

SaskTel Reply Comments:

Gazette Notice SLPB-004-14

Consultation on the Technical, Policy
and Licensing Framework for Advanced
Wireless Services in the Bands
1755-1780 MHz and 2155-2180 MHz
(AWS-3)

October 2, 2014

EXECUTIVE SUMMARY

1. The following represents a summary of SaskTel's Reply Comments in response to SLPB-004-14, *Consultation on the Technical, Policy and Licensing Framework for Advanced Wireless Services in the Bands 1755-1780 MHz and 2155-2180 MHz (AWS-3)*.
2. SaskTel continues to recommend to Industry Canada that Tier 2 service areas be used for AWS-3 licensing. For mobile services, Tier 2 will allow for the most efficient and effective mobile network deployment, and therefore ensure the spectrum is most fully utilized to the benefit of Canadians in both urban and rural areas. The use of smaller service areas will run the increased risk of fragmentation of spectrum holders, and incomplete network deployments.
3. Globalive and SaskTel have both stated that HSPA and LTE technologies provide the means to mitigate interference between cell sites, now allowing for a service area boundary to cross an urban area. SaskTel fully supports the Globalive request to modify the Tier 2 boundary in the Ottawa-Outaouais region to follow provincial borders, and in a similar manner SaskTel again requests that the Tier 2 boundary in the Lloydminster region follow the provincial border.
4. Many respondents indicated in their comments that the deployment requirements were too lax, in particular the Tier 3-based 10-year requirements. Some respondents proposed more rigorous requirements, and in one case SaskTel believes the new proposed requirement is actually too onerous on service providers. SaskTel has proposed what we believe are the best balanced deployment requirements that are achievable, provide for the most effective utilization of the spectrum to the benefit of urban and rural Canadians, and are not too costly and onerous.
5. Upon review of the comments submitted, SaskTel continues to support the Department's proposed eligibility requirements for the set-aside spectrum that restrict bidding only to new entrants with operating networks in the licence area. This will reduce or eliminate spectrum speculation and hoarding, and prevent the spectrum from laying fallow.

6. Furthermore, a considerable amount of spectrum is being allowed to lay fallow in Saskatchewan, both by new entrants and facilities-based carriers who have chosen not to build network infrastructure. These operators have no plans to deploy, nor will they ever deploy their spectrum in the foreseeable future. SaskTel therefore recommends that Industry Canada expand their proposed eligibility requirement to restrict bidding only to service providers operating a network in the licence area to cover not only set-aside spectrum, but also to unrestricted non-set-aside spectrum blocks. Application of this policy to both new entrants and large wireless service providers will ensure the effective utilization of this spectrum and prevent further spectrum speculation and hoarding.
7. SaskTel strongly urges the Department to clarify its plans for the set-aside spectrum in areas of the country where it is recognized that there is not and perhaps never will be a business case for new entrants to deploy infrastructure. With roaming rates as they are, the high costs of deploying duplicate network simply do not make business sense in these areas, and any set-aside spectrum will remain fallow for decades. SaskTel continues to urge the Department to provide new entrants the first chance to bid on the set-aside spectrum, and then immediately allow open bidding on any unassigned set-aside spectrum, if not in the same auction process then in a follow-up auction process immediately following the initial AWS-3 auction.
8. A public consultation on the future plans for the unassigned set-aside spectrum is essential to the industry to clarify the plans, and to allow proper valuation of the AWS-3 spectrum blocks.
9. SaskTel continues to urge Industry Canada to re-examine its spectrum policy to allow the most effective and efficient use of spectrum for consumers, especially in rural areas. We would suggest to Industry Canada that it would be in the best interest of consumers if this auction and the final formulation of the rules be delayed until after the final CRTC rules for roaming are determined, which is expected by the end of 2014, so it will not excessively delay allocation of the spectrum. It is our belief that, given the high probability of substantially reduced roaming rates for new entrants, the onus will be placed on existing facilities-based carriers to carry all traffic from all companies, especially in low-population density areas. By having a better idea of traffic demands on their networks, potential bidders will better be able to determine

the value of the AWS-3 spectrum and this would make the auction allocate the spectrum more efficiently.

10. Given the tremendous changes in the regulatory field, SaskTel believes that the AWS-3 auction should be delayed in order for all participants to assess their individual business and investment strategies subsequent to the conclusion of the roaming proceeding. SaskTel believes this spectrum is too valuable to be rushed into the marketplace. To ensure the spectrum is assigned and utilized effectively, efficiently, and in the public interest, the rules for roaming must be definitively established. SaskTel fears that this rushed process will not result in an auction outcome that is in the best interests of the industry and the public.

INTRODUCTION

11. The following represent Saskatchewan Telecommunications' (SaskTel's) Reply Comments in response to public comments submitted regarding Gazette Notice SLPB-004-014, *Consultation on the Technical, Policy and Licensing Framework for Advanced Wireless Services in the Bands 1755-1780 MHz and 2155-2180 MHz (AWS-3)*.
12. The section numbering of the remainder of this document corresponds to the numbering of the consultation paper released by the Department. Failure to address any particular issue or item, or the Comments made by any other party, should not be construed as agreement with those Comments where such agreement is not in the interests of SaskTel.

SASKTEL RESPONSE TO THE CONSULTATION

Part A – Band Plan

7. Band Plan and Tier Sizes

A2 - Industry Canada is seeking comments on its proposal to use Tier 2 licence areas for both the 15 + 15 MHz and 10 + 10 MHz blocks.

13. ABC Communications has proposed the use of Tier 4 service areas for this band.¹ Bell Mobility² and Xplornet³ have both proposed the use of Tier 3 licence areas. SaskTel disagrees with the use of Tier 3 and 4 service areas for mobile spectrum. In particular with the proposed sealed-bid auction format, there is a very high risk of fragmentation in a region with different operators winning the spectrum in neighbouring service areas. There is no opportunity in a single round sealed bid auction format for bidders to respond to fragmentation by attempting to win adjacent spectrum blocks with additional higher bids. With the small size of the Tier 4 service areas, there will be great potential for interference between service operators deploying mobile systems. Issues with interference have already been seen with Fixed Wireless Access (FWA) systems licensed using Tier 4 service areas.

¹ ABC Communications comments on SLPB-004-14, paragraphs 12, 13

² Bell Mobility comments, paragraph 19

³ Xplornet comments paragraphs 13-19

14. SaskTel still recommends Tier 2 service areas be utilized for the AWS-3 spectrum, as proposed by Industry Canada. Smaller tier service areas are not manageable and not conducive to mobile services such as LTE, and therefore would not allow an effective and efficient deployment of AWS-3 mobile services. Using Tier 3 and smaller service areas will likely create fragmentation of licence holders, and result in rural areas not being properly deployed. Tier 2 service areas provide the best likelihood of the AWS-3 spectrum being fully deployed to the benefit of both urban and rural population.

Tier 2 Service Area Boundaries

15. In their comments Globalive Wireless (d.b.a WIND Mobile) proposed that the Tier 2 boundary between 2-06 Eastern Ontario & Outaouais and 2-05 Southern Quebec be modified to follow the provincial border.⁴ WIND Mobile proposes that the Outaouais region of Quebec be included in Tier 2-05 Southern Quebec. WIND Mobile states that the original technical rationale for deviation from provincial borders no longer applies with current state wireless technology. Current LTE and WCDMA technology provide mechanisms such as scrambling codes and cell identity codes that, when properly planned and coordinated with neighbouring operators, can provide effective interference mitigation.

16. SaskTel is well aware of the RF design and interference mitigation tools that are provided in the LTE and WCDMA technologies, and fully supports the proposal by WIND Mobile to modify the Tier 2 boundary between areas 2-05 Southern Quebec and 2-06 Eastern Ontario to follow the provincial border, and include the Outaouais region of Quebec into the Tier 2-05 Southern Quebec service area.

17. SaskTel has previously commented to Industry Canada that the same technical advancements in LTE and WCDMA technologies referenced by WIND Mobile make deviations in licence service area boundaries in urban areas away from provincial borders unnecessary. Following provincial boundaries will generally align with communities of interest, and result in more efficient utilization of spectrum, in particular by regional operators, and enable additional facilities-based carriers to provide service to the community.

⁴ Comments of WIND Mobile, paragraphs 6-11

18. SaskTel again strongly urges the Department to end the deviation from provincial borders for spectrum licences around the City of Lloydminster, including the AWS-3 spectrum. SaskTel urges Industry Canada to follow provincial boundaries for the Tiers in the AWS-3 band, in alignment with the boundary used in the 700 MHz spectrum auction, allowing Saskatchewan people to continue to be served in Saskatchewan.

8. Licensing Process and Pro-competitive Measures

A4 – Industry Canada is seeking comments on the proposed eligibility criteria to bid on set-aside spectrum licenses.

19. SaskTel notes the comments made by Niagara Networks, and their proposal to “slightly expand” the proposed definition for a qualified new entrant bidder.⁵

20. The comments made by Niagara Networks imply that their one simple proposed change will completely solve every problem and challenge the government faces in reaching their goal of a fourth facilities-based carrier in every region, and create the nirvana of a wireless industry in Canada that is fully competitive with no further need for regulation.⁶ The truth of the matter is that the change being proposed by Niagara Networks will create the opportunity for spectrum speculators to acquire the AWS-3 set-aside spectrum, at a potentially low cost below market value, and then sit on the spectrum in the hope that perhaps another new entrant may choose to utilize the spectrum.

21. The current extent of deployments clearly shows that there are many areas of the country with population densities that are too low to support more than one facilities-based carrier and additional “capacity” spectrum more suitable to more urban areas will not change that economic reality. In these areas it is simply not economical for new entrants to deploy networks, nor will it ever become economical in some areas where low roaming rates and high infrastructure costs make network deployment by a new entrant impractical.

⁵ Niagara Networks comments, pages 7-10

⁶ Niagara Networks comments, pages 9-10

22. Providers with licenses for the AWS-3 spectrum without networks are unlikely to change their decisions about network build out based on access to this spectrum. SaskTel opposes spectrum needlessly lying fallow, and if spectrum speculation is allowed for the AWS-3 set-aside spectrum it will almost guarantee the spectrum will remain fallow, possibly for decades. This is a real threat: for example, in Saskatchewan the licenses won by new entrants Shaw Communications and Globalive in the AWS auction in 2008 are still not being utilized.
23. SaskTel disagrees with the eligibility definition proposed by Niagara Networks, and supports the eligibility criteria proposed by Industry Canada.
24. Furthermore, a considerable amount of spectrum is currently unused in Saskatchewan as a result of lax deployment requirements. One facilities-based carrier is currently sitting on a large amount of spectrum in many areas of Saskatchewan where they have declined to build network infrastructure. Other wireless service providers are offering service in Saskatchewan and who do not operate a network but continue to hoard spectrum with no plans to deploy a network in Saskatchewan. Given Industry Canada's stated desire to revoke licenses for non-deployment, there is no policy reason to allow spectrum hoarders that do not have a network in Saskatchewan to bid on the Saskatchewan licenses (including both the set-aside and non-set-aside blocks) and hoard yet more spectrum.
25. Therefore SaskTel continues to recommend that Industry Canada expand their proposed eligibility criteria that restricts bidding only to service providers operating a network in the license area to be applied to both the set-aside and the non-set-aside AWS-3 spectrum blocks. By expanding the requirement to all AWS-3 spectrum, the problem of spectrum hoarding by operators without networks in the license area can be eliminated.
26. SaskTel also notes the proposal in the comments from the Public Interest Advocacy Centre (PIAC) to disaggregate the G, H, & I blocks into three 5+5 MHz blocks. One option suggested for the three blocks would be to allow bidding on one of the three blocks by the large regional service providers.⁷ SaskTel agrees with this proposal.

⁷ Public Interest Advocacy Centre (PIAC) comments, paragraphs 72-73

Splitting up the set-aside spectrum would allow for more flexibility and therefore more viable competition from new entrants. Allowing for the regional service providers to bid on one of these blocks would also allow for more competition against the Large Wireless Service Providers (LWSP) in the region.

27. SaskTel also notes the proposal by the PIAC “to amend the proposed definition of LWSP such that large regional service providers which are not national in scope are no longer captured by the definition and thus eligible to bid on the AWS-3 set-aside.”⁸ SaskTel agrees with this proposal as the definition would then effectively become the same definition of LWSP as was used in the original AWS spectrum auction.

Part B – Licensing Framework

9. Conditions of Licence

B3 – Industry Canada is seeking comments on the proposed deployment condition of license as stated [in the consultation].

28. SaskTel notes the comments of McNally, Taylor and Middleton regarding the rather weak deployment requirements proposed in the consultation. Specifically, the respondents proposed the option of strengthening the 10-year Tier 3 rollout requirements,⁹ in agreement with SaskTel’s proposal in our comments of increasing the 10-year Tier 3 population deployment requirements.
29. The Public Interest Advocacy Centre (PIAC) also commented that the 10-year deployment requirements were too low, and should be increased to ensure the spectrum is effectively deployed “for the benefit of all Canadians, not just those living in more populated areas.”¹⁰
30. In their comments Xplornet also stated that the Tier 3 based deployment requirements were too low. Xplornet goes on to submit that Industry Canada should “significantly increase the second deployment requirements at the 7 year mark to 90% or more.”¹¹ While SaskTel agrees that the long term deployment requirements need

⁸ PIAC Comments, paragraph 73

⁹ Consultation comments from McNally, Taylor, and Middleton, paragraph 6.

¹⁰ PIAC comments, paragraph 82

¹¹ Xplornet comments paragraph 44

to be increased, a requirement to serve 90% of the population is too high, and would be too onerous for any service provider using high frequency AWS-3 spectrum. The 90% requirement might be more appropriate for low band spectrum e.g. 700 or 850 MHz, but it would be simply far too expensive to deploy network over a region using high frequency AWS spectrum to cover 90% of the population.

31. SaskTel has provided sample requirements for the Saskatchewan Tier 3 licences that would require every major centre with population over 10,000 in the province to be served within 10 years¹². Considering the exponentially increasing demand for broadband data in both urban and rural areas, SaskTel does not feel that deploying the AWS-3 spectrum to the nine major centres in Saskatchewan over a 10 year time frame is overly onerous.
32. SaskTel still recommends the proposed 10-year Tier 3 deployment requirements as provided in our consultation comments, with the expectation that similar deployment requirements would be developed by the Department for the rest of the country to ensure every major centre with population over 10,000 within each Tier 3 service area is covered after 10 years.
33. Regardless of what option is chosen or what decision is made by the Department, SaskTel reiterates that the 10-year Tier 3 deployment requirements are too weak and need to be increased to ensure effective utilization of the AWS-3 spectrum, and that it does not become fallow outside of the large metropolitan cities.

Part C – Auction Process and Rules

10. Auction Format and Timing

Auction Timing

34. In their comments Bell Mobility Inc.¹³ has proposed postponing the non-set-aside portion of the AWS-3 auction by 1 to 2 years. TELUS¹⁴ has proposed that the AWS-3 restricted and unrestricted blocks be auctioned separately, with the proposed timeframe of late 2015 for the unrestricted spectrum.

¹² Consultation comments from SaskTel, paragraphs 58-59

¹³ Bell Mobility Inc. comments, paragraph 14

¹⁴ TELUS comments, paragraphs 73, 74

35. Regional operator TBayTel believes “*that this auction should be delayed until 2016. This will allow small regional carriers like Tbaytel to assess our individual business and investment strategies.*”¹⁵ Another regional operator, Eastlink¹⁶ in their comments stressed the importance of wholesale roaming rates and tower sharing to help bring competitive services to new markets, and expressed optimism that the ongoing CRTC review of rates and terms for wholesale roaming will ensure they can compete sustainably.
36. Given the tremendous changes in the regulatory field, SaskTel still believes that the entire AWS-3 auction should be delayed in order for all participants to assess their individual business and investment strategies subsequent to the conclusion of the roaming proceeding. SaskTel believes this spectrum is too valuable to be rushed into the marketplace. To ensure the spectrum is assigned and utilized effectively, efficiently, and in the public interest, the rules for roaming must be definitively established. SaskTel fears that this rushed process will not result in an auction outcome that is in the best interests of the industry and the public.
37. Should Industry Canada decide not to postpone the entire AWS-3 auction, then as an alternative SaskTel would support the proposal from Bell Mobility to postpone the non-set-aside portion of the AWS-3 auction by 1 to 2 years. This would allow for meeting the Department’s objective of rushing the set-aside spectrum into the hands of the new entrants prior to the 2500 MHz auction, while still allowing the incumbents the opportunity to properly assess multiple and conflicting changes that are and will occur in the Canadian wireless regulatory field, and therefore allow a proper valuation of the AWS-3 non-set-aside spectrum blocks.

C1 – Industry Canada is seeking comments on the proposal to use the sealed-bid auction format for the AWS-3 auction.

38. In their comments Rogers Communications disagreed with the Department’s proposal to use a sealed-bid auction format for the AWS-3 auction, citing aggregation risks and lack of price discovery¹⁷. There would also be no flexibility to bid on different sets of

¹⁵ Tbaytel comments, paragraphs 30, 31

¹⁶ Eastlink comments, paragraph 8

¹⁷ Rogers Communications comments, paragraphs 44-47

licences in response to demand from other bidders. Rogers Communications has proposed the use of a Simultaneous Multiple Round Auction (SMRA) auction format.¹⁸

39. TELUS also opposed the use of a sealed-bid auction format for the auction of unrestricted spectrum¹⁹, but did not oppose the sealed-bid format for the auction of the restricted spectrum blocks.²⁰ TELUS proposes a Combinatorial Clock Auction (CCA) format for the unrestricted auction.
40. SaskTel has concerns that the use of either the SMRA or CCA auction formats for an auction with a very small number of spectrum blocks in each licence area will allow the large wireless service providers to use their large financial strength to foreclose smaller bidders, effectively completely shutting out the much smaller regional players. SaskTel believes that the sealed-bid auction format is suitable for a small number of blocks being auctioned per licence area. The sealed-bid format along with the use of the second price rule will allow bidders to truly express the value of the spectrum, and prevent as much as possible the large industry players from deliberately shutting out smaller players.

14. Post-Auction Licensing Process for Unassigned Licences

41. TELUS in their comments proposes that the AWS-3 auction be conducted in two separate phases, with the restricted spectrum blocks being auctioned in March, 2015.²¹ Furthermore, TELUS proposes that the unrestricted spectrum auction be “held in the late 2015 timeframe”, and that it “include all restricted spectrum licences not acquired as part of the March 2015 restricted spectrum sealed bid auction.”²²
42. SaskTel agrees with this proposal to have two separate auction processes, with the second process held immediately or shortly after the initial restricted sealed-bid format AWS-3 spectrum auction.

¹⁸ Ibid., paragraphs 49-50

¹⁹ TELUS comments, paragraphs 73-74

²⁰ Ibid., paragraphs 71-72

²¹ TELUS comments, paragraph 72

²² Ibid., paragraph 74

43. In our comments, SaskTel stated that *“it is imperative that a public consultation be conducted at some point regarding the disposition of these unassigned licences.”*²³

44. SaskTel notes that the Public Interest Advocacy Centre (PIAC) commented that:

*“Thus, PIAC requests that the Department clearly commit itself to publicly consulting on what to do about unsubscribed spectrum.”*²⁴

45. SaskTel strongly urges the Department to clearly state their plans for the unassigned spectrum licences prior to the application date for the initial AWS-3 spectrum auction in order for proper valuation of the spectrum licences by the auction participants.

CONCLUSION

46. SaskTel has reviewed the public comments submitted in response to Gazette Notice SLPB-004-014, *Consultation on the Technical, Policy and Licensing Framework for Advanced Wireless Services in the Bands 1755-1780 MHz and 2155-2180 MHz (AWS-3)*, and has chosen to provide reply comments and clarify SaskTel's position on some issues raised in the comments.

47. Reply comments have been presented that:

- again urges the Department to utilize Tier 2 service boundaries for the AWS-3 auction. This allows for the most efficient and effective utilization of the spectrum for mobile services.
- reinforces the comments made by Globalive that current wireless technologies standards such as HSPA and LTE do provide sufficient measures for interference mitigation that would allow a service area boundary to cross an urban region. This supports requests from both Globalive to modify the Tier 2 boundary to follow provincial borders in the Ottawa-Outaouais region, and from SaskTel to modify the Tier 2 boundary in the Lloydminster area to also follow the provincial border.

²³ SaskTel Comments, paragraph 72

²⁴ PIAC Comments, paragraph 105

- supports the Department's proposed set-aside eligibility criteria restricting bidding only to those entities with operating networks in the licence area, recognizing the fact that there are areas in the country with low population densities, that due to the current Canadian wireless industry climate new entrants have not and likely never will deploy costly network infrastructure. The current proposal as worded will reduce or eliminate spectrum speculation and more importantly prevent the spectrum from needlessly laying fallow for years or decades.
- SaskTel joins other respondents in stating that the Tier 3-based 10-year deployment requirements are too lax. A variety of different proposals for increased deployment requirements were presented, but SaskTel still believes our proposed Tier 3-based 10-year deployment requirements provide the best balance of effective spectrum utilization to the benefit of urban and rural residents, versus cost burdens on the wireless service provider.
- SaskTel reiterates that the sealed-bid auction format is best suited for the small number of spectrum blocks being auctioned per service area, and would help prevent large service providers from deliberately shutting out smaller players such as regional service providers.
- SaskTel again stresses the importance of a public consultation, and the clarification of the Department's plans regarding the unassigned set-aside spectrum blocks prior to the initial auction. The future plans for the unassigned set-aside spectrum blocks is a critical factor in the valuation of all of the AWS-3 spectrum blocks, both set-aside and non-set-aside, and bidders need to be fully informed prior to the commencement of the auction.

48. While SaskTel believes that the current set-aside proposals for the AWS-3 will exacerbate the spectrum issues being experienced by facilities-based carriers in Saskatchewan, we would ask that as a minimum Industry Canada considers re-auctioning the unassigned set-aside spectrum as quickly as possible in those areas where New Entrants have not deployed infrastructure or no New Entrants bid for the set-aside. It is SaskTel's opinion that the most efficient allocation of spectrum would

be achieved if the auction for the set-aside were conducted first and immediately after it, the auction for the non-set-aside and any unclaimed set-aside spectrum were held.

49. A considerable amount of spectrum is being allowed to lie unused in Saskatchewan as a result of lax deployment requirements. One facilities-based provider currently sits on all of their spectrum in many areas of Saskatchewan since they have declined to build network there. Furthermore, wireless service providers offering service in Saskatchewan and who do not operate a network are hoarding spectrum with no plans to deploy a network in Saskatchewan. Given Industry Canada's stated desire to revoke licenses for non-deployment, there is no policy reason to allow spectrum hoarders that do not have a network in Saskatchewan to bid on the Saskatchewan licenses (including both the set-aside and non-set-aside blocks) and hoard yet more spectrum.
50. Industry Canada used the Saskatchewan-Alberta provincial border as the dividing boundary in the Lloydminster area for the spectrum licences awarded in the recent 700 MHz auction. SaskTel asks that the same provincial border be used again as the boundary in the AWS-3 spectrum auction to align with the 700 MHz spectrum licences awarded in the last auction.
51. Finally, despite the demand to apply this spectrum to meet the needs of Canadians, SaskTel would question the overall timing of the auction itself. In a regulatory environment which is in such a state of flux, with questions regarding roaming, wholesale pricing and tower access all being revisited, it is not appropriate to have an auction at this time. This regulatory uncertainty does not allow either New Entrants or Incumbents to accurately assess their business strategies. Without a clearer view of the structure in which business is conducted spectrum may not be allocated efficiently or effectively for Canadians.
52. SaskTel thanks the Department for the opportunity to provide input into these crucial matters. It is our hope that our reply comments will assist in a fuller view of the requirements for this spectrum in all regions of Canada.