

**Innovation, Science and
Economic Development Canada**

Spectrum Management and Telecommunications

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Notice No. SMSE-009-21

***Consultation on Updates to the Licensing and Fee
Framework for Earth Stations and Space Stations in
Canada***

**Comments
of
Xplornet Communications Inc.**

October 4, 2021

INTRODUCTION AND EXECUTIVE SUMMARY

1. Xplornet Communications Inc. (“Xplornet”) is pleased to provide its comments with respect to the *Consultation on Updates to the Licensing and Fee Framework for Earth Stations and Space Stations in Canada* (“Consultation”) currently being undertaken by Innovation, Science and Economic Development Canada (“ISED”).
2. Xplornet is Canada’s leading rural broadband provider. Alongside our current investments in rural fibre-to-the-home (“FTTH”) and 5G wireless broadband services, Xplornet is also a leader in providing direct-to-home satellite broadband services for rural and remote Canadians. We are participating in the present Consultation to provide ISED with our views concerning the opportunities and challenges that ISED’s proposed updates to its satellite licensing and fee framework present for the rural and remote Canadians who rely on satellite connectivity to participate in the digital economy.
3. The Government of Canada has recognized the critical role that satellite services play in meeting Canada’s connectivity objectives. Given Canada’s vast geography and the distribution of its population, it is not possible to deploy terrestrial facilities to all Canadian homes. Rural and remote Canadians living in the most difficult to reach and least densely populated areas of the country are best served using direct-to-home satellite solutions. Satellite broadband solutions are developing rapidly. In the near future, the launch of the Jupiter 3 satellite will enable Xplornet to provide speeds of 100 Megabits per second (“Mbps”) to our customers.
4. Although satellite connectivity is often the most (or only) viable broadband solution to reach customers in certain rural and remote regions of Canada, this service remains extremely challenging to deploy to customers. Indeed, as Canada has correctly recognized in its Connectivity Strategy¹, it is not helpful to provide Canadians with access to high speed services if those services are not affordable.²

¹ High-speed Access for All: Canada’s Connectivity Strategy: https://www.ic.gc.ca/eic/site/139.nsf/eng/h_00002.html [“Connectivity Strategy”].

² Connectivity Strategy, page 13.

This is the challenge we face with satellite-based connectivity, as the costs associated with providing this service are significant.

5. Indeed, the up-front costs to set up a new customer on our satellite service are much higher than the costs we experience on any other technology platform. The equipment that must be installed at a customer's home to connect to our satellite network costs hundreds of dollars more than the equipment required to connect to our terrestrial LTE network. The labour costs associated with having a technician install and set up our satellite service are also significantly higher than on our other platforms, as satellite customers are often in the most difficult to reach locations. The vast majority of these up-front expenses must be absorbed by Xplornet – if we were to charge these up-front costs to our customers, our services would simply not be affordable for many Canadians, leaving them unconnected. The business case associated with satellite broadband is challenging to maintain.
6. As part of the present Consultation, ISED has proposed to exacerbate the challenges that we face in extending affordable satellite broadband solutions to rural and remote Canadians through the imposition of new spectrum licence fees on home Internet earth stations. Xplornet opposes this proposal as it will directly contribute to making satellite broadband less affordable for the Canadians who critically rely on this service to participate in the digital economy. This result will serve to frustrate the goals of Canada's Connectivity Strategy and the Spectrum Policy Framework for Canada³. ISED should not impose new fees on the terminals relied on by rural and remote Canadians.
7. In modernizing its satellite licensing and fee framework, Xplornet submits that ISED has the opportunity to facilitate the ability of satellite services to meet the needs of rural and remote Canadians. In addition to avoiding the imposition of new fees, Xplornet recommends that ISED take action to support rural and remote broadband users, as it recently did in a similar proceeding to modernize the licence

³ DGTP-001-07, *Spectrum Policy Framework for Canada* ["Spectrum Policy Framework"].

fee framework for fixed point-to-point systems⁴ (“Point-to-Point Process”). In the Point-to-Point process, ISED reduced its proposed base rates by 50% to support deployments in remote areas of Canada. Xplornet submits that ISED should similarly reduce its proposed base rates for spectrum licences for earth stations requiring site approval by 50% where earth stations will provide broadband connectivity to rural and remote Canadians.

8. By reducing the regulatory costs associated with satellite broadband services, ISED can help promote the availability of affordable broadband connectivity for Canada’s most digitally vulnerable residents and further the goals of Canada’s Connectivity Strategy and the Spectrum Policy Framework.

XPLORNET COMMUNICATIONS INC.: CANADA’S RURAL BROADBAND PROVIDER

9. Xplornet is a champion for rural connectivity in Canada. We proudly serve those Canadians who choose to live in traditionally underserved areas outside of the cities and urban areas. Bringing fast, affordable broadband to rural Canada is more than just our business: it’s our purpose. Today, we are proud to provide broadband Internet services to approximately one million rural Canadians located in every province and territory of Canada.
10. Over the last 15 years, with investments now totalling over \$1.5 billion, we have built a national network that leverages diverse advanced technologies, including FTTH connectivity, state-of-the-art wireless technologies and our fleet of 4G high-throughput Geostationary (“GSO”) satellites.
11. Our success as a rural broadband provider has been based on our ability to deploy the best-fit technology to serve a given rural region. Based on factors of geography and population density, we are able to select a technology that will deliver high-quality, affordable services for our customers.
12. For example, in the more densely populated rural regions, we are currently deploying FTTH and 5G wireless services to serve Canadians. In rural regions

⁴ DGSO-004-19, *Decision on the Licence Fee Framework for Fixed Point-to-Point Systems*.

across Canada, we are currently offering wireless broadband packages that meet or exceed the CRTC's Universal Service Objective. In New Brunswick, we are currently offering packages that provide download speeds of up to 100 Mbps and upload speeds of up to 10 Mbps with unlimited data. Our rural FTTH deployments offer speeds of 1 Gigabit per second.

13. In the most rural and remote areas of the country, it is not possible to deploy terrestrial infrastructure to affordably serve the needs of Canadians. In these areas, we rely on our fleet of GSO satellites to provide direct-to-home satellite broadband services to Canadians.
14. Today, Xplornet is offering rural and remote Canadians satellite Internet packages with speeds of to 50 Mbps as well as Voice of Internet Protocol home phone services. In the near future, we will add an additional satellite to our fleet of GSO satellites, the Jupiter 3 satellite. Using this satellite, we will offer plans with speeds of up to 100 Mbps for our satellite customers.
15. Although satellite broadband may be the only viable technology to serve Canadians in many regions of the country, there are significant challenges that must be overcome to create affordable service offerings using satellite services. We are pleased to provide input to ISED as it considers changes to its satellite licensing and fee framework. Ensuring that this framework properly supports rural broadband services is critical to meeting the objectives of Canada's Connectivity Strategy. Without reliable, affordable satellite Internet services, many Canadians will not have access to the digital world.

A SATELLITE FRAMEWORK THAT SUPPORTS CANADA'S CONNECTIVITY STRATEGY

16. In revising its satellite licensing and fee framework, ISED is seeking to create an updated framework that better serves the Government of Canada's policy objectives.
17. The overarching objective that is guiding ISED in this process is the objective of the Spectrum Policy Framework, which requires ISED to manage spectrum

resources to maximize the social and economic benefits for Canadians.⁵ The Spectrum Policy Framework includes a number of enabling guidelines that direct ISED in creating policies to meet this objective. Of particular importance to the present Consultation are enabling guidelines (d) and (f). Enabling guideline (d) directs ISED to implement regulatory measures that are minimally intrusive, efficient and effective. Enabling guideline (f) directs ISED to implement spectrum management practices that are responsive to changing technology and marketplace demands.

18. Other important Government of Canada objectives inform this assessment, including Canada's Connectivity Strategy, which seeks to address marketplace demands for broadband connectivity.
19. As recognized in the Connectivity Strategy, "rural and remote communities have identified challenges accessing affordable, high-speed Internet as the number one issue impeding their economic growth."⁶ Canada has now committed billions in public funding to support the deployment of high-quality, affordable broadband services to all Canadians through programs such as the Universal Broadband Fund, the Investing in Canada Infrastructure Program and the Canada Infrastructure Bank in order to address these challenges. It is the ultimate goal of Canada's Connectivity Strategy to ensure that all Canadians have access to broadband services that meet the CRTC's Universal Service Objective by 2030.⁷ Canada has explicitly recognized the key role that satellite broadband services will play in meeting this objective.⁸
20. Beyond service availability, however, affordability is a critical factor that must be considered in order to ensure that Canadians in rural and remote regions have access to the broadband services that they require.
21. The Connectivity Strategy appropriately acknowledges that services that are not

⁵ Spectrum Policy Framework, page 8.

⁶ Connectivity Strategy, page 4.

⁷ Connectivity Strategy, page 8.

⁸ Connectivity Strategy, page 14.

affordable will not help meet Canada's connectivity goals:

“Another factor being considered is affordability. It is important that prices charged be reasonable so that Canadians can meaningfully subscribe and use the services in question. It is not enough for a service to be available, for if the cost is out of reach, Canadians cannot take advantage of it.”⁹

22. As a provider of satellite broadband services, we can attest that delivering affordable satellite solutions to rural and remote Canadians is a significant challenge.
23. Provisioning broadband service to satellite customers in rural and remote areas involves significant up-front costs that must be managed by a service provider. In order to connect a new customer to our satellite network, we must visit the customer's home. For a rural or remote installation, it is not uncommon for travel costs alone to amount to hundreds or even thousands of dollars (for example, in areas without road access). At the home, the satellite dish (i.e., home Internet earth station) and related hardware must be installed for the subscriber to connect to our satellite network. This hardware comes at a cost that is hundreds of dollars more than the equipment needed to connect to our terrestrial LTE broadband network.
24. If we were to ask our customers to pay the up-front costs associated with a satellite installation, we would not be able to offer affordable services to Canadians. In order to create affordable offerings, we must absorb these costs for the customer, creating a challenging business case for the service.
25. In 2019, as part of its Point-to-Point Process, ISED revised its licence fee framework for fixed point-to-point systems to better promote the ability for terrestrial wireless services to support rural and remote broadband services. Through the present Consultation, Xplornet encourages ISED to take similar steps to promote the ability of satellite services to meet the needs of rural and remote Canadians.

⁹ Connectivity Strategy, page 13.

26. To this end, Xplornet makes two primary recommendations to ISED as it considers changes to update its satellite licensing and fee framework. Firstly, Xplornet submits that ISED should not impose new costs on consumer broadband terminal equipment; and secondly, ISED should reduce the base rates for site-approved earth station licences supporting rural broadband connectivity. By adopting these recommendations, ISED can ensure that an updated satellite licensing and fee framework is responsive to marketplace demands for broadband connectivity, and that its updated framework furthers the objectives of Canada's Connectivity Strategy and the Spectrum Policy Framework.

ISED Should Not Impose New Fees on Consumer Broadband Terminal Equipment

27. As described in the Consultation, ISED is proposing to modify its licensing approach that applies for earth stations used for home Internet services. Under the current approach, ISED has provided an interim authorization that allows for systems of earth stations to be placed without obtaining separate site-based licences for each earth station. No fees are applied to earth stations placed under the interim process. This approach has been in place since 2015.

28. ISED is now proposing to replace its interim process with spectrum licences. As described in greater below, Xplornet generally supports this proposal. However, ISED has indicated that it intends to charge fees for these spectrum licences, which ISED recognizes will impose new costs on licensees that did not previously exist under the interim process.¹⁰

29. Xplornet opposes the imposition of new fees on generic earth station licences issued in relation to consumer broadband terminals. As noted above, the costs associated with providing affordable broadband services to customers who rely on satellite technologies for connectivity are already extremely high. It is already very challenging for service providers, like Xplornet, to develop a business case that allows for affordable plans to be offered to consumers. Adding additional regulatory costs to these services will increase these challenges, reducing the availability of

¹⁰ Consultation, paragraph 134.

affordable satellite Internet services. Accordingly, Xplornet submits that ISED should not impose fees on new spectrum licences for generic earth stations supporting rural broadband services. Reducing the affordability of broadband services will make these services less able to meet the needs of rural Canadians, running directly counter to the goals of the Connectivity Strategy and the Spectrum Policy Framework.

ISED Should Reduce the Proposed Base Rates for Site-Approved Earth Station Licences Supporting Rural Broadband Connectivity

30. Secondly, Xplornet supports ISED's stated goals of the present process to reduce fees overall for satellite services in order to support the deployment of innovative broadband solutions.¹¹

31. These are parallel goals to the goals ISED sought to achieve in its 2019 Point-to-Point Process. In the Point-to-Point Process, however, ISED took important steps to reduce fees that apply to systems in rural and remote areas in order to support rural broadband. As ISED stated:

“71. Reduced rates will further facilitate the economical deployment of broadband in rural and remote areas, lowering associated costs and extending equipment life in areas of low population densities.

72. ISED supports lower base rates, rather than a “band”-specific reduction, as it is a market-based and band-neutral approach to setting fees. Building on Decision 3, ISED will further reduce base rates across all bands by 20% in rural areas and by 50% in remote areas.”

32. Xplornet submits that the present proceeding provides an important opportunity for ISED to support rural and remote Canadians who rely on satellite services in a similar manner as it did Canadians who rely on terrestrial wireless facilities in the Point-to-Point Process.

33. Given that Canadians who rely on satellite Internet connectivity live in the regions of the country with the lowest population densities, Xplornet submits that it would be most appropriate to provide incentives that align with those extended to

¹¹ Consultation, paragraph 9.

Canadians in remote regions as part of the Point-to-Point Process. To this end, Xplornet submits that ISED should reduce its base fees for site-approved earth stations that will support rural broadband connectivity by 50%. Such a reduction will directly contribute to achieving the objectives of Canada's Connectivity Strategy and the Spectrum Policy Framework.

34. In the paragraphs that follow, Xplornet provides its initial responses to the questions posed by ISED in the Consultation. For issues that we have not addressed in the present submission, we reserve our right to comment further in subsequent stages of the Consultation.

RESPONSES TO CONSULTATION QUESTIONS

6 LICENSING FRAMEWORK

6.1 Introduction of spectrum licensing for earth stations

Q1: ISED is seeking comments on its proposals to:

- a. use spectrum licences to authorize fixed and transportable earth stations and ESIMs within Canadian territory, with multiple earth stations authorized under a single licence***
- b. issue the proposed spectrum licences for a Tier 1 service area, and have those licences authorize the radio service and frequency bands***
- c. apply the general conditions of licence that are listed in annex A to earth station spectrum licences***

35. Xplornet does not object in principle to ISED's proposal to replace radio licences with spectrum licences for all earth stations.

36. Consistent with the details set out in the Consultation, it is our understanding that these spectrum licences would be issued in the following manner:

- A single licence would allow for the operation of an unlimited number of earth stations in accordance with technical and operational requirements;
- A single licence would allow for communication with multiple GSO satellites;
- The licences would be issued on an annual basis;
- Licences would be issued on a Tier 1 basis;

- The licences would authorize the use of a frequency band, and identify with which satellites the earth stations will communicate; and
 - General conditions of licence would be applied to current authorizations.
37. Xplornet supports the above proposals. The design of ISED's proposed licensing process appears to be to create an efficient, effective method for a satellite service provider to obtain authorization to use the frequencies associated with multiple GSO satellites. Xplornet supports this goal as it is consistent with the direction given to ISED through enabling guideline (d) of the Spectrum Policy Framework.
38. That said, Xplornet is concerned that this efficient mechanism may be frustrated by details that are not fully explained in the Consultation. For example, there appears to be a concept that earth stations must be "identical" to be permitted to operate under the same licence. It is unclear from the Consultation what would constitute "identical" earth stations. For example, if the use of different models of earth stations requires us to obtain separate licences from ISED, this would completely undermine the efficiency of the process set out in the Consultation. We currently serve our satellite broadband customers using a number of GSO satellites that all operate using similar earth station equipment and frequencies. ISED's proposed licensing model appears to be designed to allow us to efficiently obtain a single spectrum licence to operate the generic earth stations associated with our GSO satellites, and a single site-approved spectrum licence for earth stations requiring site approval.
39. If the use of different models of generic earth stations makes these earth stations "different", such that they require individual licences, this will entirely frustrate the efficient process that it appears ISED is intending to create. If fees are charged for these spectrum licences, we will be required to pay more than once for the use of the same frequencies, adding significant costs to our operations.
40. If we must obtain a new spectrum licence to operate new models of similar equipment, this will also discourage (or prevent) us from adopting innovative new equipment as it becomes available. For example, through the use of a slightly

larger home Internet earth station, we may be able to increase throughput for our customers and deliver higher speed services. However, if introducing new hardware into our network requires us to obtain a distinct spectrum licence, and pay again for the use of the same frequencies we are already licensed to use to deploy an unlimited number of generic earth stations, this will stifle innovation and hold back service developments that are designed to meet the needs of Canadians.

41. This result would run against guideline (f) of the Spectrum Policy Framework, frustrating the ability of ISED's satellite licensing and fee framework to meet the objective of that document. Accordingly, Xplornet submits that ISED should not focus on licensing only "identical" earth stations under a single spectrum licence, but licensing the frequencies used by similar equipment.
42. In addition to the above, Xplornet's support for ISED's proposal also assumes that licensed frequency blocks will allow for the use of both left-hand and right-hand circular polarization in order to encourage the efficient use of spectrum. If separate licences, and thus separate fees, were required for the use of each polarity, this would also reduce the efficiency of ISED's proposal and frustrate the ability of ISED's revised licensing and fee framework to promote the objective of the Spectrum Policy Framework.

6.2 Earth station spectrum licences requiring site approval

Q2: ISED is seeking comments on its proposals to:

- a. implement spectrum licences that require site approvals for all earth stations described above operating in any frequency band**
 - b. collect and assess the technical information listed in annex B as part of the site approval process**
 - c. require earth station licensees with site-approved spectrum licences to hold licences for entire spectrum blocks, as per relevant SRSPs**
43. Xplornet generally supports ISED's proposal to require site approval for the types of licences it has identified at paragraph 35 of the Consultation.

44. As noted in our response to Q1, it is our understanding that we would only require a single spectrum licence for all earth stations requiring site approval that communicate with our various GSO satellites. This licence would identify the frequencies used to communicate with our GSO satellites and the specific satellites with which the earth stations would communicate. Our same concerns surrounding ISED's proposal to licence only "identical" earth stations under a single licence also apply with respect to earth stations requiring site approval. As noted in our response to Q1, above, Xplornet submits that ISED should not require earth stations to be "identical" to be permitted using the same licence. Such a requirement would frustrate ISED's proposed licensing process and hinder the ability of ISED's framework to meet the objective of the Spectrum Policy Framework.

Q3: ISED is seeking comments on any additional technical information that should be required for site-approved earth stations. In providing comments, respondents are requested to include supporting arguments and a rationale.

45. Xplornet is not proposing any other technical information be provided at this time.

Q4: ISED is seeking comments on what other types of earth stations, in addition to those identified, could be subject to spectrum licences that require site approvals.

46. Xplornet reserves its right to comment in later stages of the consultation process.

6.3 Spectrum licences for generic earth stations

Q5: ISED is seeking comments on its proposal to adopt generic spectrum licences in order to authorize systems of identical fixed earth stations and ESIMs.

47. With respect to generic earth station licences, Xplornet supports ISED's proposal to issue a single spectrum licence for an unlimited number of earth stations that will communicate with multiple GSO satellites.

48. As described in our response to Q1 above, we are concerned that a requirement for earth stations to be "identical" to be licensed under the same spectrum licence will frustrate the efficient design of ISED's new licensing process and hinder the

ability of ISED's framework to meet the objective of the Spectrum Policy Framework.

49. It is unclear from the Consultation what would constitute "identical" earth stations. For example, if the use of different models of earth stations requires us to obtain separate licences from ISED, this would completely undermine the efficiency of the process set out in the Consultation. As noted in our response to Q1, we currently serve our satellite broadband customers using a number of GSO satellites that all operate using similar earth station equipment and frequencies. ISED's proposed licensing model appears to be designed to allow us to efficiently obtain a single spectrum licence to operate the generic earth stations associated with our GSO satellites, and a single site-approved spectrum licence for earth stations requiring site approval.
50. If the use of different models of generic earth stations makes these earth stations "different", such that they require individual licences, this will entirely frustrate the efficient process that it appears ISED is intending to create. If fees are charged for these spectrum licences, we will be asked to pay more than once for the use of the same frequencies, adding significant costs to our operations.
51. If we must obtain a new spectrum licence to operate new models of similar equipment, this will also discourage (or prevent) us from adopting innovative new equipment as it becomes available. For example, through the use of a slightly larger home Internet earth station, we may be able to increase throughput for our customers and deliver higher speed services. However, if introducing new hardware into our network requires us to obtain a distinct spectrum licence, and pay again for the use of the same frequencies we are already licensed to use to deploy an unlimited number of generic earth stations, this will stifle innovation and hold back service developments that are designed to meet the needs of Canadians.
52. This result would run against guideline (f) of the Spectrum Policy Framework, frustrating the ability of ISED's satellite licensing and fee framework to meet the

objective of that document. Accordingly, Xplornet submits that ISED should not focus on licensing only “identical” earth stations under a single spectrum licence, but licensing the frequencies used by similar equipment.

6.3.1 Frequency bands where generic spectrum licences will be available

Q6: ISED is seeking comments on its proposals to allow generic spectrum licensing systems of identical fixed earth stations and ESIMs in the frequency bands discussed above.

53. Xplornet supports the frequency bands that have been identified by ISED for generic spectrum licensing.

Q7: ISED is also seeking comments on any other bands that should be considered for generic spectrum licensing for fixed earth stations and ESIMs, including for systems of identical receive-only earth stations in the 4000-4200 MHz band. In providing comments, respondents are requested to include supporting arguments and a rationale.

54. Xplornet is not proposing additional bands at this time.

6.3.2 Additional conditions of licence for generic spectrum licences for ESIMs and for earth stations installed by consumers

Q8: ISED is seeking comments on its proposals to:

- a. issue generic spectrum licences for ESIMs on a no-interference, no-protection basis***
- b. require ESIM licensees to provide a contact that would be available to respond to interference issues 24 hours a day, 7 days a week, as per the licence conditions in annex A***
- c. require applicants to submit technical information needed to confirm compliance with SRSP-101 when they apply for generic spectrum licences for ESIMs and for fixed earth stations intended for self-installation by consumers***

55. Xplornet reserves its right to comment in the later stages of the consultation process.

Q9: ISED is seeking comments on whether an RSS should be developed for earth stations intended for self-installation by consumers.

56. Xplornet reserves its right to comment in the later stages of the consultation process.

6.5 Introduction of spectrum licensing for space stations for all satellite services

6.5.1 Non-communications satellites

Q10: ISED is seeking comments on its proposals to:

- a. introduce spectrum licensing for space stations in all satellite services, with licences authorizing the radio service, the frequency band(s), the orbital location and a coverage area***
- b. set the licence term on a case-by-case basis for satellites that are not FSS, BSS or MSS***
- c. apply the existing conditions of licence for space stations, published as N2 – Space station licences, to the new spectrum licences***

57. Xplornet reserves its right to comment in the later stages of the consultation process.

6.5.2 FSS feeder link spectrum used by space stations in the MSS

Q11: ISED is seeking comments on its proposal to introduce spectrum licensing to authorize FSS feeder link and/or TT&C spectrum used by space stations to support MSS, with licences issued immediately after a favourable licensing decision and fees applicable once satellites are in operation.

58. Xplornet reserves its right to comment in the later stages of the consultation process.

Q12: ISED is seeking comments on whether to require MSS satellite operators to comply with the rules regarding minimum holdings for FSS feeder link spectrum, as defined in RP-008. In providing comments, respondents are requested to include supporting arguments and a rationale.

59. Xplornet reserves its right to comment in the later stages of the consultation process.

6.5.3 Changes to spectrum licences for MSS space stations

Q13: ISED is seeking comments on its proposals to:

- a. issue spectrum licences instead of approvals in principle for MSS satellites, with fees remaining payable only once satellites are launched and operational**
- b. issue spectrum licences for MSS satellites with a 20-year term**
- c. issue separate spectrum licences for MSS satellites and MSS earth stations, with each licence assigned a fee**

60. Xplornet reserves its right to comment in the later stages of the consultation process.

6.6 Types of licences required

Q14: ISED is seeking comments on its proposals to:

- a. issue the three types of satellite-related spectrum licences separately and assign a separate fee for each**
- b. allow communication with multiple GSO satellites on a single earth station licence**
- c. require separate earth station licences for NGSO systems**

61. As discussed above, Xplornet supports ISED's proposal to allow communication with multiple GSO satellites using a single earth station licence.

7 FEE REGIME

7.2 Earth stations

7.2.2 Generic earth station spectrum licences for fixed earth stations and ESIMs

Q15: ISED is seeking comments on its proposal to assign a consumption-based fee to earth station spectrum licences, where site and station approvals are required, as follows:

- below or equal to 1 GHz: \$2000/MHz**
- above 1 GHz and below or equal to 3.4 GHz: \$100/MHz**
- above 3.4 GHz and below or equal to 7.075 GHz: \$20/MHz**

- **above 7.075 GHz and below or equal to 17.3 GHz: \$10/MHz**
- **above 17.3 GHz and below or equal to 51.4 GHz: \$5/MHz**
- **above 51.4 GHz: \$1/MHz**

62. Xplornet supports ISED's general approach to adopt a consumption-based model for satellite licence fees for earth stations requiring site approval.

63. ISED's general approach is consistent with that adopted in the Point-to-Point Process. In both the current Consultation and the Point-to-Point Process, ISED's goals were to update its licensing fees to better support efficiency and innovation.¹²

64. In the Point-to-Point Process, however, Xplornet notes that ISED took important steps to reduce the fees that apply to systems in rural and remote areas in order to support rural broadband. As ISED stated:

“71. Reduced rates will further facilitate the economical deployment of broadband in rural and remote areas, lowering associated costs and extending equipment life in areas of low population densities.

72. ISED supports lower base rates, rather than a “band”-specific reduction, as it is a market-based and band-neutral approach to setting fees. Building on Decision 3, ISED will further reduce base rates across all bands by 20% in rural areas and by 50% in remote areas.”

65. Xplornet submits that the present proceeding provides an important opportunity for ISED to support rural and remote Canadians who rely on satellite services in a similar manner as it did for Canadians who rely on terrestrial wireless facilities in the Point-to-Point Process.

66. Given that Canadians who rely on satellite Internet connectivity live in the regions of the country with the lowest population densities, Xplornet submits that it would be most appropriate to provide incentives that align with those extended to Canadians in remote regions as part of the Point-to-Point Process. To this end, Xplornet recommends that ISED reduce its base fees for earth stations requiring site approval by 50% to support rural Canadians and the objectives of the

¹² Consultation, paragraph 84 and Point-to-Point Process, paragraphs 15 to 16.

Connectivity Strategy and the Spectrum Policy Framework.

Q16: ISED is seeking comments on its proposal to assign a consumption-based fee to generic earth station spectrum licences for fixed earth stations and ESIMs at the rate of \$5/MHz.

67. Xplornet opposes the imposition of new costs that will increase the challenges of providing affordable broadband services to rural and remote Canadians.
68. Since 2015, Xplornet has been deploying home Internet earth stations under ISED's interim proposal, which does not charge fees for the operation of home Internet earth stations.
69. Even under the interim process, it is difficult to extend affordable Internet using satellite services in light of the high costs associated with providing this service. Each subscriber must be provided with an earth station for their home that comes at a cost of several hundred dollars. The truck roll costs to have a technician visit the customer's home to install and set up this equipment are also much higher than those associated with other technologies, as satellite customers can be in Canada's most remote and difficult to access locations. If we were to attempt to charge customers for the actual costs associated with installing their service, it would be cost prohibitive for many customers to subscribe to satellite broadband services, leaving them without connectivity options.
70. Xplornet thus completely agrees with Canada's Connectivity Strategy that affordability is a key component to providing high-speed access to Canadians. Without affordable offerings, service availability is irrelevant.
71. To this end, we have gone to great lengths to make our services affordable for rural and remote Canadians who rely on satellite connectivity. Our standard installation fee is only \$99 for satellite services. We absorb hundreds of dollars in up-front costs in order to bring affordable connectivity to rural and remote Canadians. In light of this, it is very challenging to maintain a business case that allows us to extend satellite broadband services to rural and remote Canadians.

72. ISED is proposing to exacerbate the challenges we face by imposing new fees on home Internet earth stations. Xplornet opposes this proposal, as it will directly serve to make satellite broadband services less affordable for rural and remote Canadians and frustrate the objectives of Canada's Connectivity Strategy.

73. Xplornet submits that ISED should waive fees for generic spectrum licences where the terminal equipment being authorized will support home Internet services. Adding new fees to these services will reduce the ability of satellite broadband to be a viable option to many of Canada's most digitally vulnerable households. Such a result runs against Canada's Connectivity Strategy, and enabling guideline (f) of the Spectrum Policy Framework.

7.3 MSS earth station spectrum licences

Q17: ISED is seeking comments on its proposal to modify the existing consumption-based fee for spectrum licences for MSS earth stations operating in bands allocated to MSS as follows:

- ***at or below 3 GHz: \$1500/MHz***
- ***above 3 GHz: \$5/MHz***

74. Xplornet reserves its right to comment in the later stages of the consultation process.

Q18: ISED is seeking comments on its proposal to assign the spectrum licence fee for MSS earth stations based on the maximum amount of spectrum a system is capable of using, within a range of possible operation. This amount would be the assigned spectrum used in the fee calculation.

75. Xplornet reserves its right to comment in the later stages of the consultation process.

7.4 Space station spectrum licences

Q19: ISED is seeking comments on its proposals to:

- a. modify the MSS satellite spectrum licence fee to \$124.84/MHz***

- b. assign a consumption-based fee for new spectrum licences for all other satellites (that are not FSS, BSS or MSS) at \$124.84/MHz**

76. Xplornet reserves its right to comment in the later stages of the consultation process.

7.4.1 Spectrum licences for NGSO systems

Q20: ISED is seeking comments on its proposals to:

- a. introduce a two-step fee for space station spectrum licences for constellations of NGSO satellites in any satellite service that are subject to phased deployment milestones**
- b. apply the first fee step currently at \$62.42/MHz from the launch of the first satellite up until the deadline for the first deployment milestone (typically year 6). The second fee step, currently at \$124.84/MHz, would apply thereafter and would continue until the end of the licence term, recognizing that all annual fees will increase over time, according to the CPI**

77. Xplornet reserves its right to comment in the later stages of the consultation process.

7.5 Minimum spectrum licence fees

8 DEVELOPMENTAL SPECTRUM LICENCES FOR EARTH STATIONS AND SPACE STATIONS

Q21: ISED is seeking comments on its proposals to introduce a minimum annual spectrum licence fee of \$160 for earth stations and \$300 for space stations, and to apply these fees whenever the application of the consumption-based fee model would result in a fee lower than those amounts.

78. Xplornet supports ISED's proposal.

Q22: ISED is seeking comments on its proposal to apply a minimum annual spectrum licence earth station fee of \$160 to radioastronomy sites.

79. Xplornet reserves its right to comment in the later stages of the consultation process.

Q23: ISED is seeking comments on its proposals to introduce developmental spectrum licence fees for earth stations and space stations at a flat rate of \$160 and \$300, respectively.

80. Xplornet reserves its right to comment in the later stages of the consultation process.

Q24: ISED is also seeking comments on limits to eligibility requirements for developmental spectrum licences, limits on frequency bands where developmental licences could be issued, and conditions of licence that could be applied. In providing comments, respondents are requested to include supporting arguments and a rationale.

81. Xplornet reserves its right to comment in the later stages of the consultation process.

9 OTHER ADMINISTRATIVE ASPECTS

9.3 Periodic fee adjustment

Q25: ISED is seeking comments on its proposal to apply a prorated fee, of 1/12th of the relevant annual fee for each month until March 31 of the fiscal year, for licences issued part-way through a licensing year.

82. Xplornet supports ISED's proposal.

9.4 Short-duration licences

Q26: ISED is seeking comments on its proposals to:

- a. issue short-duration licences for periods of less than one year**
- b. assign a prorated fee of 1/12th of the total annual fee per month, with the lowest fee possible being \$160 for earth stations and \$300 for space stations**

83. Xplornet supports ISED's proposal.

9.5 Service standards and remissions

Q27: ISED is seeking comments on its proposals to set service standards for the issuance of licensing decisions for satellite-related spectrum licences as follows:

- space stations: 126 days**

- ***generic earth stations: 126 days***
- ***site-approved earth stations: 126 days***
- ***additional sites under an existing site-approved earth station licence: 49 days***

84. Xplornet supports ISED's proposed service standards.

CONCLUSION

85. In modernizing its satellite licensing and fee framework, Xplornet submits that ISED has the opportunity to facilitate the ability of satellite services to meet the needs of rural and remote Canadians.

86. In this submission, Xplornet makes two primary recommendations to ISED. Firstly, Xplornet submits that ISED should not impose new costs on consumer broadband terminal equipment. Secondly, Xplornet submits that ISED should reduce the proposed base rates for site-approved earth station licences supporting rural broadband connectivity. By adopting these recommendations, ISED can ensure that an updated satellite licensing and fee framework is responsive to marketplace demands for broadband connectivity, and that its updated framework furthers the objectives of Canada's Connectivity Strategy and the Spectrum Policy Framework.

87. Where we have not addressed certain questions posed by ISED in the Consultation, we reserve our right to comment further in subsequent stages of the consultation process.

88. We thank ISED for the opportunity to provide these comments.

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