

**Reply Comments of Shaw Communications Inc.**

**Consultation on a Licence Renewal Process for  
Advanced Wireless Services and Other Spectrum**

***Canada Gazette*, Part I, June 17, 2017, Notice No. SLPB-002-17**

**August 14, 2017**

## I. INTRODUCTION

1. The following constitutes the reply comments of Shaw Communications Inc. (“Shaw”) to Innovation, Science and Economic Development Canada (the “Department”) in connection with the proceeding initiated by *Consultation on a Licence Renewal Process for Advanced Wireless Services and Other Spectrum*, Notice No. SLPB-002-17 (the “Consultation Document”). We note that any failure by Shaw to respond to any specific comments or issues raised by other parties in this proceeding does not necessarily constitute Shaw’s agreement with or acceptance of those comments or issues.
2. As indicated in the Consultation Document, the Department has established the following objectives for the renewal of AWS-1 and other spectrum that is the subject of this proceeding:
  - to foster innovation and investment
  - to support sustained competition so that consumers and businesses benefit from greater choice and
  - to facilitate deployment and timely availability of services across the country, including rural areas.<sup>1</sup>
3. As discussed in our initial comments, as a new competitor in the market Shaw fully endorses these objectives, particularly the need to “support sustained competition so that consumers and businesses benefit from greater choice”. In Shaw’s view, real and sustainable, facilities-based competition, including in both urban and rural areas, is crucial to achieving this objective and the Government’s innovation and economic growth agenda. However, as noted by Shaw and other parties to this proceeding, there have been many ongoing obstacles to achieving sustainable competition in Canada’s mobile wireless market.
4. For example, for several years, new competitors have not been able to secure reasonable rates, terms and conditions for wholesale roaming services from the incumbents. Nor have they been able to gain timely access to reasonable antenna tower and site sharing arrangements. Even to this day, and notwithstanding the interventions of the Department, the CRTC and even Parliament, new competitors continue to face significant barriers to providing a robust and fully competitive mobile wireless alternative to the incumbents. For example, Shaw does not have access to the same spectral resources as the incumbents, and we continue to face uncertainty over mandated wholesale roaming rates, which remain subject to review by the CRTC.

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<sup>1</sup> Consultation Document, para. 5.

5. It is for these reasons, as well as those set out in Shaw's initial comments in this proceeding, that we urge the Department to approach its determinations in this proceeding by taking into account the circumstances of all competitors in the market and the impact of its decisions on the prospects for competition in all areas of the country. Specifically, in renewing the licences for AWS-1, G Block and I Block spectrum, the Department must take into account the state of the market, the ongoing need to promote sustainable competition, as well as the imperative of competitors to deploy networks efficiently and in accordance with the dynamics of the marketplace. These factors are essential to ensure an enhanced consumer experience and to meet the needs of the evolving digital economy.

## **II. REPLY TO QUESTIONS AND ISSUES RAISED IN THE CONSULTATION DOCUMENT**

6. Set out below are Shaw's reply comments to the submissions that were filed by other interested parties in response to the questions posed by the Department in the Consultation Document.

### ***A. ISED invites comments on the assessment of the AWS-1, G Block and I Block equipment ecosystems.***

7. Most parties to this proceeding noted that the equipment ecosystem for AWS-1 spectrum is relatively well developed with numerous AWS-capable devices available in the market.<sup>2</sup>
8. By contrast, the equipment ecosystem for G Block spectrum is far less established. As noted by SaskTel, it has only been in recent years that LTE deployment in this band has become reasonably practicable. Plus, carrier aggregation of G Block spectrum continues to be a challenge. Although the 3GPP has standardized LTE band 25 to include the G Block, there are only a limited number of carrier aggregation combinations at present that are capable of supporting this band.
9. With respect to I Block spectrum, the comments submitted by other interested parties in this proceeding confirm that there is no equipment ecosystem currently available for this spectrum nor is there a 3GPP band designation.

### ***B. ISED invites comments on the proposal to renew AWS-1, G Block and I Block licences that have met their conditions of licence.***

10. In its initial comments in this proceeding, Shaw indicated its general support for the Department's proposal to renew AWS-1, G Block and I Block licences where their conditions have been met. However, in interpreting the licence conditions for this spectrum, Shaw noted that these licences

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<sup>2</sup> See, for example, the comments of the following interested parties: Bell Mobility, SLPB-002-17, 25 July 2017, para. 1; Telus, SLPB-002-17, 25 July 2017, para. 10; Rogers, SLPB-002-17, 25 July 2017, para. 9; SaskTel, SLPB-002-17, 25 July 2017, para. 16; and Quebecor, SLPB-002-17, 25 July 2017, para. 8.

contain different “spectrum implementation usage” language than that used by the Department in other commercial mobile spectrum licences. In these particular licences, the Department chose to establish spectrum implementation “targets” as distinct from concrete spectrum deployment requirements. These latter requirements can be found in the licences for AWS-3, 2500 MHz and 700 MHz spectrum.

11. In light of this language, Shaw believes that it is open to the Department to consider other factors when determining eligibility for renewal. Indeed, as noted by Eastlink, “*the deployment requirements set out in Appendix C [of the AWS-1 Licensing Framework] were not binding and were established only to be used as a potential factor in determining whether to renew.*”<sup>3</sup>
12. It is evident from the comments of interested parties in this proceeding that there are other important factors that are also relevant when determining eligibility for licence renewal. For example, each of Eastlink, Shaw and Videotron have pointed out that they have faced several challenges as new competitors in the market, not the least of which has been – and continues to be – the problem of negotiating reasonable rates, terms and conditions for wholesale roaming with the incumbents as well as continuous delays in gaining access to the incumbents’ tower and antenna sites. As noted by Shaw in its initial comments in this proceeding, these problems became so pronounced after the close of the 2008 spectrum auction that the Department, the CRTC and even Parliament were required to intervene in order to attempt to remedy the situation.
13. Another factor that is relevant to determining eligibility for renewal is the state of the equipment ecosystem for the spectrum that is the subject of the licence. As noted above, there is no equipment ecosystem for spectrum in the I Block at the present time and, in the case of G Block, the equipment ecosystem has developed in fits and starts. In fact, as Rogers points out, there are only a few 3GPP carrier aggregation combinations that include the G Block (Band 25) and there are no proposals in 3GPP to standardize 5G in either Band 2 or Band 25.<sup>4</sup>
14. As a final point, Shaw notes that several parties, including SaskTel, Telus, Shaw and Eastlink argued that AWS-1 and G Block spectrum are not ideally suited to deployments in rural or low population density areas. As noted by SaskTel:

*...AWS-1 and PCS G spectrum blocks are best suited for urban deployments...*

*Rural customers could be far more effectively and efficiently served by network deployments initially utilizing low band spectrum that provides greater coverage, and then deploying sufficient high band spectrum when and if required for*

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<sup>3</sup> Eastlink Comments, SLPB-002-17, 25 July 2017, para. 19, emphasis added.

<sup>4</sup> Rogers Comments, SLPB-002-17, 25 July 2017, para. 11.

*additional network capacity. This allows some flexibility for the wireless provider to meet the financial challenges of serving these very sparsely populated rural areas.*<sup>5</sup>

15. AWS-1 and G Block spectrum are better-suited for urban environments and high population density areas because the propagation characteristics of this spectrum are more attenuated than low band spectrum in the 700 and 850 MHz ranges. In other words, the most spectrally efficient way to deploy this spectrum is to deploy it in urban areas or use it as an “add on” to an existing low band spectrum deployment in lower population density areas.
16. For the incumbents, this deployment model has not proven to be a problem because they already had low band spectrum when they acquired AWS-1 and G Block spectrum in the 2008 spectrum auction.
17. The same cannot be said for new competitors in the market. None of the current new entrants in the market held licences for any low band spectrum prior to the auction. In fact, it was not until 2014, that some new entrants were able to acquire low band spectrum licences in the Department’s auction of spectrum in the 700 MHz band. However, the amounts that were acquired by these entities were extremely modest, and certainly pale in comparison to the aggregate low band spectrum holdings of the incumbents. In fact, in Shaw’s case, it had no low-frequency spectrum at all and, even with our very recent acquisition of 700 MHz spectrum, we still have significantly less low-frequency spectrum as compared to the wireless incumbents.
18. The deployment model described by SaskTel, as referred to above, only works if one is entering the market with sufficient - and sufficiently diverse - spectral holdings. This was not the case for new competitors that entered the market after the 2008 spectrum auction and, even today, the model represents a challenge owing to the limited amounts of low band spectrum held by these entities.
19. For these reasons as well as those set out in Shaw’s initial comments in this consultation, Shaw reiterates its view that the achievement of the spectrum implementation targets that were established for AWS-1, G Block and I Block licences is an important consideration in the renewal of a given licence, but it is not the only consideration. Carriers that have not deployed their spectrum and have no actionable plan to do so do in the near term should not have a high expectation that their licences will be renewed for a 20 year licence term. However, licensees that are in the midst of deployment or have imminent, actionable business plans and dedicated

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<sup>5</sup> SaskTel Comments, SLPB-002-17, 25 July 2017, paras. 25 and 39.

budgets to deploy the spectrum in satisfaction of the targets, should be considered for renewal on the condition of meeting the targets within a specified, reasonable period of time.

20. In these circumstances, Shaw believes that a maximum conditional renewal term of two years would be appropriate for licensees of AWS-1 and G Block spectrum. Once the original targets have been satisfied, licensees should be eligible for renewal for the balance of the full twenty-year term.

**C. ISED invites comments on the likely timeframe for availability of equipment capable of providing access to licensed spectrum on an opportunistic basis**

21. Several parties to this proceeding, including Quebecor, Bell, Rogers, Telus, Shaw, SaskTel and Eastlink expressed concerns about the prospect of providing access to licensed spectrum on an opportunistic basis. These parties noted that providing such access is highly premature, likely unnecessary and, even if warranted would represent a fundamental change to Canadian spectrum management policy. Shaw shares these concerns and agrees in particular with the following points made by these parties:

- At the present time, the capabilities for dynamic spectrum access and cognitive radio are not commercially available and, indeed, are believed to be “years away” from commercial deployment;<sup>6</sup>
- The introduction of opportunistic access to licensed spectrum would represent a fundamental change to Canadian spectrum management and licensing policies,<sup>7</sup> which could undermine the value of that spectrum and significantly jeopardize the business case for commercial mobile wireless carriers,<sup>8</sup> particularly for new entrants who have significantly less - and significantly less diverse - spectrum than the incumbents.<sup>9</sup>
- There are other spectrum bands where unlicensed use is permitted or which have open spectrum designations which should be considered first for the development of opportunistic access technologies before licensed commercial mobile bands are considered for this use. As noted by Telus, “nearly 8 GHz of licence exempt spectrum [is] already at the disposal of

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<sup>6</sup> Rogers Comments, SLPB-002-17, 25 July 2017, para 21.

<sup>7</sup> See : Xplornet Comments SLPB-002-17, 25 July 2017, para. 5; Quebecor Comments, SLPB-002-17, 25 July 2017, para. 19; Bell Comments, SLPB-002-17, 25 July 2017, para 5; Telus Comments, SLPB-002-17, 25 July 2017; SaskTel Comments, SLPB-002-17, 25 July 2017, para. 28; and Eastlink Comments, SLPB-002-17, 25 July 2017, para 21.

<sup>8</sup> Bell Comments, SLPB-002-17, 25 July 2017, para. 5, Eastlink Comments, SLPB-002-17, para. 21; Quebecor Comments, SLPB-002-17 25 July 2017, para. 18; and Rogers Comments, SLPB-002-17, 25 July 2017, para. 19.

<sup>9</sup> See: Quebecor Comments, SLPB-002-17, 25 July 2017, paras. 17-19; Rogers Comments, SLPB-002-17, 25 July 2017, para. 20; and Eastlink Comments, SLPB-002-17, 25 July 2017, para. 21.

Canadian innovators (along with an additional 7 GHz proposed in the currently open *Consultation on Releasing Millimetre Wave Spectrum to Support 5G* (SLPB-001-17)) versus the 648 MHz of cellular radio mobile spectrum (CMRS) currently available to the mobile industry,”<sup>10</sup>

- Because opportunistic access to licensed spectrum represents a fundamental change to spectrum management and licensing policies, this proceeding - which is focussed on spectrum in the AWS-1, G Block and I Block bands - is not the appropriate forum in which to consider this issue.<sup>11</sup> This issue should only be considered when industry direction on opportunistic access becomes clear and only in the context of a standalone proceeding where the implications of introducing opportunistic access can be considered in a comprehensive manner.<sup>12</sup>

**D. ISED invites comments on the proposal to renew AWS-1 and G Block licences that have complied with their conditions of licence for a new term of 20 years and I Block licences that have complied with their conditions of licence for a new term of 10 years.**

22. Virtually all parties to this proceeding supported the Department’s proposed licence renewal term of 20 years for AWS-1 and G block licences.
23. With respect to I Block licences, some parties, including Shaw, supported the Department’s proposal to renew these licences for a shorter 10-year term given the uncertainty surrounding the equipment ecosystem for this spectrum,<sup>13</sup> whereas other parties, such as Eastlink, argued that the licence term for I Block spectrum licences should also be set at 20 years because of this very uncertainty. As noted by Eastlink:

*... if anything, the I Block licence term should be longer because it does not yet have a developed ecosystem. I Block licence holders invested in the spectrum licence based on the strong likelihood of renewal, non-binding deployment requirements, and the expectation that a 3GPP standard would be developed in due course... It is only reasonable that I Block licence holders should have the*

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<sup>10</sup> See: Rogers Comments, SLPB-002-17, 25 July 2017, para. 22 and Telus Comments, SLPB-002-17, 25 July 2017, para. 23.

<sup>11</sup> See: Bell Comments, SLPB-002-17, 25 July 2017, para. 7 and Telus Comments, SLPB-002-17, 25 July 2017, para. 23.

<sup>12</sup> See: Quebecor Comments, SLPB-002-17, 25 July 2017, para. 19; Xplornet Comments, SLPB-002-17, 25 July 2017, para. 5; Eastlink Comments, SLPB-002-17, 25 July 2017, para. 21; Telus Comments, SLPB-002-17, 25 July 2017, para. 22; Bell Comments, SLPB-002-17, 25 July 2017, para. 7; and SaskTel Comments, SLPB-002-17, 25 July 2017, para.28.

<sup>13</sup> See, for example, Telus Comments, SLPB-002-17, 25 July 2017, para. 27 and Shaw Comments, SLPB-002-17, 25 July 2017, para. 53.

*time needed for the 3GPP standard to be developed, and then some time to deploy the spectrum, before the licence expires...*<sup>14</sup>

24. The FCC is currently considering the status of I Block spectrum and, if it concludes that this spectrum can be paired with spectrum in the 1675-1680 MHz frequency range, then a 3GPP standard could be finalized for the I Block which, in turn, may serve as the catalyst for the development of a compatible equipment ecosystem. While it is conceivable that all of these developments could occur within a ten year time frame, a more reasonable time frame, using the experience with G Block spectrum as a guide, would likely be in the range of 15 to 20 years. On this basis, Shaw would support a 20-year term for the I Block licences.

***E. ISED invites comments on the proposal to apply deployment levels at the Tier 4 population coverage level, within eight years of the new licence term, as described above and provided in annex C, to the AWS-1 and G Block licences issued through the renewal process.***

***F. ISED invites comments on whether or not the proposed Tier 4 deployment option should apply to I Block licences issued through the renewal process.***

***G. ISED invites other proposals for deployment requirements for the AWS-1, G Block and I Block licences issued through the renewal process.***

25. A wide range of views were provided by interested parties on the Department's two deployment options for AWS-1, G Block and I Block spectrum. Rogers and Bell took the position that the Department did not establish expanded deployment requirements when it renewed the spectrum licences for other commercial mobile spectrum and, therefore, it would be "unusual" for it to do so in relation to the licences that are under consideration in this proceeding.<sup>15</sup> Rogers noted that the Department considered this issue when it renewed the licences for cellular and PCS spectrum and decided not to establish further deployment requirements because, among other things, it could create "investment uncertainty".<sup>16</sup>

26. Other parties, including Shaw, Quebecor, SaskTel, Eastlink, EcoTel and Telus, generally supported the Department's proposal to establish expanded deployment requirements for renewed AWS-1, G Block and I Block licences, but differing views were presented by these parties on the degree to which the deployment requirements should be expanded.

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<sup>14</sup> Eastlink Comments, SLPB-002-17, 25 July 2017, para. 24.

<sup>15</sup> Bell Mobility Comments, SLPB-002-17, 25 July 2017, para. 10.

<sup>16</sup> *Renewal Process for Cellular and Personal Communications Services (PCS) Spectrum Licences*, March 2011, p. 6, available online at: [https://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/dgso-002-11-pcs-e.pdf/\\$FILE/dgso-002-11-pcs-e.pdf](https://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/dgso-002-11-pcs-e.pdf/$FILE/dgso-002-11-pcs-e.pdf)

27. For example, each of Shaw, Quebecor, Xplornet and Eastlink supported the Department's "Option 1" proposal, set out at paragraph 30 of the Consultation Document, which would apply the Tier 3 deployment requirements that currently apply to AWS-3 spectrum licences to AWS-1 and G Block licences.<sup>17</sup> Several reasons were given by these parties in support of this option, including the fact that the propagation characteristics of this spectrum make it ill-suited for deployments in low density population areas, as well as the fact that it could force licensees to deploy spectrum in an uneconomic or inefficient fashion, or invest in networks that are less advanced than might otherwise be the case.
28. Shaw further pointed out that this latter issue is particularly problematic for new entrants that do not have sufficient low-band spectrum to facilitate deployments in less urban areas because it would require these licensees to exclusively deploy higher band spectrum to the Tier 4 level. As noted above, this is not a spectrally efficient network deployment model. In fact, in a previous submission to the Department on the Licensing Framework for AWS Spectrum, Bell made this very point:

*...artificial micromanagement, such as implementation requirements, imposed on licensees who acquire spectrum through an open auction, can force licensees to make unnecessary and inefficient technological and capex investments simply to meet an interim implementation date.*<sup>18</sup>

29. By contrast, SaskTel and Telus generally supported the Department's "Option 2" proposal, which would apply expanded deployment requirements at the Tier 4 level; however, even these parties did not support the Option 2 approach in all instances. For example, Telus argued that Tier 4 deployment requirements should not be applied to G Block spectrum until 15 years after the new licence term, while SaskTel argued that these requirements should not be imposed on AWS-1 and G Block licensees in certain Tier 4 areas because of the low population densities associated with areas. As noted by SaskTel:

*SaskTel does not believe the mandatory deployment of every AWS-1 and PCS G spectrum block in these rural areas is required to provide good quality wireless broadband service to these rural residents. This is far more RF bandwidth than would be necessary to serve the residents in these sparsely populated areas, and would simply be a wasted investment.*<sup>19</sup>

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<sup>17</sup> *Technical, Policy and Licensing Framework for Advanced Wireless Services in the Bands 1755-1780 MHz and 2155-2180 MHz (AWS-3)*, SLPB-007-14, 18 December 2014.

<sup>18</sup> Comments of Bell Mobility, DGTP-002-07, 25 May 2007, available online at: [https://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapi/dgtp-002-07-Bell-QA.pdf/\\$FILE/dgtp-002-07-Bell-QA.pdf](https://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapi/dgtp-002-07-Bell-QA.pdf/$FILE/dgtp-002-07-Bell-QA.pdf)

<sup>19</sup> SaskTel Comments, SLPB-002-17, 25 July 2017, para. 38.

30. As noted above, both Rogers and Bell opposed the Department's proposal to establish expanded deployment requirements for renewed AWS-1 and G Block licences, but Rogers argued that if the Department decided to do so, it should adopt the "Option 1" approach because it would "harmonize deployment requirements at the same coverage percentages and tier level as the recently auctioned AWS-3 spectrum, which possesses the same propagation characteristics as AWS-1".<sup>20</sup> In addition, the Option 1 approach would "minimize interference risks to established networks that coordinating mid-band mobile spectrum on a Tier 4 level could bring."<sup>21</sup> Although Bell did not favour imposition of new or expanded deployment requirements for any licences issued through the renewal process, it argued that, if the Department chose to do so, the new requirements should not apply to G Block spectrum licences because the ecosystem is not mature and "deployment has not progressed as quickly."<sup>22</sup>
31. Having reviewed the submissions of interested parties on the issue of expanded deployment requirements for AWS-1 and G Block spectrum, Shaw maintains that the Department's Option 1 deployment proposal is more appropriate in the circumstances than the Option 2 proposal. This Option received the greatest amount of support from interested parties in this proceeding and, in fact, even those parties that endorsed the Department's Option 2 deployment proposal were required to qualify their support for that proposal because it is simply not feasible in all circumstances.
32. The Department's Option 1 proposal also makes the most sense for new competitors in the market who are still building out their networks and, therefore, do not have an existing network of cell towers and antenna sites which can be easily upgraded to accommodate new spectrum bands and equipment. As noted by Shaw in its initial comments in this proceeding, spectrum deployment for new competitors poses a completely different set of challenges than it does for the incumbents who can leverage their existing network infrastructure and network sharing arrangements as a means of meeting highly granular deployment requirements, such as those established at the Tier 4 serving area level.<sup>23</sup>
33. With respect to I Block Licences, given the uncertainty surrounding the equipment ecosystem for this spectrum, Shaw maintains that a deployment "requirement" is not appropriate for these licences. Indeed, as noted by Rogers, "it does not make sense to move forward with a more aggressive deployment option" for this spectrum.<sup>24</sup> Shaw therefore agrees with Rogers and

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<sup>20</sup> Rogers Comments, SLPB-002-17, 25 July 2017, para. 29.

<sup>21</sup> *Ibid*, para. 31.

<sup>22</sup> Bell Comments, SPPB-002-17, 25 July 2017, para. 11.

<sup>23</sup> Shaw Comments, SLPB-002-17, 25 July 2017, para. 56.

<sup>24</sup> Rogers Comments, SLPB-002-17, 25 July 2017, para. 34.

Eastlink that it would be more appropriate to maintain the current deployment “targets” for these licences.<sup>25</sup>

**H. ISED invites comments on the proposed conditions of licence for the AWS-1, G Block and I Block licences issued through the renewal process as set out in annex A.**

34. Shaw has reviewed the submissions of other interested parties on the licence conditions that were proposed in Annex A of the Consultation Document and notes that virtually all parties, including Shaw, were unanimous in their opposition to the R&D condition of licence. Although it is well-intentioned, this condition does not serve to promote innovation and may indeed stifle innovation in some circumstances.
35. As noted in its initial comments in this proceeding, Shaw is extremely supportive of innovation and investment in advanced telecommunications networks. However, the challenges associated with meeting the legal and technical eligibility requirements associated with the R&D condition of licence are significant, particularly for new competitors such as Shaw that are directing all of their investments at the present time into the build out of their networks.
36. While an R&D condition of licence might be well-suited for wireless carriers that have a mature business and/or a solid base of wireless subscriber revenues, new entrants are not yet at this stage in their development and do not have the luxury of engaging in novel R&D programs. At the present time, all of the efforts of new entrants are being directed toward network expansion and service roll-out initiatives.
37. Added to this challenge is the fact that there is a large administrative burden associated with the gathering, auditing and generating of R&D reports which is of no direct benefit to the licensees that are subject to the R&D condition of licence. As noted by other parties in this proceeding, such as the CWTA and Bell, the legal and technical eligibility requirements associated with the R&D condition of licence are highly specific and narrowly defined. Consequently, only certain projects meet the requirements which makes the exercise of planning, tracking, documenting and reporting on these extremely time consuming and costly.
38. Furthermore, and perhaps more importantly, the R&D condition of licence is unnecessary. In 2009, the Department found that most if not all of Canadian telecommunication companies are exceeding the 2% requirement for R&D spending and that many R&D projects are carried out by telecommunications equipment manufacturers working in collaboration with service providers.<sup>26</sup>

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<sup>25</sup> See Eastlink Comments, SLPB-002-17, 25 July 2017, para. 32 and Rogers Comments, SLPB-002-17, 25 July 2017, para. 34.

<sup>26</sup> Consultation on Revisions to the Framework for Spectrum Auctions in Canada, DGRB-001-09, p. 9.

This data suggests strongly that it is no longer necessary to impose an R&D requirement on licence holders because market forces are driving R&D spending in any event.

39. The R&D condition of licence is also fundamentally inconsistent with Shaw's approach of pursuing innovations through partnerships and investing in a world-leading converged network that will provide choice in the marketplace. In its current form, the R&D condition of licence distorts the marketplace and the investment decisions of licensees, which should be driven by the connectivity needs and wants of Canadian consumers and businesses. In fact, the Department itself has noted that both the OECD and the Telecom Policy Review Panel have "cautioned against the mix of regulation and industrial development strategy"<sup>27</sup> which is currently reflected in the R&D condition of licence because it is not transparent and interferes with market-based investment decisions.
40. Accordingly, if the Department is truly interested in promoting competition, innovation and choice that will drive investments in world-leading telecommunications networks, it should remove the R&D condition of licence from AWS-1, G Block and I Block licences as well as all other commercial mobile spectrum licences.
41. With respect to the other conditions of licence set out in Annex A of the Consultation Document, Shaw notes that several parties, including Quebecor, Eastlink, Bell, Rogers, Telus and SaskTel recommended that the Department streamline the reporting requirements for licensees by reducing the frequency of these reports or submitting reports to the Department only on request.
42. Shaw supports these recommendations and urges the Department to take them into consideration when rendering a determination on the conditions of licence that should be applied to AWS-1, G Block and I Block spectrum licences that are issued through the renewal process.
43. With respect to the Department's proposed licence condition 10 which reflects the Tier 4 deployment requirements set out in Annex C of the Consultation Document, Shaw does not support this proposal for the reasons set out above as well as in its initial comments in this proceeding. Shaw notes that the majority of parties in this proceeding do not support this proposal either.
44. Finally, Shaw notes that two parties, Bell and Telus, have argued that the condition of licence pertaining to mandatory roaming should be removed, or at a minimum, revisited in light of the CRTC's decision to regulate the GSM-based wholesale roaming services of Bell, Rogers and

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<sup>27</sup> *Ibid*, p. 10.

Telus. Among the reasons given by Bell and Telus for the removal or revisiting of this licence condition is that it is “redundant” and allegedly introduces “unnecessary regulatory uncertainty”.<sup>28</sup>

45. Shaw respectfully disagrees with these parties for the following reasons. First, the rules established by the Department for mandatory roaming apply to all holders of commercial mobile spectrum licences, not just those that provide GSM-based roaming services pursuant to the regime established by the CRTC. Second, the scope of the Department’s mandatory roaming requirements is not limited to the GSM-based roaming arrangements that have been mandated by the CRTC. They apply to all roaming arrangements that may employ other standards or technologies. Third, there is no inconsistency between the rules for mandated GSM-based roaming that were established by the CRTC and the rules established by the Department for mandated roaming. As already noted, the CRTC has mandated only one type of roaming service, namely the wholesale GSM-based roaming services of the incumbents. It is evident, therefore, that when parties offer and/or subscribe to these services, they are subject to the regulatory regime that was established by the CRTC for these services. However, all other roaming arrangements remain subject to the Department’s rules and regulatory framework for mandatory roaming.

### **III. Conclusion**

46. As indicated in its submissions in this proceeding, Shaw believes that there are a number of important factors that should be taken into account when considering the renewal of AWS-1, G Block and I Block licences, including the state of the market, the ongoing need to promote sustainable competition, as well as the imperative to deploy networks efficiently and in accordance with the dynamics of the marketplace. These factors are essential to ensuring a high quality, enhanced consumer experience and are key requirements in meeting the needs of the evolving digital economy.
47. In these circumstances, it would be inappropriate for the Department to establish rules for the renewal of these spectrum licences that are focussed solely on the needs and capabilities of the wireless incumbents. The Department must consider the particular circumstances of all holders of AWS-1, G Block and I Block licences when determining eligibility for licence renewal and not just those of the incumbents.
48. The Department should also ensure that it does not establish deployment requirements that distort network efficiencies and investments or degrade the consumer experience. Critically, in making its determinations in this Consultation, the Department must ensure that it does not

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<sup>28</sup> See Bell Comments, SLPB-002-17, paras. 20-26 and Telus Comments, SLPB-002-17, paras. 46-47.

compromise choice or competition, either in urban or more remote areas. For these reasons, as well as those set out in its initial comments in this proceeding, Show reiterates its view that, when renewing the licences for AWS-1 and G Block spectrum, the most suitable spectrum deployment obligation is that which is contemplated under the Department's Option 1 proposal.