

Canada Gazette Notice No. SMSE-005-11

**Decisions on a Band Plan for Broadband Radio
Service (BRS) and Consultation on a Policy and
Technical Framework to License Spectrum in the
Band 2500-2690 MHz**

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**Comments
of
Bell Mobility Inc.**

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Table of Contents

	<u>Page</u>
1.0 EXECUTIVE SUMMARY	1
2.0 SPECTRUM PACKAGING FOR LICENSING.....	5
2.1 Block Sizes.....	5
2.2 Tier Sizes for BRS Spectrum	6
3.0 PROMOTING COMPETITION	6
3.1 Spectrum Aggregation Limits and Spectrum Set-Asides.....	6
3.2 Promoting Service Deployment in Rural Areas	25

1.0 EXECUTIVE SUMMARY

1. Bell Mobility Inc. (Bell Mobility) is pleased to respond to the Department's Consultation regarding *Decisions on a Band Plan for Broadband Radio Service (BRS) and Consultation on a Policy and Technical Framework to License Spectrum in the Band 2500-2690 MHz* – Notice No. SMSE-005-11, as published in the *Canada Gazette* Part 1, 12 February 2011 (the Consultation).

2. The stated intent of the Consultation is to establish a policy and technical framework that will govern the auction of spectrum in the band 2500-2690 MHz, also referred to as the 2500 MHz band. The Consultation seeks comments regarding general policy considerations related to spectrum packaging, competition issues and rural deployment for the auction of the 2500 MHz band.

3. Industry Canada's Consultation on the 2500 MHz spectrum auction is another key piece of the evolution of global telecommunications networks. Wireless telecommunications capability has now become a significant instrument of national competitiveness and productivity. Over a short period of time, wireless networks have evolved from primarily carrying voice traffic to true broadband networks which are a pillar of Canadian economic growth and productivity in the digital age. The impact of this change has resulted in Bell Mobility observing a dramatic transformational shift in its HSPA+ network traffic which far exceeds all expectations and forecasts.

4. Bell Mobility is at the forefront of these Canadian wireless achievements. Through thousands of distribution points across Canada, Bell Mobility offers Canadians the widest array of leading edge wireless devices including smartphones, Turbo Hubs, Turbo Sticks and tablets. Bell Mobility's world-class network is supported by billions of dollars of investment in its networks as well as in wireless R&D and, most recently, the development of mobile applications. As of year-end 2010, Bell Mobility had over 7.2 million wireless subscribers and employed thousands of Canadians.

5. These achievements allow the Canadian wireless industry to make significant contributions to the Canadian economy. A report prepared by OVUM Consulting titled *The Benefits of the Wireless Telecommunications Industry to the Canadian Economy* found that wireless communications generate a total economic value of \$39 billion for the Canadian economy – over \$16 billion in terms of direct contribution to gross domestic product (GDP), an

additional \$14 billion benefit due to the economic flow through to contributing suppliers in the supply chain and close to \$9 billion in consumer surplus.

6. The Canadian wireless industry has benefited from the relative freedom from regulation. Traditionally, this less-interventionist policy approach has allowed Canada's wireless companies to adapt and grow, be competitive, and deliver innovative wireless services to Canadian consumers at affordable prices. Competition has resulted in 96% of Canadians having access to several HSPA+ networks – more than is available to the citizens of any other G8 country. Canada's HSPA+ networks are world-class and support among the fastest wireless speeds available anywhere. This achievement can only occur through billions of dollars of infrastructure investment by the industry, with hundreds of millions of dollars in network improvements and enhancements invested annually.

7. The above milestones have been achieved over the years against the backdrop of a minimally intrusive regulatory approach. However, there is a worrisome trend of Industry Canada becoming more interventionist in the wireless sector. Bell Mobility submits that no factual basis exists for intervention. There is neither insufficient competition nor an incentive to deter entry. As a result, market forces will ensure that those willing and able to put the spectrum to its best use will bid for and acquire spectrum. Applying spectrum set-asides or spectrum caps varies from the market-based approach inherent in spectrum auctions and begins to reinsert bureaucratic judgment into the equation.

8. Bell Mobility strongly believes that it would not be in the public interest to impose set-asides in the 2500 MHz spectrum auction, nor does it believe, given the current evolution and competitiveness of the Canadian wireless market, that an auction spectrum aggregation limit (spectrum cap) should be placed on the amount of spectrum that can be acquired by any single wireless service provider including its affiliates. The appropriate policy is for the Department to focus on enabling competition over more advanced services. As a recent Phoenix Center Policy Paper titled *A Policy Framework for Spectrum Allocation in Mobile Communications* (or Phoenix Center Policy Paper), argues, policy makers need to carefully consider the trade-off that arises "between dividing a fixed amount of spectrum into (a) many small pieces or (b) few big pieces,"¹ and that this implies that "since advanced services, such as mobile broadband, demand that each firm possess large amounts of spectrum, the relevant tradeoff is potentially

between many firms selling less advanced services versus few firms selling more advanced services."²

9. It is critical to note that Bell Mobility, like other national wireless providers (i.e. network providers that build out in both rural and urban areas), requires additional spectrum. Explosive wireless data growth, enabled by Bell Mobility's billions of dollars of investment in its network, is a reality in Canada driven by a virtuous circle of affordability, variety of devices, richer content, faster speeds and DSL/Cable like service offerings. In fact, in 2008, the average smartphone user on Bell Mobility's network used approximately 15 MB of data per month, but by 2010 this had increased to 300 MB per month representing a 1900% increase for the same average user. Bell Mobility is currently using, or plans to use, its entire existing spectrum and does so in a spectrally efficient manner. However, given the national focus of our network deployment and the extensive use of leading edge smartphones by our several million customers, Bell Mobility is quickly using up its available spectrum.

10. Wireless spectrum is the essential ingredient which, if properly employed, can enable Canada to fully exploit the opportunity and promise of the wireless broadband economy. To that end, it is important to note that spectrum in different frequency bands have different characteristics, and as such, network operators require various types of spectrum depending on the services and business models they are trying to implement. As Professor Thomas Hazlett indicates in a report titled *Economic Issues in Spectrum Utilization* (or Hazlett Report), attached as Appendix 2 to these comments, "the evidence clearly reveals that the firms acquiring the largest bandwidth holdings are those that serve the most customers and build the largest, most expensive network infrastructure."³ This led him to the conclusion that "this is a set of facts that is strongly consistent with the efficiency view, and strongly inconsistent with the anticompetitive view."⁴

11. There are aspects of 700 MHz and 2500 MHz spectrum that indicate that 2500 MHz spectrum can be an effective option in more densely populated areas. In a report titled *Comparison of Radio Propagation Characteristics at 700 and 2,500 MHz Pertaining to Macrocellular Coverage* (or CRC Report), attached as Appendix 3 to these comments, the

¹ Beard, T.R., G. S. Ford, L.J. Spiwak, and M. Stern, A Policy Framework for Spectrum Allocation in Mobile Communications, Phoenix Center Policy Paper No. 42, available at <http://ssrn.com/abstract=1800063>, page 29.

² Ibid.

³ Hazlett, T., *Economic Issues in Spectrum Utilization*, February 2011, page 7.

⁴ Ibid.

Communications Research Centre Canada shows that "the lower path loss at 700 MHz offers the potential for increased coverage area per base station,"⁵ which means that "fewer base stations would be required at 700 MHz than at 2,500 MHz."⁶

12. The Department must not lose sight of the fact that 2500 MHz spectrum, of which there is considerably more available than 700 MHz spectrum, is very suitable to the needs of carriers whose operations have a greater focus on urban/regional markets. If there is a joint 700 MHz and 2500 MHz auction, there will be a substantial amount of spectrum available for auction, ranging from 110 MHz up to 170 MHz in some areas. With two spectrum bands and this amount of spectrum available, all parties should be allowed to bid in an open auction. This allows the market to determine the appropriate substitutability between 700 MHz and 2500 MHz spectrum and network operators to focus their efforts in order to obtain the appropriate mix of spectrum holdings given the business model that they are trying to implement (i.e. national versus urban/regional).

13. Moreover, existing BRS licensees need access to additional spectrum. As indicated in the Consultation Paper, existing BRS spectrum licensees will have different spectrum holdings depending on the geographic location of the license. It is critical that these licensees have the opportunity to bid for 2500 MHz spectrum throughout the country.

14. The following summarizes Bell Mobility's position:

- There should be no spectrum set-asides, aggregation limits (caps) or other concessions as part of the 2500 MHz auction;
- There should be 5 + 5 MHz blocks for FDD-based paired spectrum, and 10 MHz blocks for TDD-based unpaired spectrum, and the block sizes should be consistent across all regions;
- Licensing of 2500 MHz spectrum should be based on Tier 3 service areas across all spectrum blocks; and
- There is no need for specific measures, such as roll-out requirements, within the 2500 MHz spectrum auction process in order to ensure further deployment of BRS spectrum in rural and remote areas.

⁵ Communications Research Centre Canada, Comparison of Radio Propagation Characteristics at 700 and 2,500 MHz Pertaining to Macrocellular Coverage, April 2011, page iii.

⁶ Ibid.

2.0 SPECTRUM PACKAGING FOR LICENSING

2.1 Block Sizes

1-1. Should the block sizes be uniform in size?

- (a) If a uniform size is preferred, what size should be considered?**
- (b) If a mix of block sizes is preferred, what combinations and arrangements should be considered?**

1.2 In the specific geographic regions discussed above and shown in Appendix A, which block size option(s) should be adopted and why is this option(s) preferred over the other options? Should the combinations and arrangements of block sizes be the same or different in different areas?

15. Bell Mobility submits that the block sizes be the same in all geographic regions discussed in Appendix A of the Consultation Paper, but that different block sizes should be used for FDD-based paired spectrum and TDD-based unpaired spectrum. For FDD-based paired spectrum, the block sizes should be 5 + 5 MHz. The 5 + 5 MHz block size will allow for more operators to acquire spectrum, and at the same time allow bidders the flexibility to assemble blocks into larger blocks of contiguous spectrum if so desired in order to support their business plans.

16. For TDD-based unpaired spectrum, the block sizes should be 10 MHz. Given that network operators can use TDD spectrum with either LTE or WiMAX technologies, guardbands may be required in order to reduce problems of interference. As a result, if there are small block sizes, with multiple operators, the need for guardbands will compromise the efficient use of the TDD-based spectrum. Moreover, Bell Mobility submits that the 5 MHz "restricted bands" at 2570 – 2575 MHz and 2615 – 2620 MHz be added to the adjacent allocated TDD blocks above 2575 MHz and below 2615 MHz.

17. Furthermore, in order to help facilitate the efficient use of 2500 MHz spectrum, Bell Mobility recommends that the Department have a policy as part of the 2500 MHz spectrum auction framework that allows for the creation of contiguous spectrum blocks consisting of newly licensed and previously licensed BRS spectrum (if necessary). For example, the policy may allow for the voluntary swapping of spectrum prior to the final assignment of spectrum licenses. By ensuring that all BRS spectrum license holders have contiguous spectrum, the Department

will increase the likelihood that the 2500 MHz spectrum band will be used as efficiently as possible.

2.2 Tier Sizes for BRS Spectrum

- 2-1. The Department seeks comments on whether the licensing of 2500 MHz spectrum should be based on uniform tier sizes across all spectrum blocks, or on a mixture of tier sizes.**
- 2-2. Based on your answer above, if a uniform tier size is preferred, what tier size should be adopted? If a mixture of tiers is preferred, please indicate the proposed tier(s) for each spectrum block.**

18. Bell Mobility recommends that the Department should license the 2500 MHz spectrum on the basis of Tier 3 service areas. It is true that larger geographic areas allow for fewer neighbouring service providers and thus less coordination problems. However, given the propagation properties of 2500 MHz spectrum, this should be less of a problem than with lower frequency spectrum bands. As a result, the benefits of having the flexibility to focus on smaller geographic areas (regardless of whether they are urban or rural), will likely exceed the cost of any coordination problems, especially given the fact that existing BRS licenses already have Tier 3 service areas (with the exception of Northern Canada). Moreover, network operators will still have the ability to aggregate smaller service areas into larger ones.

3.0 PROMOTING COMPETITION

3.1 Spectrum Aggregation Limits and Spectrum Set-Asides

- 3-1 If the Department determines that there is a need for measures to promote competition in the wireless services market, which of the above mechanisms would be most appropriate in the 2500 MHz band and why should this mechanism be considered over the other? Comments should also indicate if further restrictions should apply.**

In light of your response above, and recognizing that pending decisions on block sizes and tier sizes could influence your response:

- 3-2 (a) If the Department were to implement spectrum aggregation limits (caps), should a cap apply to the 2500 MHz band? If a cap is necessary:
 - (i) What should be the size of the cap and should this be specific to either the paired and/or unpaired spectrum bands?**
 - (ii) Should bidders and their affiliates or associates share the cap?****

- (iii) How long should the cap remain in effect?**
- (b) If the Department were to implement a set-aside in the 2500 MHz auction:**
 - (i) Who should be entitled to bid in the set-aside block(s), and should the entitled bidders be restricted to bidding on the set-aside only?**
 - (ii) How much spectrum should be set-aside and which block(s) should be set-aside?**
 - (iii) If the set-aside were to include multiple blocks of spectrum, should these blocks be contiguous?**
 - (iv) What restrictions should be put in place to ensure that policy objectives are met (for example, should trading of the set-aside be restricted for a given time period)?**

19. Bell Mobility submits that there is no need for measures such as spectrum set-asides, aggregation limits (or caps), or any other restrictions in order to promote competition in the Canadian wireless services market. The Canadian wireless market has, in the past, benefited from the relative freedom from regulation. Traditionally, this less-interventionist policy approach has allowed Canada's wireless companies to adapt and grow, in order to be competitive and deliver innovative wireless services to Canadian consumers at affordable prices. Competition between wireless network providers has resulted in billions of dollars being invested in new technologies and services. This investment resulted in Canada being a world leader in the provision of wireless services. For example, 96% of Canadians now have access to HSPA+ networks that can offer mobile broadband speeds up to 21 Mbps; Canada's wireless service prices compare favourably to similar countries; and Canada has among the lowest wireless service revenues as a percentage of GDP. The combination of network quality and affordable prices has resulted in Canadians having among the highest average voice minutes per month.

20. Some may argue that spectrum allocation policies are required to promote competition, in order to ensure that existing network operators do not "overbid" (pay above the mere "use value" of the spectrum) in order to keep entrants out of the market. However, there is significant trade-off between increasing the number of competitors and achieving the scale necessary in order for network operators to operate in the most efficient manner. As the Phoenix Center Policy Paper argues, policy makers need to carefully consider the trade-off that arises "between dividing a fixed amount of spectrum into (a) many small pieces or (b) few big pieces,"⁷ and that this implies that "since advanced services, such as mobile broadband, demand that each firm

⁷ Phoenix Center Policy Paper, page 29.

possess large amounts of spectrum, the relevant tradeoff is potentially between many firms selling less advanced services versus few firms selling more advanced services."⁸

21. In order to understand the implications of this trade-off, it is important to determine whether there is insufficient competition and whether or not current network operators have the incentive to overbid in order to deter entry. As Professor Leonard Waverman and Kalyan Dasgupta have observed in a report titled *Time to Set Aside Caps that Don't Fit: The Limits of Spectrum Policy in Canada* (or Waverman-Dasgupta Report), attached as Appendix 1 to these comments, "the same factors that suggest that there is not insufficient competition in the market also suggest that the incentives for incumbent firms to overbid in order to deter entry are weak."⁹ Thus, where there is sufficient competition and weak incentives to deter entry, then policy makers should focus on enabling competition among firms selling more advanced services rather than trying to increase or maintain competition.

22. As discussed further below, there is sufficient competition in the Canadian wireless services market and the incentives to overbid in order to deter entry are weak. This implies that spectrum auctions should not be used as a tool in order to make artificial adjustments to the level of competition in the market. Therefore, Bell Mobility strongly believes that there is no need for measures such as spectrum set-asides, aggregation limits (or caps), or any other restrictions in order to promote competition in the Canadian wireless services market.

Sufficient Competition – Canada is a World Leader

23. There is no doubt that the wireless industry requires significant capital investments to deploy network technologies. These capital investments are fixed, and due to their specific use, they are also sunk (i.e. there is little value in using the investments for alternative uses if the network operator were to go out of business). In such environments network operators need to charge prices above short run marginal cost in order to recover the fixed costs associated with operating in the industry. This is especially true in dynamic industries that require frequent upgrades to products and networks in order to satisfy consumer demand.

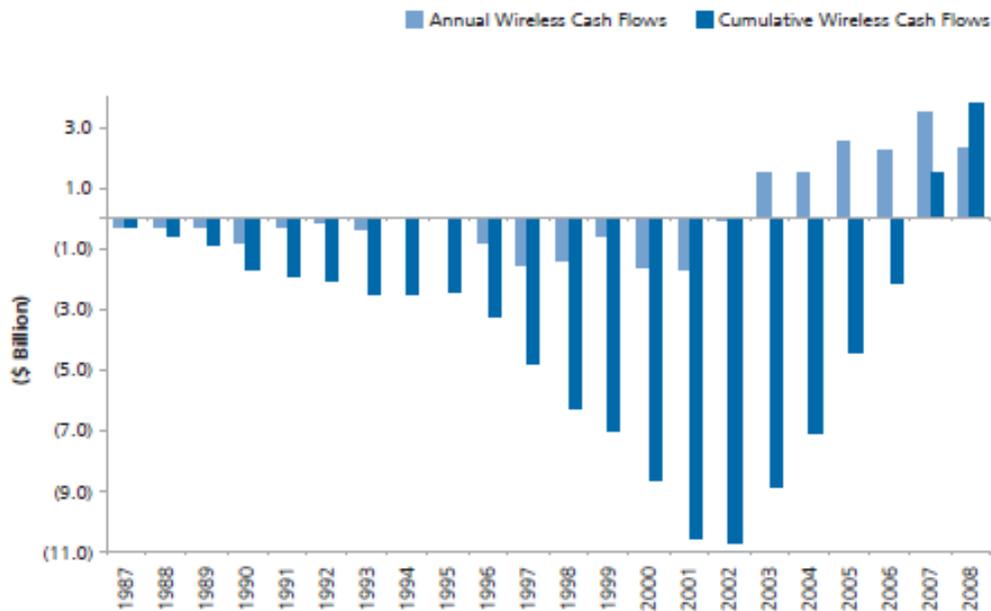
⁸ Ibid.

⁹ Waverman, L. and K. Dasgupta, *Time to Set Aside Caps that Don't Fit: The Limits of Spectrum Policy in Canada*, February 2011, paragraph 38.

24. In these dynamic environments, investors will anticipate that initial cash-flows will be low or even negative, but that higher margins in later years will compensate them for the high initial capital expenditure. For example, a large-scale new network investment will depress cash-flows in the year that the investment is made, but as capital requirements decline over time cash flow margins improve. This is not evidence of market power, but is simply the normal dynamics of the investment cycle. Public policy should not redistribute the returns to network operators when margins improve at the later end of the investment cycle. This will significantly dampen network operators' incentive for risk-taking and innovation.

25. As figure 1 shows, there have been years of massive investment, significant risk and the accumulation of significant operating losses in the Canadian wireless industry. This does not even include the \$4.26 billion spent in the AWS auction or the subsequent network investments that are required to implement the use of that spectrum. The inclusion of these investments would once again result in a negative cumulative cash flow for the wireless industry.

Figure 1 Canadian Wireless Industry Cash Flow, 1987-2008



Source: NERA Economic Consulting, *Regulatory Policy Goals and Spectrum Auction Design: Lessons from the Canadian AWS Auction*, Figure 4.

26. Canadians are now receiving the benefits of the substantial capital investments made by the wireless industry over the last 20 years. In Canada, there are now more wireless

connections than local wireline connections¹⁰, and the wireless market revenues now contribute 41% of total telecommunication revenues.¹¹ The wireless industry also makes a significant contribution to the Canadian economy. A report prepared by OVUM Consulting titled *The Benefits of the Wireless Telecommunications Industry to the Canadian Economy* found that wireless communications generate a total economic value of \$39 billion for the Canadian economy – over \$16 billion in terms of direct contribution to GDP, an additional \$14 billion benefit due to the economic flow through to contributing suppliers in the supply chain and close to \$9 billion in consumer surplus.¹² In terms of employment, the wireless industry employs over 294,000 people in Canada and the value added per employee in the wireless sector is estimated to be \$195,000 per year, compared to \$71,000 per year for the average Canadian employee.¹³

27. Yet Industry Canada's Consultation requests comments on whether more should be done to improve the level of competition. This urge to micromanage the wireless market is being driven by inaccurate claims by some that the industry is not competitive enough. This misperception is fuelled by reports featuring sensational titles and little evidence. These claims are being made by those who stand to benefit from government intervention. The reality is that the Canadian industry shows all the markings of intense competition. It is a lively market in which competitors gain and lose ground every quarter.

28. Canada is not falling behind. With respect to price, Canada compares favourably to similar countries. In terms of affordability (wireless service revenue as a percentage of GDP), and use (average voice minutes per month), Canada is in the top three in the G20.¹⁴ As the Waverman-Dasgupta Report observes, "the deployment of new HSPA+ networks, for instance, puts Canada well ahead of several European nations and the United States in the 'mobile broadband race'.¹⁵ They go on to conclude that "the high capital intensity of the Canadian wireless industry relative to its international peers also seems incompatible with a view of a

¹⁰ Table 5.1.8, CRTC *Communications Monitoring Report 2010*, available at <http://www.crtc.gc.ca/eng/publications/reports/policymonitoring/2010/cmr2010.pdf>.

¹¹ CRTC *Communications Monitoring Report 2010*, page 153.

¹² OVUM Consulting, *The Benefits of the Wireless Telecommunication Industry to the Canadian Economy*, April 2010, available at http://www.cwta.ca/CWTASite/english/pdf/OVUM_Study.pdf, page 1.

¹³ *Ibid.*, pages 21 and 22.

¹⁴ For a more detailed discussion see Comments of Bell Mobility Inc. filed in Canada Gazette Notice No. SMSE-018-10, *Consultation on a Policy and Technical Framework for the 700 MHz Band and Aspects Related to Commercial Mobile Spectrum*, paragraphs 70 – 74.

¹⁵ Waverman-Dasgupta Report, paragraph 49.

passive oligopoly that is behind the international leading edge of mobile deployments,"¹⁶ and that "in fact, a sober analysis would suggest that Canada has come to be something of a leader in deployment of advanced data networks, something that it could not have claimed in 2004."¹⁷

29. In terms of the level of concentration in the Canadian wireless market, 4G Americas, an international wireless industry group, shows that Canada has 7 wireless providers that have deployed HSPA+ service (Bell Canada, Mobilicity, Rogers, SaskTel, T-Bay Tel, TELUS and Vidéotron), four more than any other G20 country.¹⁸ Canada's HSPA+ networks provide more than 96%¹⁹ of Canadians with wireless broadband at speeds up to 21 Mbps and in some areas up to 42 Mbps.

30. However, even if the most restrictive analysis is used – which only considers national providers – there is nothing exceptional about the level of concentration in the Canadian market. Larger countries such as Germany, Japan and the United States do not have significantly more wireless providers than smaller countries such as Canada. As figure 2 shows, there exists regularity across countries which show that it is difficult to sustain more than four competitors in a national wireless market, and that two or three firms have a majority of the market share. Furthermore, if the AT&T/T-Mobile merger is approved, the number of national competitors in the U.S. will fall to three and the market share of the top two firms will increase. As the Waverman-Dasgupta Report conclude, such consolidation is the norm:

Overall, the picture points overwhelmingly to a naturally concentrated market, whose boundaries are determined by the interaction between the costs of establishing a network and the demand that is available to be served. Consolidation rather than further "greenfield" entry seems to be the norm in the developed world. This strong suggestion of a natural limit on entry has profound implications for the advisability of a policy such as a set-aside ...²⁰

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ As of 6 January 2011. See 4G Americas at <http://www.4gamericas.org/UserFiles/file/Global%20Status%20Updates/Global%20Status%20Update%20January%2006%202011pr.pdf>.

¹⁹ The CRTC's latest *Communications Monitoring Report*, issued on July 29, 2010, indicates (at page 153) that the advanced wireless network that supports handsets, such as smartphones and turbo sticks, is available to 96% of Canadians.

²⁰ Waverman-Dasgupta Report, paragraph 61.

Figure 2: Market Concentration

Country	National HHI	# National Competitors	Top 2 Share
USA	2220	4	55.20%
UK	2240	5	50.60%
Germany	2920	4	70.20%
Italy	3020	4	71.70%
Canada	3110	3	67.40%
Australia	3120	4	73.30%
Sweden	3370	4	75.90%
France	3390	3	78.10%
Finland	3490	3	77.00%
Japan	3590	3	77.60%

Source: FCC, 14th CMRS Report.

31. This conclusion is consistent with the Phoenix Center Policy Paper which indicates that more spectrum does not automatically imply the viability of more firms:

Stated another way, the conventional wisdom that "more" spectrum somehow a *fortiori* means "more" firms simply is not true. Economics determines the viable number of providers, not the intentions of policymakers. Mobile services cannot be supplied without spectrum, but having spectrum does not imply financial success. ... This is apparent from the history of the mobile industry, which has undergone consolidation over much of its history (and may be due for more). ... The reality is that, while we may want five, ten, or twenty mobile telephony service providers, the economics are unlikely to permit it. Consequently, the heavy use of incumbent-exclusion policies (such as spectrum caps or other limitations on spectrum use by firms) may not result in more providers, but may instead lead simply to inefficient use of scarce spectrum resources.²¹ [Footnotes omitted]

32. Therefore, the facts clearly indicate that the Canadian market is competitive and is not lagging behind. The Department's objective must be an efficient and competitive wireless market, and not to artificially maintain a large number of new entrants, many of which have already expressly stated they intend to consolidate. Propping up new entrants, and continually providing them with new entrant concessions (particularly when the new entrants are large and well capitalized), will increase costs and reduce the overall efficiency of the market to the detriment of Canadians.

²¹ Phoenix Center Policy Paper, pages 7 – 8.

"Hoarding" or "Warehousing" Spectrum is Not a Concern

33. Wireless spectrum is the essential ingredient which, if properly employed, can enable Canada to fully exploit the opportunity and promise of the wireless broadband economy. To that end, it is important to note that spectrum in different frequency bands have different characteristics, and as such, network operators require various types of spectrum depending on the services and business models they are trying to implement. Thus, it should not be surprising that national carriers require larger and more diverse inventory of spectrum in order to satisfy the demands of their millions of customers.

34. In a report titled *Comparison of Radio Propagation Characteristics at 700 and 2,500 MHz Pertaining to Macrocellular Coverage* (or CRC Report), attached as Appendix 3 to these comments, the Communications Research Centre Canada shows that the propagation characteristics of 700 MHz and 2500 MHz are significantly different. The report examines five propagation scenarios representing various rural and urban/suburban environments. Their analysis shows that "the lower path loss at 700 MHz offers the potential for increased coverage area per base station,"²² which means that "fewer base stations would be required at 700 MHz than at 2,500 MHz."²³

35. There are aspects of 700 MHz and 2500 MHz spectrum that indicate that 2500 MHz spectrum is a very effective option in more densely populated areas. For example, 700 MHz spectrum has large coverage areas which creates interference problems if towers are required to be placed close together in order to create additional capacity to support demand in that area. In those markets where capacity is limited, 2500 MHz radios can be added to existing sites rather than requiring additional sites to be built. Thus, in terms of increasing capacity Bell Mobility notes that in markets with larger subscriber density (e.g. greater than 5 subscribers per square kilometre), 2500 MHz spectrum is more effective than 700 MHz.

36. If there is a joint 700 MHz and 2500 MHz auction, there will be a substantial amount of spectrum available for auction, ranging from 110 MHz up to 170 MHz in some areas.²⁴ With this much spectrum available, it makes it extremely costly for network operators to purchase

²² Communications Research Centre Canada, *Comparison of Radio Propagation Characteristics at 700 and 2,500 MHz Pertaining to Macrocellular Coverage*, April 2011, page iii.

²³ Ibid.

²⁴ This consists of 50 MHz of usable FDD spectrum available for auction in the 700 MHz spectrum band and the 60 to 120 MHz of spectrum available for auction in the 2500 MHz spectrum band.

spectrum and not put it to productive use. Furthermore, an additional benefit of having a joint auction with no spectrum set-asides or spectrum aggregation limits is that it allows the market to determine the appropriate substitutability between 700 MHz and 2500 MHz spectrum. This allows network operators the ability to bid on the two types of spectrum in different geographic areas in order to obtain the appropriate mix of spectrum holdings given the business model that they are trying to implement.

37. Even with this much spectrum being auctioned, the Consultation raises concerns that in order to protect or enhance competition in the Canadian wireless market, mechanisms such as spectrum set-asides or spectrum caps are required in order to ensure that large providers do not bid too aggressively for spectrum in order to "warehouse" spectrum and restrict output. However, the benefits of outbidding an entrant are dubious especially if outbidding results in a significant cost disadvantage relative to other wireless operators in the market. No one operator can afford to significantly increase its cost relative to the other operators in the market and still remain competitive. Thus, a wireless operator will not want to spend hundreds of millions of dollars more than its rivals in order to acquire spectrum which it will not put to productive use.

38. It is simply too costly to try and purchase enough spectrum in order to foreclose other bidders. An example of the magnitude of the cost is provided by Professor Michael Katz:

Suppose that there are 270 MHz of suitable spectrum available for license in blocks of 30 MHz each. Also suppose that a service provider needs one such block in order to be a viable competitor. Lastly, suppose that incumbents currently hold licenses to 150 MHz of spectrum in some geographic market. Any one of the four remaining 30-MHz blocks could be used by an entrant to become a new competitor. Hence, an incumbent would have to purchase licenses for all four remaining blocks in order to deter entry. Thus, if an entrant were willing to bid up to \$50 million in order to obtain a 30-MHz license, the incumbent would have to spend \$200 million to block entry through spectrum warehousing.

Of course, as the total amount of spectrum available rises, it becomes even more costly for an incumbent to attempt to deter entry by warehousing spectrum. For example, if the total spectrum available is 650 MHz, then even if incumbents held 250 MHz of spectrum and an entrant needed 100 MHz to be a viable competitor, an incumbent would have to buy licenses for four times as much spectrum as would an entrant in order to deter entry. Moreover, for the right price, another incumbent might be willing to sell some its licenses to a potential entrant, thus increasing the amount of spectrum that an incumbent attempting to deter entry through warehousing would have to purchase.²⁵

²⁵ Katz, M.L., "An Economic Analysis of the Rural Telecommunications Group's Proposed Spectrum Cap", 2 December 2008 (Filed as *Appendix A* to the *Opposition of Verizon Wireless*, RM-11498).

39. As discussed in the Hazlett Report, an efficiency rationale for obtaining as much spectrum as possible is just as convincing an argument as the foreclosure argument. The Hazlett Report states that such claims of anticompetitive warehousing of spectrum "overlook a far more salient fact: large networks make very productive use of bandwidth precisely because of the complementarity of the new [spectrum] with those they already hold."²⁶ In fact, the report concludes that while efficiency arguments are at least as compelling theoretically as arguments that spectrum is being acquired for output restriction, the evidence clearly reveals a set of facts that support the efficiency arguments. The largest bandwidth holdings are those that serve the most customers and build the largest, most expensive network infrastructure:

Two testable implications allow us to evaluate the rival hypotheses. First, if networks with large spectrum holdings are amassing bandwidth to restrict output, then their subscriber and/or usage levels should decline relative to other networks. Alternatively, if such networks are acquiring spectrum and using it to serve more customers than rivals, then the implication is that bandwidth is being acquired for productive purposes. Second, if strategic spectrum purchases are being executed to block rivals from gaining access to spectrum, then the acquiring firms would be "hoarding" spectrum, if not by letting it sit idle, but by under-utilizing it. In that case, they amass bandwidth but economize on capital outlays relative to the expenditures undertaken by firms with no such anticompetitive motive. Alternatively, were the spectrum acquired for productive purposes, then large bandwidth owners would also be the largest investors in network infrastructure. ... The evidence clearly reveals that the firms acquiring the largest bandwidth holdings are those that serve the most customers and build the largest, most expensive network infrastructure. **This is a set of facts that is strongly consistent with the efficiency view, and strongly inconsistent with the anticompetitive view.**²⁷ [Emphasis added]

40. The Hazlett Report also points out that network operators that have "holding inventories" of spectrum is fully consistent with efficient spectrum use. It allows network operators to implement capital investments on infrastructure more efficiently and effectively because it can provide the time necessary to implement the optimal least cost solution:

Efficient spectrum use is also fully consistent with the existence of some level of "slack," what is known as "holding inventories" in other markets. Economical deployment lags exist. Infrastructure – base stations, backhaul, and mobile radios – make airwaves far more valuable. Because the operator will exploit this demand by charging for the use of the network, it has strong incentives to put such capital in place. But speed is a costly input; building networks more quickly costs more, all else equal. Taking due time to architect new systems, assemble

²⁶ Hazlett Report, page 5.

²⁷ Hazlett Report, pages 6 and 7.

labor, procure physical inputs, and arrange other assets – such as leases for preferred tower sites – generally lowers costs. It is also the case that waiting produces an important economic benefit, option value. The ability to deploy superior systems or technologies as they become available over time is one clear consideration in constructing, expanding, or upgrading wireless networks.

Hence, not all spectrum resources should always be fully committed, or used to maximize capacity, in networks. At any point in time, there will predictably be efficiency reasons to not deploy certain assets. In addition to husbanding resources on an optimal investment time path, networks are regularly built and operated so as to reserve some – indeed, abundant – slack capacity during ordinary operations. This allows not only for traffic fluctuations over standard daily or seasonal cycles, with peak times seeing higher utilization rates, but provides relatively low-cost provision of both emergency capacity (expansion) and standard growth trends. [Footnotes omitted]²⁸

41. Some will argue that the large national network providers have more than enough spectrum even if efficiency considerations are factored in. However, Bell Mobility's network will face significant capacity constraints in the short-term in both rural and urban areas. Moreover, it is important to note that there have been numerous occasions, including several outside of Industry Canada's licensing processes, to purchase mobile spectrum in Canada. Looking at the list of applicants for PCS spectrum in 1995, for example, nowhere do names like Shaw or Vidéotron appear. The same holds true for the list of those who bid for spectrum in Industry Canada's 2001 PCS Auction.

42. That does not mean some of these players have not had an interest in wireless. In fact, when new PCS provider Microcell launched an initial public offering (IPO) in 1997, Shaw and Vidéotron were both listed as owning about 10% of Microcell. What is striking is that before and after the IPO, they could have grown their stake, but chose not to. In fact, not long after the IPO, Shaw sold its shares in 1998 for an after-tax profit of around \$11 million. Media reports said that the wireless investment was sold because it was not "core" to their future business. This contrasts significantly with the earlier action of another cable company, Rogers Cable who, in the 1980s, chose to take the risk of entering the nascent wireless market.

43. A similar story holds true for Vidéotron. In 2001, they declared their wireless investment "noncore" and attempted to sell its stake for a reported \$1 billion. Interestingly, they found that no one would buy at that price and eventually they declared a \$99 million write-down on the investment in 2002.

²⁸ Hazlett Report, pages 7 and 8.

44. For the existing carriers, however, history is quite different. TELUS bought Clearnet for \$6.6 billion in October of 2000 in what, at the time, was a "bet the company" transaction. Indeed, TELUS saw its share price pay dearly for the risk.

45. In 2001, Bell Mobility was participating in Industry Canada's PCS Auction and demonstrated its willingness to take a substantial risk by bidding \$720 million. The spectrum acquired enabled Bell Mobility to enter Western Canada as a facilities-based competitor and within a year to build a 3G network without mandated tower sharing or any other form of Government subsidy or regulatory assistance. In 2006, Bell Mobility further cemented its place as a national wireless carrier through its acquisition of Aliant Mobility.

46. Similarly, Rogers and TELUS were both bidding for Microcell in 2004. Rogers won, buying the company for \$1.4 billion. Again, there was no interest shown by Shaw, Cogeco and Quebecor or even MTS. They were making other strategic choices. That same year, MTS bought Allstream for \$1.7 billion despite the fact that a GSM wireless network, with a 30 MHz national PCS licence, was available for less. These same companies passed on the opportunity to acquire Microcell when it was experiencing financial difficulty and could have been acquired for a price in the \$400 - \$500 million range.

47. The same holds true for BRS spectrum allocations. Over the past five years, there have been ample opportunities to purchase BRS spectrum. For example, potential bidders had over a year to determine whether they would enter the court-appointed bidding process for Look Communications' spectrum and broadcast licenses in 2009. Likewise, others could have made similar \$80 million offers for Craig Wireless Systems Ltd. in 2010. However, it was Bell Mobility's and Rogers' willingness to take a risk, along with the Department's foresight to enable BRS spectrum for mobile use that will enable the use of BRS spectrum for advanced wireless services. It should not be up to the Department to punish Bell Mobility and Rogers simply because others did not determine that it was worthwhile to purchase BRS spectrum when they had the opportunity.

48. To be clear, Bell Mobility is not criticizing the strategic choices made by these companies to pursue opportunities elsewhere. Many of their choices seemed to have been profitable choices for them. The key point is that these companies have had repeated opportunity and the financial ability to enter the wireless market in the past. Instead these

companies choose not to take the opportunity. Bell Mobility does not believe, therefore, that it is appropriate for the Department to intervene in the market on these companies' behalf at the expense of such companies as Bell Mobility, who incurred the risk and entered the wireless business in the early days and sustained years of losses.

49. Furthermore, existing BRS licensees require access to additional spectrum. As indicated in the Consulting Paper, existing BRS spectrum licensees will have different spectrum holdings depending on the geographic area of the license. As a result, it is critical that these licensees have the opportunity to bid for 2500 MHz spectrum throughout the country.

50. Bell Mobility, like other national wireless carriers, requires additional spectrum. Over time, Bell Mobility has taken the appropriate risks in order to ensure that it has the spectrum required in order to provide leading edge services. However, given the national focus of our network deployment and the extensive use of leading edge smartphones by our several million customers, Bell Mobility is quickly using up its available spectrum. Bell Mobility is not "warehousing" or "hoarding" spectrum in order to reduce competition and restrict output. It is simply too costly for wireless network providers to put themselves at a significant competitive disadvantage by purchasing spectrum that they do not put to productive use, especially given the amount required to try and foreclose other bidders.

Government Imposed Restrictions in Auctions Can Lead to Unintended Results

51. Asymmetric policies such as spectrum set-asides or spectrum caps can result in unintended consequences. The reason is that government intervention is blunt and hence difficult to keep narrowly focused. The greater the extent of government intervention, the greater the chances of having overlapping or redundant policies which can result in outcomes that do not make society better off. The distortions caused by intervention can be compounded unless policy makers can perfectly account for all of the various ways the policies interact, which in reality is impossible to achieve because of asymmetric information.

52. As indicated above, some will argue that asymmetric policies are necessary and are required in order to provide a fair outcome. However, because of asymmetric information, the Government (or any other participant) will never know the exact level of assistance required, and thus, will not be able to fully determine how the new policies will interact with existing policies. This greatly increases the chance that unintended consequences will arise, and in

some cases they will have negative impacts which will far exceed any potential benefits that the policy was trying to attain.

53. For example, in the case of spectrum set-asides and spectrum caps, it is not clear that there is a way to set up these policies that will not provide an opportunity for a set of bidders to "game" the auction. As long as one set of bidders has an opportunity to bid on both restricted and unrestricted spectrum, and others do not, they will always have the opportunity to bid on both types of spectrum. This is a significant competitive advantage in the auction. The only way to remove this advantage is to ensure that all bidders are able to bid on both types of spectrum, or bidders are restricted to only bidding on one type of spectrum (i.e. either restricted or unrestricted spectrum, but not both).

54. Theoretical arguments aside, the empirical evidence provides a number of examples where government manipulation of auction rules in order to promote competition has resulted in negative unintended consequences.²⁹ In the case of Canada, the set-aside in Canada's AWS auction increased the costs to the industry by hundreds of millions of dollars by artificially reducing the supply of spectrum available for incumbents and by creating gaming opportunities that altered the efficient allocation of spectrum. This resulted in a disproportionate cost burden being borne by the incumbents. The gaming opportunities were the result of the new entrants' ability to "park" their points on both restricted and unrestricted spectrum. That is, the 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 their rivals in later rounds.

55. It is easy to see that the new entrants were able to effectively use the asymmetry of the spectrum set-aside rules to minimize their own costs of acquiring spectrum. That is, there were a number of circumstances where a new entrant bid on an unrestricted license even though an equivalent restricted license was available at a much lower price. By maintaining eligibility through bids on unrestricted licenses, new entrants were able to keep the price of restricted licenses lower.

²⁹ For a more detailed discussion see Comments of Bell Mobility Inc. filed in Canada Gazette Notice No. SMSE-018-10 *Consultation on a Policy and Technical Framework for the 700 MHz Band and Aspects Related to Commercial Mobile Spectrum*, paragraphs 130 – 134.

56. It was the combination of the restricted supply of spectrum and the gaming opportunities created by the spectrum set-aside used in the AWS auction resulted in the record high prices paid for the unrestricted spectrum. As the NERA Report concludes:

While Industry Canada's objective to maximize social welfare was well intentioned, it failed to consider the side effects of its preferential treatment. Most significantly, the set-aside provision allowed entrants to bid on unrestricted spectrum with no intention of purchasing it, but with an objective of increasing the incumbent bidders' spectrum prices. This and other auction design flaws contributed heavily to the record high prices paid for the unrestricted spectrum licenses. Although the set-aside spectrum also sold at a premium, the premium was significantly lower than the one paid for unrestricted spectrum. Furthermore, given the attractive roaming and tower sharing provisions granted to the winners of the set-aside spectrum licenses, at least part of this overpayment can be attributed to the fact that it was worth more to entrants.³⁰

57. Not only did the set-aside restrictions increase the cost of spectrum licenses for the incumbents, the definition of a "new entrant" creates a situation where new entrants can exploit spectrum as an entry barrier. Given the fact that spectrum licensing is at the provincial and sub-provincial level, there is an opportunity to create market power at the regional level. For example, if a wireless provider has spectrum in Ontario but limited or no spectrum in Québec, it cannot use its spectrum in Ontario to provide a competitive constraint on the services in Québec. Thus, the Department's own policies in the AWS auction can lead to decreased regional competition, especially if set-asides are used again to limit the amount of spectrum available. As noted in the Waverman-Dasgupta Report in the case of Vidéotron:

This issue has been compounded by Industry Canada's AWS policies. In that instance, the set-aside itself has created spectrum-related barriers to entry at the regional level. In Quebec, for example, Videotron successfully blocked all other entrants from obtaining spectrum in that market. One firm now has 40% of the AWS spectrum that it won in a "protected" setting, and as a result both entrant firms and possibly one incumbent firm have been precluded from the chance to offer LTE services over their separate network in Quebec using the AWS spectrum. ... In the only market that it intends to serve with its own network, Videotron has no spectrum constraints for the foreseeable future, while competition from other firms has been constrained. Yet persisting with the market definition that Industry Canada used in 2008, and indeed applying it not just to a set-aside but to a spectrum cap, would continue to allow Videotron to obtain spectrum in ways that potentially restrict the choices available to Quebec customers. The only possible beneficiaries in this case are Videotron's owners, and not Quebec customers.³¹ [Footnotes omitted]

³⁰ Ibid., page 42.

³¹ Waverman-Dasgupta Report, paragraphs 126 and 127.

Problems Also Arise with Spectrum Caps

58. It is important to recall that the Department, subsequent to a thorough public consultation, rescinded the mobile spectrum cap policy, in *Gazette Notice No. DGTP-010-04 Decision to Rescind the Mobile Spectrum Cap Policy*, August 2004. Bell Mobility submits that the Department got it right in that decision when it stated that:

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.³²

59. As noted in the Waverman-Dasgupta Report, 2004 was also the year that Rogers purchased Microcell, yet there is no evidence to suggest that the removal of the spectrum cap hurt the performance of the Canadian wireless market:

Note that 2004 was the year in which Rogers purchased Microcell, which had emerged from bankruptcy proceedings. There is no evidence to suggest that since the cap was rescinded that the Canadian wireless industry has ceased to perform well. As mentioned previously, the wireless arms of the three major firms have invested a cumulative sum of over \$10 billion in their wireless networks between 2004 and 2009, and there are approaching 6 million broadband wireless subscriptions in Canada.³³

60. As the Department reasoned in the above decision, the Canadian wireless market continues to be a mature market and the need for spectrum caps is less relevant than in the early days of the industry. As additional spectrum continues to become available, the arguments in support of a spectrum cap to oversee spectrum concentration become weaker and weaker.

61. With respect to spectrum aggregation limits (or spectrum caps), it is important to note that the problems discussed above also apply. However, with spectrum caps, there also exists the practical issue of determining what the appropriate cap should be.

62. Trying to determine the size of the cap will require significant knowledge regarding how the demand for spectrum will evolve. As the Waverman-Dasgupta Report highlights:

³² Industry Canada, *Gazette Notice No. DGTP-010-04 Decision to Rescind the Mobile Spectrum Cap Policy*, August 2004, paragraph 9.

³³ Waverman-Dasgupta Report, paragraph 112.

There is also an inherent "design" problem associated with spectrum caps, one that should carry particular weight in the current wireless environment. Designers of spectrum aggregation limits by definition will need to conclude (a) how much spectrum is "enough", and (b) the degree to which spectrum holdings across different bands are perfect substitutes. Making strong conclusions about how much is "too much" or "just enough" would seem particularly foolhardy at a time when the wireless industry is characterised by rapid, but inherently uncertain, projected growth rates for data traffic. Thus one can be reasonably sure that mobile data traffic will double, treble, quadruple or even increase eight-fold over the next five years. However, will the increase in traffic be 32-fold or 16-fold? To such questions, few can know the answer. While it is possible that one can set a spectrum aggregation limit that ends up comfortably meeting the requirements of any and all carriers over the next few years, it is equally possible that one cannot.³⁴

63. The empirical evidence is clear. Asymmetric government policies significantly increase the chance of unintended consequences. It is simply too difficult to determine the exact level of assistance required and thus, to account for all of the potential policy interactions. It is the market that should determine the appropriate aggregation of spectrum. The public interest lies in affording all bidders the maximum flexibility to aggregate spectrum, thus enabling them to make new and innovative wireless services available to the Canadian public.

64. Given that: (i) the industry has matured; (ii) the industry is not "hoarding" or "warehousing" spectrum; (iii) additional spectrum continues to be added; and together with (iv) 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. Based on the competitiveness of the Canadian wireless market, spectrum caps should not be placed on the amount of spectrum that can be acquired by any single wireless service provider including its affiliates.

65. Bell Mobility's comments conclusively demonstrate that there is no factual basis for intervention in the wireless sector. There is neither insufficient competition nor an incentive to deter entry. As a result, market forces will ensure that those willing and able to put the spectrum to its best use will bid for and acquire spectrum. Applying spectrum set-asides or spectrum caps varies from the market-based approach inherent in spectrum auctions and begins to reinsert bureaucratic judgment into the equation. Based on the above comments and views, Bell Mobility strongly believes that it would not be in the public interest to set-aside any spectrum in the 2500 MHz spectrum auction. Moreover, Bell Mobility does not believe, given

³⁴ Waverman-Dasgupta Report, paragraph 117.

the current evolution and competitiveness of the Canadian wireless market, that an auction spectrum aggregation limit (spectrum cap) should be placed on the amount of spectrum that can be acquired by any single wireless service provider including its affiliates.

66. Bell Mobility submits that the appropriate policy is for the Department to focus on enabling competition over more advanced services. As summarized by the Phoenix Center Policy Paper:

Price cuts are mostly exhausted after about three to five rivals are present in the market. ... Consequently, adding new competitors to the mobile industry is expected to have a small impact on prices. ... Alternatively, the economic gains from having access to broadband services are typically viewed as being very large, so a policy of granting existing firms (who can maximize spillovers from their existing plant and customer relationships) sufficient spectrum to run scalable networks that support innovation in both applications and devices is likely to produce substantial economic benefits. Therefore, in effect, we have a situation where price changes are no longer a part of the calculus, since adding firms is expected to have a small effect on price competition. As such, the tradeoff revealed by the theory is simply between less- or more-advanced services, and the best policy is clear.³⁵

67. Micromanagement of the wireless market is not an indication of greater reliance on market forces. Spectrum auctions should not be used as a tool in order to make artificial adjustments to the level of competition in the market. Bell Mobility strongly believes that there is no need for measures such as spectrum set-asides, aggregation limits (or caps), or any other restrictions in order to promote competition in the Canadian wireless services market.

3-3 Are there other mechanisms that should be considered in the 2500 MHz band to promote competition? If so, how should such mechanisms be applied in this band?

68. The adoption of market-based spectrum assignment processes, such as unrestrained spectrum auctions, will determine those parties who value the spectrum most. As a result, Canada should continue to rely on real world investors and consumers, as opposed to bureaucratic judgment, for determining who values the spectrum the most and hence who will put the spectrum to its most efficient and best use. Bell Mobility submits that such an approach clearly is in the public interest.

³⁵ Waverman-Dasgupta Report, paragraph 117.

69. Reliance on market forces is a long standing policy of the Department. Indeed this was the very reason why Canada adopted spectrum auctions as an assignment method in the late 1990's. Industry Canada's summation of the Department's rationale for introducing spectrum auctions as expressed in its *Consultation on Issues Related to Spectrum Auctioning*, August 1997, is instructive when it states that:

...Auctions substitute real world investors and consumers for public servants in the determination of who has the better business plan, the most innovative ideas, the most highly beneficial services, the right technology and the best management team.³⁶

70. The Department again recognized the benefits of competitive spectrum auctions in its *Framework for Spectrum Auctions in Canada*, October 2001, wherein it noted:

In February 1996, Industry Canada announced its intention to introduce the use of spectrum auctions where reliance on market forces to select licensees was deemed to be in the public interest. A spectrum auction is a market-based tool that allows the Government to identify those entities who value the spectrum the most and who will therefore be assumed to put that spectrum to its most efficient use.³⁷

71. 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. Such intervention would, in Bell Mobility's view, perpetuate an antiquated command and control regime and would constitute unwarranted micromanagement of the wireless sector. Market forces, in short, will ensure that those willing and able to put the spectrum to its best use will bid for, and acquire spectrum.

72. The circumstances in the Canadian wireless market simply do not warrant interventionist measures. While entry-assisting policies such as spectrum set-asides were not required in the AWS spectrum auction, they are certainly not required now due to the entry of Vidéotron, DAVE, Public Mobile and Globalive. The "new entrants" from the AWS auction are large, well capitalized entities and are more than financially capable of participating in the auction without government assistance. For example, the enterprise values for the recent wireless entrants are:

³⁶ Industry Canada, *Consultation on Issues Related to Spectrum Auctioning*, August 1997, page 7.

³⁷ Industry Canada, *Framework for Spectrum Auctions in Canada*, October 2001, page 1.

(i) Quebecor – approximately \$7.5 billion; (ii) Shaw – approximately \$15 billion; and (iii) Orascom – now that it is part of VimpelCom is approximately \$33 billion. The transfer of wealth from the shareholders of one large company to the shareholders of another large company through the use of entry assisting policies, does not improve economic efficiency, nor does it benefit Canadians.

73. In consideration of the present circumstances, there is absolutely no need or rational basis for any artificial regulatory measures intended to increase or sustain competition in either the 700 MHz or the 2500 MHz spectrum auctions. As demonstrated above, the circumstances existing in the Canadian wireless market simply do not warrant the interventionist measures raised for consideration in this Consultation. There is no evidence of the failure of competitive market forces that would justify continued government intervention. To the contrary, the available evidence suggests that the Canadian wireless industry is a competitively functioning market that does not require fixing.

3-4 The Government of Canada has undertaken a consultation on potential changes to the foreign investment restrictions that apply to the telecommunications sector. How would the adoption of any of the proposed changes affect your responses to the questions above?

74. Bell Mobility firmly believes that the Canadian wireless market is competitive and does not require any more interventionist measures. This is the case regardless of the potential changes to the foreign investment restrictions. Therefore, the adoption of any of the proposed changes to the foreign investment restrictions would not impact our responses to the questions above.

3.2 Promoting Service Deployment in Rural Areas

4-1 Comments are sought on specific measures that could be adopted within the 2500 MHz spectrum auction process to ensure further deployment of BRS in rural and remote areas (e.g. roll-out conditions, tier structure, etc.).

75. Historically, the challenge of extending wireless service to low-density rural and remote areas has been the lack of a positive business case to support the significant investments required by such deployment. This is not only the case in Canada but is also the case in the U.S. where rural and remote areas also remain challenging to serve despite the vast population difference between that country and Canada. Nonetheless, Canada's wireless industry leads

the world in deployment into rural and remote areas and Bell Mobility is at the forefront of that deployment.

76. As indicated above, the propagation characteristics of 2500 MHz spectrum indicate that it is not conducive for the deployment of mobile wireless services in rural areas, but can be effective for increasing capacity in more localized ones. Market forces should determine the implementation of 2500 MHz spectrum in rural areas. It is inappropriate for the Department to mandate the broad deployment of 2500 MHz spectrum in rural areas since it will lead to an inefficient build out of network assets. Therefore, Bell Mobility submits that there is no requirement for specific measures within the 2500 MHz spectrum auction process in order to ensure further deployment of BRS spectrum in rural and remote areas.

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