

Canada Gazette Notice No. DGRB-001-09

***Consultation on Revisions to the Framework for Spectrum
Auctions in Canada***

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Reply Comments

of

Bell Mobility Inc.

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1.0 INTRODUCTION

1. Bell Mobility Inc. (Bell Mobility) is pleased to submit the following reply comments in response to Industry Canada's *Consultation on Revisions to the Framework for Spectrum Auctions in Canada* (the Consultation Document). Bell Mobility has reviewed the submissions of other parties. For the reasons outlined in these reply comments, Bell Mobility continues to maintain the positions and recommendations presented in our 15 June 2007 submission. The following summarizes Bell Mobility's position:

- spectrum auctions are market-based, any intervention in the auction process designed to distort auctions in order to assist new entrants (e.g., spectrum set-asides) significantly conflicts with the intent and spirit of the *Spectrum Policy Framework for Canada's* enabling guidelines which state that market forces should be relied upon to the maximum extent feasible, and regulatory measures, where required, should be minimally intrusive, efficient and effective, respectively;
- it is essential that bidders be qualified by Industry Canada as meeting the Canadian Ownership and Control rules before being deemed as eligible to participate in a spectrum auction;
- strongly disagrees that the establishment of fees for renewed licences are required in order to maximize the economic and social benefits that Canadians derive from the use of the radio frequency spectrum resource;
- the Department should continue to focus on using simultaneous multiple-round ascending auctions;
- licensees should anticipate a high expectation of renewal at the end of the initial term, and they should also reasonably anticipate a high expectation of renewal at the end of each and every subsequent term, assuming compliance with conditions of licence as well as the absence of a fundamental reallocation of spectrum to a new service or the absence of national policy requirement;
- it is now timely for the Department to seriously consider the use of indefinite licence terms;

- does not object to the fact that conditions of licence applied to the renewed licences may differ from those on the existing licences, with such changes being made following a consultation;
 - supports the removal of the research and development contribution condition of licence entirely;
 - recommends licensing spectrum blocks on a regional basis using the Department's Tier 2 geographic service areas, but to the extent that the Department insists on accommodating a Tier service area that addresses the difference between urban and rural areas, then the Department should use the existing Tier 3 service area;
 - agrees with the *Telecommunications Policy Review Panel Final Report* which recommended moving toward the establishment of market-based exclusive spectrum rights (i.e., the ability to buy, sell and lease spectrum) and the elimination of barriers to the development of secondary markets in spectrum.
2. In the following reply comments, Bell Mobility will address the issues raised in the order of their appearance in the Consultation Document.

2.0 SPECTRUM MANAGEMENT

3. Bell Mobility believes that the Department's *Framework for Spectrum Auctions in Canada* should continue to be based on, and support, the enabling guidelines as described in the Department's *Spectrum Policy Framework for Canada*. In Bell Mobility's view, the competitive circumstances in the Canadian wireless market simply do not warrant interventionist measures. As noted by Rogers Communications Inc. (Rogers):

Given that competition is effective in the wireless industry, there is no justification for any intervention in the spectrum markets including set-asides and caps. The Department's priority should be to ensure a neutral spectrum allocation process that stresses equality between the participants. Each carrier should be on an equal footing in seeking needed spectrum in configurations that allow for the delivery of the latest generation of data services.¹

¹ Rogers, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 14.

4. However, MTS Allstream Inc. (MTS Allstream) also recommends that future auctions contain specific mechanisms such as set-asides to allow market forces to work, and that they should also take into account the overall holdings of parties via different bands.² MTS Allstream is essentially asking the Department to micro-manage the allocation of spectrum and return to a regime that is characterized by command and control regulation.

5. Bell Mobility strongly disagrees. Given the benefits associated with auctions, it is important to make sure that the auction rules are not changed to such an extent that it becomes difficult to distinguish the results from those that would occur with other methods of assigning licenses such as a comparative review process. The greater the extent of intervention in the auction process, the greater the loss of the benefits of the auction process. Moreover, MTS Allstream's recommendations are an example of how protecting firms at an early stage of entry results in continued protection that never ends.

6. With respect to the use of spectrum set-asides, Bell Mobility notes that the set-aside mechanism created gaming opportunities that altered the efficient allocation of spectrum and caused a disproportionate cost burden on incumbents.³ The gaming opportunities are related to the ability of new entrants to "park" their points. That is, new entrants had the incentive to bid on spectrum that they did not actually want to buy in order to keep the prices on their desired spectrum from increasing too quickly and to maintain enough eligibility points in order to punish rivals in later rounds.⁴ The issue of "parking" points is also highlighted by Rogers:

Entrants could confidently rely on being overbid by incumbent operators who required these blocks as centrepieces of their footprint. This meant that entrants could maintain their eligibility points to bid while retaining flexibility to switch between lots later and could avoid commitments that might expose them to aggregation risks. The extreme length of the auction was due in large part to the very poor incentives for entrants to shed eligibility.⁵

² MTS Allstream, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 16.

³ MTS Allstream, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 10.

⁴ Ausubel, L.M., P. Cramton, and P. Milgrom, (2006), *The Clock-Proxy Auction: A Practical Combinatorial Auction Design*, in P. Cramton, Y. Shoham, and R. Steinberg (eds.), *Combinatorial Auctions*, MIT Press, Chapter 5, paragraphs 115-138.

⁵ Rogers, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 35.

7. Bell Mobility agrees with TELUS Communications Company (TELUS) that the "parking" of points had three negative effects:

The set-aside provision also provided entrants with a possible strategic advantage because it allowed them to bid on open spectrum to maintain eligibility, while waiting for competitive entrants to drop out of the bidding. The consequences of this strategy are at least threefold. First, it results in an increase in the incumbents' license prices. Second, it jeopardizes one of the most fundamental auction design features, the eligibility rule. Third, it likely explains the record number of rounds it took to complete this auction.⁶

8. Bell Mobility also agrees with Rogers that the set-asides used in the advanced wireless services (AWS) spectrum auction is a clear illustration of the hazards of introducing interventionist policies:

After deciding to introduce additional facilities-based carriers into the Canadian wireless industry, Industry Canada decided to use an auction set-aside to accomplish this goal. The set-aside however resulted in significant unintended consequences. It created massive gaming opportunities, which were exploited successfully by several new entrants at the expense of the incumbent carriers. As a result, prices on some licences were artificially inflated while other valuable blocks were obtained at steep discounts. While Industry Canada's objective to add new carriers was achieved, it came at the cost of disrupting the efficient allocation of spectrum and placing a disproportionate cost burden on incumbents.⁷

9. The disproportionate cost burden is the result of new entrants bidding on unrestricted spectrum with no intention of buying. As Bell Mobility indicated in our initial comments, this led to an inefficient increase in the price of the spectrum blocks available to incumbent wireless providers to bid on. As TELUS points out:

... the set-aside provision artificially raised the demand for spectrum because the entrants were allowed to place bids on unrestricted spectrum with no intention of buying, but with the objective of increasing the prices the incumbents would have to pay. We refer to this behavior as "fake bidding." We also recognize that if the department is going to create a model that allows one competitor to substantially raise another carrier's cost and thereby deplete capital its competitor might otherwise use to compete, the first carrier will of course pursue the strategy.⁸

⁶ TELUS, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 5.

⁷ Rogers, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 16.

⁸ TELUS, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 5.

10. Conclusive evidence of the inefficient increase in the price of spectrum comes from comparing the price of spectrum in Canada with the price of spectrum in the United States. TELUS makes this comparison and concludes that:

The high price of spectrum in the Canadian auction is contrary to historical patterns because Canadian spectrum has generally sold for less than spectrum in the U.S. If one assumed the spectrum in Canada was to be allocated in exactly the same fashion as elsewhere one would expect more of a historic or at least comparable result. However, this was not the case because the Canadian auction design and the licensing terms and conditions differed from other countries. Consequently, it is reasonable to conclude that the valuation premium observed in Canada is at least partially, if not fully, the result of the specific design used for the Canadian AWS auction.⁹

11. Bell Mobility reiterates that the solution to the problem of "parking" points is to simply not impose set-asides in the auction design. With no set-aside spectrum, all bidders have the opportunity to bid on spectrum blocks in response to changes in price which allows for the efficient aggregation of licences.

12. With respect to MTS Allstream's recommendation that future auctions should also take into account the overall holdings of parties via different bands, Bell Mobility disagrees and submits that this would require the Department to micro-manage the spectrum allocations of all firms in the industry. As Bell Mobility noted in its AWS Comments, there is a practical difficulty in establishing appropriate allocations of spectrum. The Department would require very precise information about the future operational plans of all firms in the market. If the allocation is set too low, then new and existing services may not be deployed in the most efficient manner. If the allocation is too high, then it has no effect on the market and is not necessary.¹⁰

13. Bell Mobility notes that the Department does not want to dictate the allocation of spectrum of particular firms. Subsequent to a thorough public consultation, the mobile spectrum cap policy was rescinded in *Gazette Notice No. DGTP-010-04 – Decision to Rescind the Mobile Spectrum Cap Policy*, August 2004. Bell Canada submits that the Department got it right in DGTP-010-04 when it stated that:

⁹ TELUS, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 5.

¹⁰ Bell Canada, *Part 5: Bell Canada's Response to Specific Questions Raised in the Department's Consultation Paper – Canada Gazette Notice DGTP-002-07 – Consultation on a Framework to Auction Spectrum in the 2 GHz Range Including Advanced Wireless Services*, page 15.

The Canadian cellular industry has extended coverage to more than 94 percent [now 97%] of the population and most major highways, and the migration to digital systems is well advanced. The wireless industry has matured and experienced tremendous growth in subscribers, and consumers are being provided with a range of voice and data services. After nine years, the Canadian wireless industry is well established.

In the near future, the wireless industry is going to have access to significantly more spectrum. The Department has proposed allocating and designating at least 100 MHz of new spectrum for the expansion and evolution of the cellular services such as advanced wireless services (AWS). As more spectrum becomes available, a spectrum cap policy to oversee spectrum concentration becomes less relevant.¹¹

14. Bell Mobility submits that, as the Department reasoned in the above decision, the Canadian wireless market is now a mature market and that the need for allocative measures is less relevant than in the early days of the industry. Bell Mobility also believes that, as the Department alludes to above, as more spectrum becomes available the arguments in support of a spectrum cap to oversee spectrum concentration become even weaker.

15. Bell Canada submits that given: (i) that the industry has matured; (ii) additional spectrum is becoming available; and together with (iii) the use of market-based spectrum auctions to assign the spectrum to the most efficient user, the issue of spectrum concentration, as the Department noted in its 2004 Notice rescinding the mobile spectrum cap, is no longer relevant and should not be adopted.

16. Moreover, service providers require spectrum at all frequencies. As Rogers notes, limiting the amount of spectrum a service provider can obtain can seriously effect its ability to offer the next generation of wireless service:

Policies that lead to the fragmentation of spectrum holdings (with operators holding relatively small amounts of spectrum across many bands) will discourage advanced wireless services by raising deployment costs and limiting achievable data speeds. Such fragmentation may occur either through poor auction design or through ill-conceived constraints on the amounts of spectrum that operators can hold in a band. The need for substantive contiguous blocks is a technical requirement that the Department can simply not ignore. The auction framework should not prevent carriers from assembling enough contiguous spectrum to deliver viable and efficient 4G services otherwise the entire auction process will not advance the wireless industry in Canada.

...

¹¹ Industry Canada, Gazette Notice DGTP-010-04 – *Decision to Rescind the Mobile Spectrum Cap Policy*, August 2004, paragraphs 9 and 10.

[Furthermore] the ties between specific spectrum blocks and technologies also mean carriers must have the opportunity to obtain spectrum at all frequencies, no matter what their other holdings. A technology or equipment made available in one band today might not be offered in another band for years. A carrier's other spectrum will not act as a substitute, particularly given the change in focus to broadband data, and if they are missing a key spectrum band, they will not be able to compete. If Industry Canada prevents a carrier from participating in an auction, it effectively is deciding who will be allowed to offer the next generation of wireless services. It would mean that Industry Canada's role is picking the winners and losers in the Canadian wireless industry.¹²

17. MTS Allstream is essentially asking the Department to micro-manage the allocation of spectrum and return to a regime that is characterized by command and control regulation. The reason the Department moved to the use of auctions is because they are an efficient market-based means of assigning spectrum licences, through a fair and transparent process to those that value them the most. Interference in the market by the regulator dilutes the economic and social benefits that can be achieved through greater reliance on market forces.

18. Since spectrum auctions are market-based, any intervention in the auction process designed to assist new entrants (e.g., spectrum set-asides), significantly conflicts with the intent and spirit of the *Policy Framework's* enabling guidelines (a) and (d) which state that market forces should be relied upon to the maximum extent feasible, and regulatory measures, where required, should be minimally intrusive, efficient and effective, respectively.

19. Similarly, Bell Mobility agrees with Rogers that auctions of spectrum in different bands should not be considered isolated events, and supports Roger's request that the Department consider the future release of spectrum in a comprehensive manner.¹³ Wireless service providers need a clear understanding of spectrum availability over the long term.

20. Finally, Bell Mobility continues to stress that it is essential that bidders be qualified by Industry Canada as meeting the Canadian Ownership and Control rules before being deemed as eligible to participate in a spectrum auction. Once a bidder has paid tens, if not hundreds of millions of dollars to the Government, the Department will be under significant pressure to ensure that the bidder passes the ownership conditions, even if such an outcome is not

¹² Rogers, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraphs 43 and 53.

¹³ Rogers, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 23.

warranted. Bell Mobility supports TELUS' recommendation that the best way to manage the foreign ownership restrictions is to have each potential participant submit their Canadian ownership and control filings before the commencement of the spectrum auction.¹⁴ Moreover, other providers should not have to engage in commercial transactions and/or transactions required by regulation until the service provider's qualification is approved.

3.0 AUCTION TYPES AND ATTRIBUTES

21. The Department's policy objective, as stated at page 8 of the *Policy Framework*, is "to maximize the economic and social benefits that Canadians derive from the use of the radio frequency spectrum resource." Bell Mobility continues to believe that auctions which are an efficient market-based means of assigning spectrum licences, through a fair and transparent process to those that value them the most, is the most effective means to achieve this objective.

22. It is important that the Department continue to allow stakeholders to comment on the potential impact of the auction design in a specific situation, and be willing to alter any problematic design element. Bell Mobility agrees with the concerns that both the Canadian Wireless Telecommunications Association (CWTA) and TELUS have regarding how the Department employed the use of the Vickery auction for air-to-ground services. As TELUS states:

TELUS is not aware of any consultation by the Department specifically on the addition of the Vickery second-price format. TELUS notes that introducing spectrum auction formats without consultation detracts from regulatory and more importantly business certainty. Typically spectrum auctions in Canada involve a large amount of capital and the Department does the industry a large disservice by not fully and actively consulting on any new format it is considering adopting.¹⁵

23. The process for consultation, comment, reply and final policy regarding the auction design for a particular spectrum auction is described by the Department in Section 5 of the 2001 *Framework for Spectrum Auctions in Canada* (the *Auction Framework*). Bell Mobility submits that the process as described in Section 5 of the *Auction Framework* should remain. Bell Mobility also supports TELUS' recommendation that any move away to another auction format be the subject of a separate consultation, not one associated with a particular band but rather

¹⁴ TELUS, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 12.

¹⁵ TELUS, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 11.

one that focuses purely on alternative auction formats, perhaps including industry workshops as part of the process.¹⁶

24. Section 6 of the *Auction Framework* provides an overview of the simultaneous multiple-round ascending (SMRA) auction, which as noted in the Consultation Document, continues to be used successfully by the Department and a number of other administrations around the world. Bell Mobility suggests that given the benefits and extensive use of the SMRA for spectrum auctions, the adoption of a different auction framework should only occur if it is better in terms of maximizing openness and minimizing administrative burden.¹⁷

3.1 Openness

25. As Bell Mobility noted in its initial comments, an additional benefit of the SMRA, is open bidding which provides additional information and promotes the efficient assignment of licences. By its very design, sealed-bid auctions are not open. Because of the single round design, there is no opportunity for price discovery. This is the main reason why Saskatchewan Telecommunications (SaskTel) also does not support the use of Vickery auctions. SaskTel argues:

Despite a preference for the Vickrey auction method versus the sealed-bid first-price format, SaskTel has concerns regarding the lack of price discovery inherent with any single round sealed-bid auction format. We believe that the only way to truly determine the value of spectrum licence(s) is through the use of price discovery, and comparing one's own bid(s) versus the bid(s) submitted by other participant(s).¹⁸

¹⁶ TELUS, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 11.

¹⁷ This is consistent with the *Policy Framework's* enabling guidelines (e) regulation should be open, transparent and reasoned, and developed through public consultation, where appropriate; and (f) spectrum management practices, including licensing methods, should minimize administrative burden and be responsive to changing technology and market place demands.

¹⁸ SaskTel, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 4. The benefits of openness are also noted by Rogers which states "Future auctions in Canada must therefore remain open and perform the key market function they were designed to do, helping establish a spectrum band's value." See Rogers, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 55. Note that MTS Allstream also does not support the use of Vickery auctions. See MTS Allstream, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 50.

26. With respect to the combinatorial clock auction, even though it has a multiple-round process in the first stage, Bell Mobility submits that since combinatorial clock auctions auction off generic spectrum blocks, it does not fully reveal the information regarding the value of the spectrum frequency. The underlying assumption regarding the use of generic lots is that each lot has an identical value. However, the value of a bid has two dimensions: (i) quantity of spectrum, and (ii) the exact location of the spectrum frequency. The exact location of the spectrum frequency is important because of wireless providers' existing spectrum holdings and existing relationships with other wireless service providers.

27. This concern is also raised by SaskTel which states:

SaskTel foresees little application for the clock auction method. Our understanding is that this auction method could be employed where the spectrum licence blocks being offered are equal in bandwidth, usability (i.e. the same usage conditions and restrictions), and therefore desirability to auction bidders. It must be noted that this is very rare in spectrum management these days. There are almost always conditions affecting one spectrum block and not adjacent blocks. For example, band edge restrictions are often tighter than block edge restrictions between blocks in the same band, often due to sharing requirements with adjacent band spectrum users. Coordination issues between adjacent band users are often enough to make band edge blocks less desirable than blocks in the middle of the band. SaskTel suggests that the SMRA method should be used instead of the clock auction method.¹⁹

28. Therefore, neither the sealed-bid nor the combinatorial clock auctions are better than the SMRA at maximizing openness.

3.2 Administrative Burden

29. A significant problem of combinatorial bidding is the complexity it introduces into the bidding process. As TELUS argues:

The extra levels of complexity that this introduces to auction design have limited the use of this capability to very few auctions involving only a few licences. This complexity is not an inherent design issue for SMRA as combinatorial bidding will greatly increase the complexity of any auction format, the greater number of potential combinations on offer the greater the levels of complexity introduced. In a Canadian spectrum auction involving combinatorial bidding the licence tier

¹⁹ SaskTel, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 5.

used for the licences would probably have to be limited to tier 2 or tier 1 if the recent FCC process were to be followed.²⁰

30. Even Rogers acknowledges the complexity of the combinatorial clock auction, but argues that even though "algorithms are required to determine winners and prices, the complexity is on the auctioneer side and not on the bidder side."²¹ However, any proper bidding strategy must take into account the impact that bid will have on the probability of winning and what the final outcome will be. In order to put into place an effective bidding strategy bidders will have to understand how the algorithms determine winners and prices. Thus, contrary to what Rogers believes, the complexity will be on both the auctioneer side and the bidder side.

31. Rogers also believes that these costs are worth bearing in order to alleviate the problem of aggregation risk:

Rogers believes that the existing SMRA auction format is inadequate as it leaves all bidders – entrants and incumbents alike – unduly exposed to aggregation risks. The complexity of the licence structure adopted for some auctions, such as the recent AWS award, has served to exaggerate these risks and also create incentives for gaming behaviour that distort auction outcomes.²²

32. It should be noted that aggregation risk may not be significant. As analyzed by Ausubel, Cramton, McAfee and McMillan (1997):

Synergies (or complementarities) among licences may be conveniently classified as local or global. We define *local synergies* as those gains in value that specifically arise from obtaining two or more geographically neighboring licenses. We define *global synergies* as those gains in value that accrue from obtaining increased numbers of licenses or markets: economies of scale or scope among multiple licences that arise irrespective of their geographic locations.

...

Synergies, therefore, have major implications for the design of spectrum-license and other multiple-object auctions. If synergies are extreme, package bidding may be warranted in order to overcome the exposure problem. But if synergies are modest, auctions with package bidding offer little advantage, and given the complexity of these auctions, the simultaneous ascending auction is probably the more practical design.

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²⁰ TELUS, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 8.

²¹ Rogers, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 60.

²² Rogers, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 54.

From a policy perspective, our analysis suggests that the FCC made the right choice of auction mechanism in adopting license-by-license bidding rather than package bidding. Bidders in the AB and C auctions had local synergies and bid for them. Judging from the footprints, they were often successful. Apparently, the local synergies were not so large that bidders faced a serious exposure problem. This is further supported by the absence of bid withdrawals intended to back out of failed aggregations.²³

33. In fact as SaskTel argues, the objectives of package bidding can be accomplished by prudent bidding strategies:

SaskTel believes that the objectives of package bidding can be accomplished by prudent bidding strategies in an SMRA auction format. Bidders are free to bid on any combination of blocks or licences they desire, without the added complexity of adhering to, or having to consider as part of their bidding strategy, predefined bidding packages. Allowing auction participants the full flexibility on bidding on any combination of licences and blocks, as can be done in the SMRA auction, is the best method to allow the participants to meet their individual business needs.²⁴

34. Thus, neither the sealed-bid nor the combinatorial clock auctions are better than the SMRA at minimizing administrative burden.

35. While Bell Mobility appreciates, and supports, the Department's policy of monitoring the advances in both the theoretical and practical aspects of auction design, at this time we believe that the Department should continue to focus on using SMRA, since neither the sealed-bid auction, nor the combinatorial clock auction are better at maximizing openness and minimizing administrative burden than the SMRA. It should be noted that SaskTel also supports the continued use of SMRA format and that MTS Allstream does not support the use of Vickery auctions.²⁵ As SaskTel notes:

SaskTel has participated in previous simultaneous multiple-round ascending (SMRA) auctions held by the Department. The SMRA auction format has worked very well. We feel it is the best format to use when there is expected to be a high demand for the spectrum, a large number of bidders, and/or a large number of licences are being offered. Through the multiple round approach, the true value of the spectrum can be obtained as bidders decide how much they are willing to pay for each spectrum block. Bidders can also bid on multiple blocks or licence

²³ Ausubel, L.M., P. Cramton, R.P. McAfee, and J. McMillian, (1997), "Synergies in Wireless Telephony: Evidence from the Broadband PCS Auctions," *Journal of Economics and Management Strategy*, 6(3):497-527, pages 498-500, and 526.

²⁴ SaskTel, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 5.

²⁵ MTS Allstream, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 50.

areas to suit their business requirements, and can change their bidding strategies if they so choose as the auction proceeds. Overall, SaskTel sees the SMRA format as a very efficient spectrum auction format, and recommends that the Department continue to use the SMRA auction format for cases where there are a large number of licences being auctioned, a large number of bidders, and/or high expected demand.²⁶

4.0 LICENCE RENEWAL

4.1 High Expectation of Renewal

36. Bell Mobility submits that not only should licensees anticipate a high expectation of renewal at the end of the initial term, they should also reasonably anticipate a high expectation of renewal at the end of each and every subsequent term, assuming compliance with conditions of licence as well as the absence of a fundamental reallocation of spectrum to a new service or the absence of an overriding policy need. It is important to note that these views are supported by the majority of other parties.²⁷

37. In Bell Mobility's view the high expectation of renewal at the end of the initial term and at the end of each and every subsequent term, sends the appropriate signals of stability and certainty to both licensees as well as to the investment markets while at the same time not fettering the Minister's authority or ability to take the appropriate actions in exceptional circumstances.

38. Bell Mobility also believes that it is important that the specific operable licence term should be included in the actual licence issued by the Department. In Bell Mobility's view it is not sufficient to merely state the expectancy in the associated auction policy or consultation documents. In this regard, it is noteworthy that the *Policy Framework's* enabling guideline (h) states that spectrum policy and management should support the efficient functioning of markets by clearly defining the obligations and privileges conveyed in spectrum authorizations.

²⁶ SaskTel, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 5.

²⁷ See Bragg Communications Inc. (Bragg), *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraphs 9 and 11, CWTA, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 3, Rogers, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 68, SaskTel, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 8, and TELUS, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 14.

4.2 10-year Terms

39. Bell Mobility does not believe that a 10-year licence term is sufficient given the development of the Canadian wireless market. We submit that it is now timely for the Department to seriously consider the use of indefinite licence terms for wireless service providers operating as licensed Canadian radiocommunication carriers. Bell Mobility also notes that such a move would be consistent with the actions of other regulators who have either moved to 15 or 20 year licence terms, and who are considering the movement toward indefinite terms. However, if the Department does not adopt indefinite terms, then it should at the very least adopt 20-year licence terms with a permanent high expectation of renewal, assuming compliance with conditions of licence. The move to longer licence terms is supported by Rogers, SaskTel and TELUS.²⁸

40. Bell Mobility believes that moving to indefinite (or even 20-year) licence terms with the current authority granted the Minister under the *Radiocommunication Act* to amend or withdraw a licence is consistent with the following *Policy Framework* enabling guidelines: (a) market forces should be relied upon to the maximum extent feasible; (d) regulatory measures should be open, transparent and reasoned, and developed through public consultation where appropriate; (f) spectrum management practices, including licensing methods, should minimize administrative burden and be responsive to changing technology and market place demand; and (h) spectrum policy and management should support the efficient functioning of markets by clearly defining the obligations and privileges conveyed in spectrum authorizations and reallocating spectrum where appropriate, while taking into account the impact on existing services.

41. The Consultation Document notes that one of the main issues of interest at the time of renewal is the extent of implementation achieved by licensees. Bell Mobility submits that those who pay the most for the spectrum have the incentive as well as the technical, financial and business capacity to best manage the spectrum. The fact that the spectrum is paid for up-front, as was noted numerous times in the Department's 1995 consultation concerning the implementation of spectrum auctions in Canada, is an enormous motivator not to hoard

²⁸ Rogers, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 64, SaskTel, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 8, and TELUS, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 14.

spectrum. Shareholders, having invested their capital, will demand a return as soon as possible.

42. Bell Mobility believes that the reality is that strict adherence to corporate governance standards and duties to shareholders provide much more of an incentive to put spectrum to use than could any condition of licence. As a result, the Department should not propose mid-term implementation requirements as a condition of licence. This is consistent with the *Policy Framework's* enabling guideline (a) market forces should be relied upon to the maximum extent feasible.

4.3 Renewed Licences May Have Different Conditions of Licence

43. As noted above, Bell Mobility strongly believes that there should be indefinite licence terms, though even with indefinite licence terms, we recognize that in rare circumstances conditions of licence may have to be amended (for example, a change in international allocation, an overriding policy issue, or to accommodate changes in technology). However, in order to ensure that bidders understand exactly what is being auctioned, such changes should be the exception rather than the rule. Therefore, Bell Mobility does not object to the fact that conditions of licence applied to the renewed licences may differ from those on the existing licences, with such changes being made following a consultation. SaskTel and TELUS also support Bell Mobility's view.²⁹

4.4 Licence Fees for Renewed Licences

44. Bell Mobility strongly disagrees that the establishment of fees are required in order to maximize the economic and social benefits that Canadians derive from the use of the radio frequency spectrum resource. The implementation of such fees is not regulation in a manner that interferes with market forces to the minimum extent necessary. Bell Mobility believes that the intent of that statement is directed toward the objective of fully exploiting and maximizing the economic and social benefits Canadians obtain from the spectrum through the full and efficient exploitation of that public resource in deriving positive economic and social externalities for the Canadian public. As noted by Bragg:

²⁹ SaskTel and TELUS support Bell Mobility's view. See SaskTel, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 8, and TELUS, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 15.

Similarly, Bragg takes issue with the Department's apparent belief that the only way in which to ensure "a fair return" is through licence fees based on the market value of the spectrum. Such an approach ignores the many benefits accruing to Canadian consumers and businesses as a result of the significant and ongoing investments of licensees, as well as licensees' significant contributions to the economy in terms of employment, productivity enhancement and in myriad other ways. It also ignores the detrimental effects that higher licence fees could have on the affordability and expansion of wireless services (as discussed in greater detail later herein).

Bragg notes that a perusal of the Department's 2007 *Spectrum Policy Framework for Canada* does not reveal any suggestion or policy basis upon which it could reasonably be concluded that the Department's goal in setting licence fees should be to ensure a "fair return" for the Canadian public or that licence fees based on economic-rent seeking are otherwise appropriate. Rather, that document adopts as its policy objective: "to maximize the economic and social benefits that Canadians derive from the use of the radio frequency spectrum resource". Thus, the *Framework* recognizes that licensees' contributions to Canadian society come in both economic and non-economic forms.

Accordingly, Bragg submits that licensees' significant investments in infrastructure, technologies and services, as well as their contributions to the Canadian economy, represent a significant "return" in and of themselves.³⁰

45. TELUS agrees:

We would submit that a fair return does not and should not equate to market value. In the truest sense Government is not a business, rather it is in the business of enabling business to occur. Government is a steward of spectrum and its job is to work to ensure that spectrum is used to enable wealth creation. Licence holders enable that wealth creation by investing in the networks that are an input to improved productivity. The investment made through the use of spectrum forms a large part of the return to the public.

Measuring the economic contribution our investment adds in terms of auction fees already paid, investment in plant and operating expenses, including employment, are all factors that contribute to fair return. TELUS believes that the taxes the business pays are also an important component of a return to the Canadian public. TELUS also considers that a fair return must include compensation for Government managing the spectrum.

...

Rather than justify a regime to maximize rents on spectrum licensees this objective requires that the Department take a holistic look at all of the benefits to Canadians derived from up-to-date, ubiquitous, broadband mobile networks and the continuing large investments required by the licensees. TELUS asserts that such a holistic view of the net benefits accruing to Canadians is the right focus

³⁰ Bragg, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraphs 14, 15 and 16.

for the Department. We submit that rather than develop market-based formulas outside of a consultative process, the Department work with industry to establish a methodology to set fees at a fair and reasonable level.³¹

46. Bell Mobility also agrees with MTS Allstream that the proceeds of the auction compensate Canadian taxpayers for the use of the public resource and that there is no reason to implement fees at a later date:

In general, it is MTS Allstream's view that bid prices paid in auctions are reflective of the very long life of the anticipated wireless business resulting from being able to exploit the license. In this context an additional "market-based" renewal fee would not likely be appropriate.³²

47. Bell Mobility notes that licence fees over and above what was paid in the spectrum auction are not conducive to investment and in fact, funds used to pay fees are funds that are not available for infrastructure investments. The CWTA estimates that in 2008/2009 Canadian licence fees will amount to approximately \$130 million for the industry. As noted by TELUS:

That \$130 million could otherwise be spent on network investment by operators assuming a corresponding reduction in licence fees. As the industry prepares to invest billions in 3G and LTE technology, infrastructure and services, the government should ask whether that investment is a fair return in itself and in turn whether higher taxes in terms of fee increases stimulates or deters said investment. If stimulating investment for the benefit of the Canadian public, because they are the beneficiaries of such investment, is the goal of public policy then higher fees are merely a prescription for failure.

48. When one takes into account the cumulative effect of annual licence fees as well as spectrum auction payments, Canadian licensees have paid billions of dollars to the Federal Government in spectrum-related fees since the 1980's. This, moreover, is over and above the billions of dollars in infrastructure investments, taxes paid to all levels of government and payroll charges that are required to operate wireless businesses and provide productivity and security enhancing wireless services to Canada and its citizens.

49. If the Department does implement licence fees at the time of renewal, then Bell Mobility submits that the Department adopt a cost-recovery regime. Such a move would put Canadian licensees on an equal footing with their U.S. counterparts. However, in order to ensure that

³¹ TELUS, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, pages 15 and 16.

³² MTS Allstream, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 68.

bidders understand exactly what is being auctioned, the cost-recovery fees must be determined prior to the commencement of the auction. MTS Allstream supports this position:

On the other hand, the Department could consider instituting a standard cost-based fee for spectrum administration, to recover the direct costs of spectrum management. For existing licenses, this could be put in place for renewal terms. For new licenses, this could be effective on license issuance. Thus bidders in auctions would have clarity regarding the total cost of the license and would incorporate the expectation of the ongoing administrative fee into their bid values.³³

5.0 OTHER ISSUES

5.1 Research and Development

50. The Department estimates that the licence condition has generated \$1 billion in associated research and development investment since its introduction in the 1980's. Bell Mobility notes that in the Harmonization Consultation it and other carriers identified that the cumulative effect of uncoordinated government fees, taxes and financial obligations related to licensing, originating from several distinct Federal departments and agencies, has placed a significant and onerous financial burden on all licensees. A reduction in this burden would make such funds available for investment in wireless networks, applications and services. Therefore, Bell Mobility supports the elimination of the condition entirely. This recommendation is supported by all parties that commented on this issue.³⁴

³³ MTS Allstream, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 69. Also see Rogers, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraphs 68 and 70.

³⁴ Bragg, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraphs 25, CWTA, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 6, Canadian Independent Telephone Company Joint Task Force (Joint Task Force), *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 5, MTS Allstream, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 71, Rogers, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 71, SaskTel, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 8, SkyTerra Inc., *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 2, , Telesat Canada, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 5, and TELUS, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 18. Ciel Satellite Group, the Canadian Satellite and Space Industry Forum and the Satellite Industry Association did not comment on this issue.

5.2 Tier Areas for Spectrum Licensing

51. The Joint Task Force argues "that the Tier 4 service area approach provides a reasonable balance between auction and infrastructure costs as well as a realistic possibility of developing an economically viable business case."³⁵

52. Bell Mobility does not support the establishment of a new Tier level, nor do we support the continued use of Tier 4 service areas. The more granular the service area, the more difficult it is to implement the spectrum. Moreover, the problem of frequency coordination at the border of adjacent service areas will be severely magnified as a result of the use of numerous small licence areas.

53. Border areas, between alternate service providers, can be classified as areas with greatly reduced spectral efficiency since part of the spectrum is unused in order to not create interference into the neighbouring system or suffer the effects of interference from neighbouring systems. To maximize spectral efficiency, it is recommended that the number of licences around border areas be minimized to the greatest extent possible. This implies that service areas should have the greatest amount of geographic area so that border areas constitute a small percentage of the total area.

54. Typically, a service provider must expect to coordinate spectrum usage with a neighbouring service provider in an area extending at least 25 km from the border. This border area would constitute the majority of Tier 4 service areas in the more densely populated areas of the country, and in some of the smaller Tier 4 service areas, the border area would constitute the whole of the service area.

55. Bragg notes that there is no need for the creation of a new tier level, and that all it will do is increase the complexity of the auction process:

Bragg opposes the creation of an additional Tier level. Bragg submits that the creation of a new Tier level would only create unnecessary complexity in the auction process. The Department has already established four Tier levels that divide Canada into a significant number of small service areas. Accordingly, Bragg can appreciate no apparent need for yet another Tier level.³⁶

³⁵ Joint Task Force, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 6

³⁶ Bragg, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraphs 27.

56. Concerning the question of whether the block and tier sizes proposed by the Department will allow the entry of new carriers in the market, Bell Mobility does not believe that the technical and band plan design should be fundamentally designed or predicated on the possibility of new entrants. It should instead be designed to deliver spectrum to achieve the maximum spectral efficiency possible, while effectively integrating with existing national and regional systems. As noted by the CWTA:

CWTA submits that the changes to the service areas as discussed are the antithesis of reliance on market forces. This type of action would be a step in the wrong direction. CWTA submits the Department should not be considering policy changes in order to support a particular business case over another.³⁷

57. Moreover, it is not clear that the development of a new tier level will help stimulate the development of wireless services in rural areas. As SaskTel argues:

SaskTel does not believe that providing a separate tier for urban versus rural areas will help stimulate development of wireless services in rural areas. Access to spectrum and the cost of acquiring spectrum is only one obstacle to providing service to rural areas. Even when spectrum is acquired economically, there are other challenges involved such as high costs for network infrastructure in remote areas, high backhaul and transport costs, and the high cost of operating the network and providing customer service in these remote areas.³⁸

58. Bell Mobility believes that a broader licensing approach has served Canada well, especially when compared to the fragmented licensing approach and resulting problems experienced in the U.S. (e.g., coverage gaps, customers triggering unintended roaming fee due to hand-off between different licensees). The Tier 2 service areas are based on Statistics Canada census divisions, and result in 14 areas covering all of Canada. Bell Mobility also submits that Tier 2 regional spectrum blocks would provide the greatest degree of flexibility for those requiring spectrum for expansion or to meet capacity constraints in certain areas. Further, as the Department noted in its 2000 PCS Auction Final Policy, regional spectrum blocks can also be aggregated by those wishing to provide national services.

59. Bell Mobility submits that to the extent that the Department insists on accommodating a Tier service area that addresses the difference between urban and rural areas, then the

³⁷ CWTA, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 6.

³⁸ SaskTel, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 11.

Department should use the existing Tier 3 service area. The development of a new Tier service area will create unnecessary costs to both the Department and Industry participants, especially since existing network infrastructure was developed, and implemented based on the existing Tier service areas.

60. Bell Mobility believes that the Department should licence spectrum on the basis of Tier 2 service areas. This would be consistent with the Policy Framework's enabling guidelines (f) spectrum management practices, including licensing methods, should minimize administrative burden and be responsive to changing technology and market place demands; and (h) spectrum policy and management should support the efficient functioning of markets by ensuring that appropriate interference protection measures are in place.

61. MTS Allstream suggests the use of a sealed-bid first-price approach to compete for a subsidy required for a rural area build-out.³⁹ However, Bell Mobility notes that this type of auction is the same style of auction process that they do not want used for the auction of spectrum in general.⁴⁰

62. Bell Mobility agrees with SaskTel that there are other mechanisms available to access spectrum in rural areas:

For spectrum acquisition, there are other mechanisms available to obtain access to spectrum in rural areas. Secondary markets for spectrum acquisition are available, including spectrum transfer and subordinate licensing arrangements. For the high costs of network construction and operation, various funding sources are available to help alleviate some of these costs.⁴¹

63. However, Bell Mobility believes that the secondary markets can be improved. Bell Mobility agrees with the *Telecommunications Policy Review Panel Final Report* which recommended moving toward the establishment of market-based exclusive spectrum rights (i.e., the ability to buy, sell and lease spectrum) and the elimination of barriers to the

³⁹ MTS Allstream, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraphs 39 and 40.

⁴⁰ MTS Allstream, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 50.

⁴¹ SaskTel, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 11. See also Rogers, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, paragraph 76, and TELUS, *Comments – Canada Gazette Notice DGRB-001-09 – Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 19.

development of secondary markets in spectrum.⁴² This is consistent with the *Policy Framework's* enabling guideline (h) which states that spectrum policy and management should support the efficient functioning of markets by facilitating secondary markets for spectrum authorizations.

64. Similarly, Bell Mobility is supportive of the current transferability condition which was one of the enhanced spectrum rights associated with the introduction of spectrum auctions in Canada in the late 1990's. While Bell Mobility believes that the transferability condition should be maintained, the level of activity under this condition may increase if Industry Canada allowed licensees to engage in transfers without Industry Canada approval. A self-reporting regime could be established, for eligible licensees, along with the development of an appropriate database on the Department's website which could track and list current licensees and their spectrum holdings.

6.0 CONCLUSION

65. Bell Mobility appreciates the opportunity to participate in the Department's *Consultation on Revisions to the Framework for Spectrum Auctions in Canada*. We look forward to the Department's final policy concerning these issues of significant importance to the future of the Canadian wireless industry.

*** End of Document ***

⁴² Canada Gazette Notice DGRB-001-09, *Consultation on Revisions to the Framework for Spectrum Auctions in Canada*, page 2.