

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)

Reply Comments of
Rogers Communications
October 2, 2014



Executive Summary

- E1. Rogers welcomes the upcoming licensing of AWS-3 spectrum since this will be an important band for satisfying growth in demand for mobile broadband services in Canada. Rogers' customers rely very heavily on the LTE mobile broadband services that Rogers provides and Rogers therefore requires AWS-3 spectrum in order to satisfy this demand.
- E2. Rogers also requires AWS-3 spectrum to remain competitive with its primary competitors, Bell and TELUS, who have combined their spectrum assets in order to provide faster LTE speeds and greater capacity.
- E3. Rogers supports the proposed band plan since it will align the band with the general structure of the U.S. AWS-3 band plan and will maximize the economies of scale and equipment availability, simplify cross-border frequency coordination, and facilitate cross-border roaming. In the event that a set-aside will be used, Rogers supports the designation of the G, H and I blocks for the set-aside.
- E4. The combination of the Department's various licensing proposals with a single set-aside block, a sealed-bid, second-price auction structure will ensure that there will be limited competitive bidding in each geographic area for the set-aside spectrum. This means that the majority of valuable AWS-3 spectrum will likely be acquired for an amount far below the true market value of the spectrum. Instead, Rogers recommends that a simultaneous multiple round ascending (SMRA) format should be used with open bidding for all AWS-3 spectrum to the benefit of the Canadian taxpayers.

Introduction

1. Rogers Communications (Rogers) welcomes the opportunity to reply to the comments filed by other parties in response to Industry Canada's (the Department's) *Consultation on the Technical, Policy and Licensing Framework for Advanced Wireless Services in the Bands 1755-1780 MHz and 2155-2180 MHz (AWS-3)* (SLPB-004-14), July 2014 (the Consultation Paper).
2. Rogers stated its positions on all of the issues raised in the Consultation Paper in its comments of September 4, 2014. This reply is limited to comments on proposals made by other parties. Failure to address any specific issue raised by other parties should not be taken by the Department as Rogers' acquiescence with the position.

Band Plan

3. In our comments, Rogers supports aligning the AWS-3 band plan with the general structure of the U.S. band plan since this would ensure that Canadians will benefit from greater economies of scale and equipment availability, simplified cross-border frequency coordination and cross-border roaming. Rogers also supports the proposal to license AWS-3 spectrum using large blocks since this would enable higher throughput, capacity and network efficiencies.
4. The majority of parties, including the new entrants, support alignment with the U.S. band plan and the proposed positioning of the set-aside and open blocks in the band.
5. Bell and TELUS call on the Department to reverse the position of the set-aside blocks and the open block so that they will each have the opportunity to acquire AWS-3 spectrum that will be contiguous with their existing AWS-1 spectrum and they say that this will be a more efficient use of the spectrum.

6. The Department should reject this proposal. Bell's and TELUS' proposals are entirely self-serving and, if adopted, would result in successful bidders for set-aside spectrum having to wait for an ecosystem to develop for terminal devices that will operate across the entirety of the AWS-1 and AWS-3 bands. As the Department notes in the Consultation Paper, 3GPP Band Class 10 currently encompasses the G, H, and I blocks but not the J block. The Department has also noted that many countries have licensed AWS-1 spectrum, some have identified the G, H, and I blocks for mobile broadband services and no country other than the U.S. has initiated a licensing process for this spectrum. The designation of the G, H, and I blocks for new entrants would allow new entrants to benefit if a Band 10 ecosystem develops before the ecosystem that will eventually develop for terminal devices that will operate across the entirety of the AWS-1 and AWS-3 bands. If the J block is designated for new entrants, they may need to wait longer for an ecosystem to develop before they can use their AWS-3 spectrum. This delay would not be consistent with the Department's stated objective of providing more spectrum so that new entrants can increase their capacity and support the provision of next generation services, such as LTE.

7. Bell has also proposed that the open block be split into two small blocks rather than a single large block. TELUS also proposes that the open block be split into smaller blocks, although it further proposes that the open block be expanded. It is possible that Bell and TELUS intend to bid separately for the AWS-3 open blocks and to combine whatever spectrum that they are each able to acquire. Presumably, splitting the open block into two small blocks would allow them both to acquire AWS-3 spectrum in the same geographic area and, combined with their first proposal, would enable whichever party that holds the AWS-1 F block in a given area to acquire the contiguous AWS-3 G block, leaving the non-contiguous H block for the other company to acquire. As with their first proposal,

this proposal is transparently self-serving. The creation of smaller blocks would also be out of step with the Department's proposal for a single large block to enable faster mobile broadband speeds and the more efficient use of AWS-3 spectrum. Bell's and TELUS' proposals should therefore be rejected by the Department.

Tier Sizes

8. Rogers' comments highlighted the benefits of licensing AWS-3 spectrum using Tier 2 licence areas since the use of these relatively large areas is consistent with the fact that this spectrum will be used to implement wide area mobile services. The use of Tier 2 areas would result in the need for less coordination between licensees and would help to reduce the aggregation risk arising from the lack of package bidding, although Rogers continues to have serious concerns with the significant aggregation risks that will remain if the Department proceeds with its other proposals.
9. Most parties support the use of Tier 2 service areas for licensing AWS-3 spectrum for many of the same reasons that Rogers provides in its comments.
10. Xplornet and the Independent Telecommunications Providers Association complain that the proposed use of Tier 2 service areas is problematic since, in their view, the use of these relatively large areas will make it more difficult for these operators to acquire AWS-3 spectrum only in the geographic areas that they intend to serve. They contend that the use of larger areas that include major urban markets will make it prohibitively expensive for these operators to acquire spectrum in smaller markets since better capitalized bidders will place higher bids in order to acquire spectrum in major markets.
11. Bell argues that the set-aside block should be licensed using relatively small Tier 3 service areas since, in Bell's view, the use of Tier 3 areas would allow new

entrant bidders to bid for only those areas in which they intend to implement services. Those bidders that intend to serve urban markets could bid for Tier 3 licences that include urban markets, and those bidders that intend to serve small markets and rural areas could bid for Tier 3 licences that include only small markets and rural areas.

12. Rogers has no comment on whether the Department should license set-aside spectrum on the basis of Tier 3 areas. Rogers recognizes that the use of Tier 2 service areas will result in the licensing of geographic areas that include both major markets and smaller markets, including rural areas. However, as we explain in our comments, the use of relatively large Tier 2 areas for licensing commercial mobile spectrum is consistent with the fact that the spectrum will be used to implement wide area systems. Mobile services are generally not implemented on the basis of small and localized systems. If the small regional companies intend to implement small and localized wireless broadband services, then it may be more sensible for them to do so using spectrum that has been allocated for fixed wireless services and that is already licensed using relatively small service areas. The Department should therefore license the AWS-3 open block on the basis of Tier 2 service areas.

Set-Aside

13. In our comments, we explained that we support the use of open bidding for licensing of mobile spectrum so that those companies that value the spectrum the most will be able to bid for it and put it to its highest use. We also noted that the use of a set-aside combined with other of the Department's proposals will result in new entrants acquiring this valuable resource at a significant discount to its true market value.

14. TELUS also opposes the proposed set-aside. It argues that the spectrum restricted to new entrants should be reduced to a total of 20 MHz and that the Department should utilize a 10 MHz auction cap instead of a set-aside. TELUS' proposal is based on the fact that new entrants already have restricted access to a disproportionately high amount of mobile spectrum given their relatively low number of customers.
15. Rogers agrees with TELUS' assessment that the new entrants already have access to an adequate amount of restricted spectrum and that larger operators require additional spectrum to serve the significantly higher number of customers that rely on their networks and services.
16. TELUS notes that the use of a set-aside combined with other of the Department's proposals will result in new entrants successfully acquiring AWS-3 set-aside spectrum at a considerable discount given the limited bidding that is expected and the proposed low opening bids. Specifically, TELUS finds that, on average, successful set-aside bidders will enjoy a 70% discount compared to what they would pay if set-aside spectrum were subject to the existing annual spectrum licence fee of \$0.03512361. TELUS also notes that these same bidders would enjoy an 85% discount compared to what they would pay if the U.S. FCC AWS-3 reserve price is used. Rogers agrees with TELUS' assessment and we continue to recommend that the Department license all AWS-3 spectrum on the basis of an open bidding format.
17. SaskTel and TELUS propose that unsold set-aside spectrum should be subject to open bidding so that those bidders which are not eligible to bid for set-aside spectrum will have the opportunity to acquire unsold set-aside spectrum. Rogers supports this proposal since it would result in the efficient use of spectrum that would otherwise remain unused and would allow operators to provide consumers with faster mobile data speeds and higher quality services.

18. PIAC and Quebecor assert that the incumbent wireless operators' holdings are excessive and that this justifies the use of a set-aside. These claims are misleading. It is important to remember that the incumbents have 92% of wireless customers but only 85% of the available mobile spectrum. Incumbents require more spectrum than new entrants because they have many more customers and their customers are heavier users of capacity-hungry mobile broadband services compared to the new entrants' customers.
19. PIAC calls for the Department to split the set-aside into small blocks and to reserve one of the set-aside blocks for "public" use. Although PIAC does not clarify what it intends for the "public" use block, Rogers assumes that PIAC intends for this spectrum to be commonly available, either on a licence-exempt basis, or on the basis of proposed new "opportunistic" technology that is being considered in the U.S. for other bands, but has not yet been commercially deployed. In any event, Rogers urges the Department to reject PIAC's proposal. The AWS-3 band is a band that has been identified by the 3rd Generation Partnership Project (3GPP) industry standards development association as an IMT-2000 commercial mobile band. The band is therefore valuable spectrum that will be harmonized with the U.S. and that will be supported by a developed ecosystem enjoying significant economies of scale.
20. PIAC's proposal for a "public" use block would undermine these benefits and would be impractical since the "public" use block will require a technology and terminal solution that would be designed solely for use in the Canadian market. It is also not consistent with the Department's long-standing approach whereby valuable commercial mobile spectrum is assigned on the basis of spectrum licensing which ensures that operators have full control over discrete frequencies within a geographic area, minimizing interference with other operators in the same band. The licensing of commercial mobile spectrum on this basis will

ensure that Canadian consumers will continue to have access to high quality mobile services.

21. In addition, the licensing of commercial mobile spectrum on this basis has resulted in the orderly development of mobile communications that are of high quality, consistent with the objectives of Canadian telecommunications policy. In any event, the Department has identified other spectrum bands, such as the 5 GHz band, that are available on a licence-exempt basis and the use of these bands for “public” use purposes would be more appropriate.
22. The creation of smaller blocks would also be out of step with the Department’s proposal for a single large block to enable faster mobile broadband speeds and would result in a less efficient use of the spectrum resource. PIAC’s proposal should therefore be rejected by the Department.
23. TELUS asserts that it suffers from a “spectrum deficit” and requires additional mobile spectrum more than other large wireless service providers and it claims that Rogers is “over-provisioned” with spectrum. TELUS’ claims are misleading. As Rogers explains in its comments, TELUS and Bell have pooled their mobile spectrum holdings and formed a joint network. The ability of TELUS and Bell to combine their spectrum for LTE enables them to enjoy a potential ongoing mobile broadband speed advantage which Rogers will not be able to equal or surpass unless it can acquire additional spectrum capacity to facilitate faster speeds. This situation will be exacerbated if TELUS and/or Bell successfully acquire the AWS-3 open block and when TELUS and Bell successfully acquire additional spectrum in the upcoming 2500 MHz auction. Although Bell and Rogers will be prevented from bidding for additional 2500 MHz spectrum in geographic areas where they each already hold 40 MHz of this spectrum, TELUS will be free to bid for up to 40 MHz of 2500 MHz spectrum and can combine this spectrum with Bell’s existing 2500 MHz holdings (also 40 MHz in some areas) to enable faster

mobile data speeds. The Department should therefore dismiss TELUS' claims that it requires additional spectrum more than other large operators such as Rogers.

Eligibility

24. Rogers' comments explained why the use of open bidding for AWS-3 spectrum would be more efficient and advantageous for the Canadian taxpayer. In the event that the Department elects to proceed on the basis of a set-aside, Rogers supports the proposed eligibility requirements which provide that only those new entrants that are actively providing commercial mobile wireless services and are operating a wireless network will be eligible to bid for the AWS-3 set-aside block in a given area. Rogers also recommended that more stringent coverage requirements be satisfied by eligible bidders for set-aside spectrum.
25. All of the new entrants support the proposed eligibility requirements related to the proposed set-aside.
26. PIAC and other parties, including Xplornet, have proposed that eligibility requirements for bidding on set-aside spectrum should be relaxed so that any new entrant will be permitted to bid for this spectrum, irrespective of whether they have built a network and currently offer mobile services using their existing licensed spectrum. These parties assert that relaxing the requirements will enable more new entrants to bid for and successfully acquire set-aside spectrum.
27. However, these parties ignore the arrangement that the Department has proposed whereby companies will be provided with the privilege of bidding for set-aside spectrum only if they have previously acquired AWS-1 spectrum and only if they have built a network and actively provide mobile services using their AWS-1 spectrum. This *quid pro quo* is intended to provide an incentive for existing facilities-based new entrants to increase their capacity and support the

provision of next generation services, such as LTE, and it precludes the participation of spectrum speculators from bidding on the same spectrum. As we explain in our comments, Rogers supports the Department's proposal for these very reasons. If new entrants that are not eligible to bid for the set-aside block want to acquire AWS-3 spectrum, they are free to bid for the open block.

28. PIAC also calls on the Department to amend the eligibility rules so that regional incumbent operators will be eligible to bid for set-aside spectrum. PIAC asserts that, unless these regional incumbent operators are permitted to bid for set-aside spectrum, it is unlikely that they will successfully bid for any AWS-3 spectrum since, as PIAC argues, they will likely be outbid by better capitalized national incumbent operators.

29. It is important to remember that, although regional incumbent operators such as SaskTel and MTS are relatively less capitalized than national incumbent operators, each of the regional incumbent operators dominate the wireless market in their respective operating territories. For example, according to the 2014 CRTC Telecommunications Monitoring report, SaskTel's wireless subscriber market share in Saskatchewan in 2013 was 68% while MTS' market share in Manitoba was 51%.¹ Since bidders in any spectrum auction will generally bid up to their individual valuations, and since these regional bidders have the greatest share of the market in their respective operating territories, they can be expected to have the highest valuations for spectrum within those territories. As a result, the dominant wireless market position of the regional incumbent operators will ensure that they will be competitive in the bidding for the AWS-3 open block and do not therefore require access to the set-aside block.

Sealed-Bid Format, Second-Price Rule & Opening Bids

¹ CRTC Communications Monitoring Report September 2014, Table 5.5.6, p. 216.

30. Rogers' comments explained that the proposed set-aside, combined with the proposed use of a sealed bid format, relatively low opening bids, eligibility limits and second price rule will virtually guarantee that there will be very limited bidding on set-aside spectrum in every geographic area. This will result in new entrants successfully acquiring this valuable resource at a very significant discount to its true market value and will thereby deny Canadian taxpayers the considerable revenues that would otherwise have accrued to them by the licensing of this spectrum using an open bidding format. For the same reasons, Rogers continues to recommend that the Department use an open bidding format for the licensing of AWS-3 spectrum.
31. Rogers also explained that the use of a sealed-bid format would significantly increase aggregation risks meaning that bidders may not be successful in assembling the geographic footprint they require to support their business case. It will also not allow for price discovery and will result in Canadian taxpayers receiving lower revenues than would otherwise accrue to them. To address these serious draw-backs, Rogers urges the Department to use an SMRA auction for licensing AWS-3 spectrum.
32. As noted above, TELUS explains that the combination of the proposed set-aside and opening bids will result in successful bidders of set-aside spectrum enjoying a significant discount compared to the level of payments they would make if the existing spectrum licence fee or U.S. FCC AWS-3 reserve prices are applied to this spectrum. Rogers agrees with TELUS and we continue to recommend the changes outlined in our comments so that these unwarranted and inefficient discounts can be avoided.
33. Not surprisingly, most of the new entrants support the sealed bid format, second price rule and opening bids. As Rogers explains in its comments, the combined use of these measures along with the set-aside and eligibility rules will ensure

that there will be minimal competitive bidding for set-aside spectrum. This means that successful bidders will be able to acquire set-aside spectrum for an amount far below the true market value of the spectrum. The new entrants' support for these measures is therefore transparently self-serving and should be rejected by the Department.

Auction Timing

34. Rogers did not comment on the Department's proposal that the AWS-3 auction will be held in March 2015.
35. Bell has asked the Department to postpone the auction of the AWS-3 open block by one to two years so that incumbent licensees can focus their resources on 700 MHz deployment and the upcoming 2500 MHz auction. Bell acknowledges that new entrants require additional spectrum immediately and that the auction of the set-aside block should proceed on the basis of the timing proposed by the Department.
36. Similarly, SaskTel has asked the Department to postpone the auction of all AWS-3 spectrum until such time as the CRTC has rendered a decision following the current wholesale wireless services proceeding so that prospective bidders can fully understand any new wholesale requirements before bidding for AWS-3 spectrum.
37. Bell's proposal to postpone the auction for the open block appears to be motivated by the fact that Bell and TELUS have pooled most of their commercial mobile spectrum to operate their jointly built network. The pooling of Bell and TELUS' spectrum in this manner has given them a potential advantage in terms of greater capacity and faster mobile broadband speeds that other competitors

cannot match unless they acquire additional spectrum or pool their spectrum with other competitors.

38. If the auction of the open block is postponed, operators such as Rogers will not be able to acquire AWS-3 spectrum that it requires to increase its capability of providing faster mobile broadband speeds. This situation is compounded by the fact that, with the introduction of the Department's new spectrum licence transfer policy, it is more difficult for Rogers to acquire mobile spectrum in the secondary market or partner with other spectrum licensees. Since spectrum auctions are the only realistic means by which Rogers can acquire additional mobile spectrum to meet its customers' needs, it is critical that the Department license available non-set-aside spectrum in a timely manner.

39. With respect to SaskTel's proposal, Rogers notes that it is entirely possible, if not likely, that the CRTC will have rendered its final decision regarding the regulation of the wholesale wireless market before the proposed AWS-3 auction.

40. Rogers therefore urges the Department to reject Bell's and SaskTel's proposals and auction the open block and set-aside block in the timeframe proposed by the Department. In the event that the Department holds the AWS-3 auction in March 2015 as it has proposed, Rogers reiterates that it is vitally important that the results of the AWS-3 auction be published before the start of the 2500 MHz auction so that prospective bidders in the 2500 MHz auction will be able to finalize their respective auction valuations and strategies.

Mandated Mobile Virtual Network Operator (MVNO)

41. Cogeco opposes the Department's proposal to license AWS-3 set-aside spectrum only to those bidders that have already used their AWS-1 spectrum to build a network and provide services. Cogeco insists that other forms of new

competitors should be introduced into the mobile services market and it calls on the Department to mandate a wireless resale model known as an MVNO.

42. As the Department already knows, the CRTC has initiated a proceeding to examine whether the wholesale mobile wireless services market is competitive and whether any regulatory measures are required in this market. Parties such as Cogeco and others have made interventions in the CRTC's proceeding and have requested that the CRTC mandate MVNO access in the wireless wholesale market. The CRTC is therefore already considering the issue raised by Cogeco.
43. Rogers notes that Cogeco's proposal is not consistent with the Department's long standing objective of promoting facilities-based competition in the wireless services market. The primacy of this objective is clearly seen in the Department's current proposal that only those new entrants which have already built a wireless network and provide services will be eligible to bid for AWS-3 set-aside spectrum and the proposal that successful bidders will be subject to specific rollout requirements to ensure that they will put the AWS-3 spectrum to use and unlock the benefits that will accrue to Canadians as a result.
44. Mandating MVNOs will reduce the incentive to invest so that consumers will not be able to enjoy the next generation of technology, expanded coverage in new geographic areas, or improvements in network quality. Instead, it will lead to less efficient networks, less real competition and more regulatory gaming.
45. Lastly, Rogers would note that Cogeco's proposal is beyond the scope of the issues raised in the Consultation Paper.
46. For all of these reasons, the Department should disregard Cogeco's request for mandated MVNO access.

Competitiveness of the Wireless Market

47. PIAC asserts that the Canadian wireless market is not competitive. Among other things, PIAC argues that wholesale domestic roaming rates are excessive and that promoting a fourth national carrier is consistent with other jurisdictions and will lead to lower wireless retail prices. In making these assertions, PIAC relies on the Competition Bureau's claim that the incumbents have market power in wireless retail markets and the fact that the CRTC has found that unjust discrimination and undue preference has occurred in the wireless wholesale market. Quebecor also refers to the Bureau's claim that incumbents have market power.
48. Regarding PIAC's assertion that wholesale domestic roaming rates provided by incumbents are excessive, Rogers notes that the conditions of licence require that wholesale roaming services be provided on the basis of commercial rates. Evidence recently filed by Rogers with the CRTC clearly demonstrates that the rates Rogers negotiated with new entrants are in line with the commercial rates that have been negotiated between U.S. carriers for domestic roaming.²
49. PIAC's claim that Canada should take steps to promote a fourth national carrier since this would be consistent with the approach that has been taken in other jurisdictions and would lead to lower prices for high-use, high-end wireless services is incorrect.
50. Rogers notes that PIAC's international analysis is no longer relevant since it has been overtaken by more recent events. For example, PIAC refers to the 2009 licensing of a fourth entrant in the French mobile wireless market as evidence that policy-makers in Europe are actively promoting the need for four-player

² Rogers Communications, Intervention, Telecom Notice of Consultation CRTC 2014-76 and 2014-76-1, May 15, 2014, Attachment 2.

wireless markets. In fact, European policy-makers, including those in France, are now open to the prospect of consolidation within wireless markets from four to three competitors. PIAC's comments are silent with respect to these more recent and widely reported calls by French policy-makers for consolidation in the French wireless market.

51. Contrary to PIAC's assertions, price declines for high-use, high-end wireless services in Canada show that most of the competition is between Bell, TELUS and Rogers which have focused on this segment. New entrants have focused on the lower tier of usage where prices are rising.

52. With respect to PIAC's and Quebecor's reliance on the Competition Bureau's claim that incumbents have market power in the retail market and will earn above normal profits, it is important to note that the Bureau's assessment is based on an analysis of the profitability of Rogers and TELUS performed by the Brattle Group. The analysis confirms that Rogers invested more than \$14 billion over the first 25 years of its operation up to 2013, and had returns on that investment that were below the cost of that capital. Despite showing that Rogers had a shortfall below its cost of capital, the Brattle Group conducted a highly speculative projection that assumes that Rogers' free cash flow will grow by 2% every year until 2030 and that Rogers will earn \$15 billion in profits. In the first two years of their forecast, the Brattle Group is already wrong as Rogers has seen a 6% drop in its free cash flow for 2013 and expects a 3 to 8% decrease for the full year 2014. The Brattle Group's prediction excludes the \$3.3 billion that Rogers spent earlier this year in the 700 MHz auction and similarly fails to capture the material expenditures that Rogers may make in future spectrum auctions and investments for future generations of wireless technology. The only basis for the Bureau's claim regarding above normal profits and market power is the imaginary forecast of the Brattle Group.

53. PIAC also argues that an AWS-3 set-aside is required in light of the CRTC's recent finding of unjust discrimination and undue preference in the wholesale domestic roaming rates Rogers charged new entrants and in the use of exclusivity clauses. With respect to the CRTC's findings, it is important to note the following. First, the rates charged to the new entrants were consistent with other of Rogers' Canadian domestic roaming rates with both regional and national operators. The rates were also consistent with Rogers' roaming agreements with small and mid-sized U.S. operators, and with U.S. roaming rates agreed to between U.S. operators. Second, Rogers never required new entrants to agree to exclusivity clauses in domestic roaming agreements. New entrants freely entered into domestic roaming agreements with Rogers. They accepted a long-term exclusive contract rather than a short term one in order to obtain lower rates. In any event, the Federal Government has enacted Section 27.1 of the *Telecommunications Act* which imposes a cap on the wholesale roaming rates for voice, data and text messaging services that carriers can charge to other carriers. The level of caps is significantly lower than the rates that have been commercially negotiated in Canada and the U.S.

54. For all of these reasons, the Department should reject PIAC's assertions regarding the competitiveness of the wholesale and retail wireless markets and the need for an AWS-3 spectrum set-aside.

55. Rogers appreciates this opportunity to share its views with the Department.