Instead, the Department should adopt a more future proof fixed fees regime with additional frequency ranges with reduced base rates and no escalator to provide facilities-based operators with greater cost-certainty.

Q3: ISED invites comments on the proposals for minimum fees, short-duration licence fees and prorated fees.

22. Similar to Rogers, most stakeholders generally support the Department's proposals for minimum fees, short-duration licence fees and prorated fees.²⁶ In addition to their general support, both Bell and TeraGo support the Department providing reimbursement for pre-paid licences that are returned to the Department prior to the end of their term.²⁷ Rogers supports this position and believes Bell's recommendation of using the Department's own prorating schedule of 1/12 of the total annual licence fee for each calendar month, again provides a simple and predictable way for licensees to estimate fee reimbursement costs.

23. Rogers thanks the Department for the opportunity to share its views and participate in this consultation process.

²⁵ Shaw Comments, para 12-13.

²⁶ Telus Comments, para 29; Quebecor Comments, para 18; SaskTel Comments, para 27-28; CanWISP Comments, para 19; CCI Comments, para 3; CEA Comments, pg 3-4; Cogeco Comments, para 24-25; Ecotel Comments, para 24; Seaside Communications Comments, para 18.

²⁷ TeraGo Comments, para 12-13; Bell Comments, para 22.