

February 27, 2008

**Responses to Questions for Clarification on the AWS Policy
and Licensing Frameworks**

Introduction

This document serves as a companion document to the other documents for the auction, including:

- *Policy Framework for the Auction for Spectrum Licences for Advanced Wireless Services and other Spectrum in the 2 GHz Range* issued November 2007 under *Canada Gazette* Notice No. DGTP-007-07 (hereafter referred to as AWS Policy Framework).
- *Consultation on Proposed Conditions of Licence to Mandate Roaming and Antenna Tower and Site Sharing and to Prohibit Exclusive Site Arrangements* issued November 2007 under *Canada Gazette* Notice No. DGRB-010-07.
- *Licensing Framework for the Auction for Spectrum Licences for Advanced Wireless Services and other Spectrum in the 2 GHz Range* issued December 2007 under *Canada Gazette* Notice No. DGRB-011-07 (hereafter referred to as AWS Licensing Framework).
- *Update on Clarification Questions for the AWS Policy Framework and Deadline Extension for the Consultation on Proposed Conditions of Licence (DGRB-010-07)* under *Canada Gazette* Notice No. DGRB-012-07.
- *Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services under Canada Gazette* Notice No. DGTP-002-07.
- Client Procedures Circular, *Radiocommunication and Broadcasting Antenna Systems* (CPC-2-0-03).
- *Reply Comment Period Notice for DGRB-010-07* (dated January 22, 2008).

Development of the policy framework began on February 16, 2007, with the issuance of a discussion paper in which Industry Canada requested comments by May 25, 2007. There was also a reply comment period where parties had the opportunity to respond to the initial comments of others ending on June 27, 2007. The Minister of Industry considered these comments in making his decision.

This document responds to the clarification questions which were submitted on or before the January 22, 2008 deadline as amended in *Canada Gazette* Notice No. DGRB-012-07. The questions are not reproduced in this document. The questions that were submitted are posted on Industry Canada's website at <http://ic.gc.ca/spectrum>. A request was made to include a reply comment period for DGRB-010-07. Industry Canada agreed and the deadline for reply comments was February 7, 2008. These reply comments are also posted on Industry Canada's website. For clarity and ease of reading, the questions are responded to generally rather than individually.

For convenience, the responses to the questions have been grouped under the following themes:

1. Clarification of the AWS Policy Framework
2. Clarification of the AWS Policy Framework relative to Roaming
3. Clarification of the AWS Policy Framework regarding Antenna Tower and Site Sharing
4. Collusion
5. Definition of Licences
6. Auction Design and Operation
7. Auction Software
8. Process and Procedural Questions, Including Deposits and Payments
9. Technical and Engineering Issues

The results of the considerations of submissions in response to the *Consultation on Proposed Conditions of Licence to Mandate Roaming and Antenna Tower and Site Sharing and to Prohibit Exclusive Site Arrangements* will be published in a notice to appear in the *Canada Gazette*. That Gazette notice is expected to be available within the next week and will be posted on Industry Canada's website. Clarification questions received that relate to these issues will be answered in that document.

1. Responses to Clarification of the AWS Policy Framework

1.1 *In response to questions seeking clarification on what other mobile spectrum is to be made available by 2011, in what amounts, the process and the timelines.*

Answer:

Industry Canada forecasts the following spectrum resources for commercial mobile applications below 3 GHz will be released in the short to medium term. This forecast is based on best estimates at this time and is subject to change.

700 MHz

The CRTC announced that over-the-air analog television licences will only be issued or renewed for analog transmission until August 31, 2011 (except in very remote rural areas which will be considered on a case-by-case basis). The transition to digital transmission of over-the-air TV signals (DTV transition) will increase the efficiency of the radio spectrum currently dedicated to over-the-air TV, thereby freeing up spectrum to be used for other purposes, including public safety and commercial use. As stated in a letter to the CRTC in September 2006, Industry Canada is currently developing a post-transition DTV allotment plan in consultation with the industry that will accommodate DTV broadcasting in TV channels 2-51, freeing up the spectrum in what are now TV channels 52 to 69. Public consultations in the future will address questions such as harmonization of the spectrum with the United States and spectrum utilization policy matters.

2500 MHz

Industry Canada issued a revised spectrum policy for the band 2500-2690 MHz in March 2006. The policy provides for the introduction of mobile services while allowing incumbent operators to stay in the band and pursue their business plans according to their existing licences. The policy does not provide for a firm transition date for the incumbent operators but does indicate that Industry Canada will consult on the auction of unassigned spectrum, implementation matters related to the adoption of a new band plan and the implementation of mobile services.

2020-2025 MHz and 2155-2180 MHz

Industry Canada expects to initiate consultation on opening these bands taking into account demand and developments in other countries.

Various bands below 1700 MHz

In 2006, Industry Canada consulted on several bands below 1700 MHz. The bands identified for consumer products such as Multi-use radio (MURS), RFID, WLAN, medical and utility telemetry, have already been opened. There are a number of additional bands (216-220 MHz, 944-952 MHz and 1390-1395/1432-1435 MHz) proposed for flexible use. Analysis is ongoing and will require further consultation. As noted in a letter to the CRTC, Industry Canada will also review the spectrum in the band 1435-1525 MHz.

Interested parties are invited to register with the Spectrum Auctions mailing list, at <http://agora.ic.gc.ca/contacts/MailingList.html>, to receive news on upcoming licensing processes for different spectrum bands.

1.2 *In response to questions seeking clarification on other government programs.*

Answer:

Potential bidders should direct any questions that are not part of the AWS Policy Framework or related to the spectrum management program to the appropriate government department or agency. For example, questions on SR&ED tax credits should be directed to the Canada Revenue Agency and questions on obligations of telecommunications carriers, including 911 services, should be directed to the CRTC.

1.3 *In response to questions seeking clarification as to why the Minister of Industry selected the geographic tier sizes in the policy.*

Answer:

The geographic areas (tier sizes) were discussed in the February 16, 2007 consultation paper and the Minister of Industry considered all comments received before making his

decision. The decision to offer some spectrum in both tier 2 and 3 takes into account the interest expressed in this spectrum by a wide variety of parties from all parts of Canada. One consideration for the non-set-aside spectrum was that since the incumbent radiocommunication carriers have significant amounts of spectrum already licensed according to larger geographic areas, including some on a tier 1 basis, offering spectrum on a tier 3 basis allows flexibility to top up their existing spectrum holdings by bidding only where they need additional capacity. The tier structure enables interested parties to focus their bidding on specific areas which may be of primary interest to them. With respect to the set-aside spectrum, potential new entrants demonstrated that they need larger geographic areas to compete with the established carriers.

The decision to make some of the set-aside spectrum available on a tier 2 basis is consistent with the stated policy objective of more competition in the wireless industry at the national or regional level. Also, the decision to provide some spectrum on a tier 3 basis within the set-aside allows potential new entrants to obtain spectrum based on their needs.

For both the PCS Expansion Band and the band 1670-1675 MHz, there were no substantial comments opposing the proposal to use geographic tier 2.

1.4 *In response to questions seeking clarification as to why the Minister of Industry chose to establish the new entrant set-aside at 40 MHz.*

Answer:

Many respondents requested 40 MHz or more for a new entrant set-aside. The 40 MHz set-aside is sufficient to enable competitive entry and allow for growth, at the national or regional level, consistent with the stated policy objective of greater competition in the industry. At the same time, it takes into account that incumbent radiocommunication carriers already have significant amounts of spectrum and that they will be in a position to bid on 50 MHz of AWS spectrum plus the 10 MHz of PCS spectrum and a further 5 MHz being made available in this auction.

1.5 *In response to questions seeking clarification as to whether, in the absence of a spectrum cap, it is correct that all the available core AWS spectrum in each of the set-aside category (i.e. 40 MHz) and non-set-aside category (i.e. 50 MHz) could be acquired by a single bidder; and whether a single entity could acquire all of the 90 MHz of AWS spectrum.*

Answer:

Yes, these outcomes are theoretically possible. There is no spectrum aggregation limit (commonly referred to as a spectrum cap). However, given the interest expressed in this spectrum by a wide range of parties, including the incumbent radiocommunication carriers, market forces are expected to ensure a level of competitive bidding for both the set-aside and non-set-aside spectrum.

- 1.6** *In response to questions seeking clarification as to whether the policy:*
- *Means that MTS Mobility, which holds 45 MHz of cellular and PCS spectrum within Manitoba along with a 61 percent market share qualifies as a new entrant within Manitoba?*
 - *Means that incumbent carriers which have no spectrum or share of the wireless market within Manitoba and Saskatchewan are not permitted to bid on new entrant spectrum within Manitoba or Saskatchewan?*

Answer:

The AWS Policy Framework provides that only entities with less than 10 percent share of the national mobile wireless market are eligible to bid on the set-aside spectrum as a new entrant. Therefore, the answer to both questions is yes.

In considering criteria for defining new entrants, Industry Canada took into account the possibility of either or both national or regional new entrants. In either case, enabling potential new entrants to have access to contiguous spectrum across Canada was an important consideration. This is consistent with the spectrum holdings of existing carriers against which new entrants will be competing. Attempting to define new entrants in a manner that took into account regional or local market shares would have had the effect of forcing some entities that qualify as new entrants to bid on non-contiguous spectrum in different parts of Canada. This would not have been consistent with the policy objective of enabling a more competitive wireless market across Canada.

With respect to the geographic areas served by the two carriers identified in this question, Industry Canada was satisfied that, taking into account market size and population densities, and the amount of spectrum being made available in this auction, there is sufficient opportunity for both potential new entrants and national incumbents to have a reasonable opportunity to acquire spectrum in these two geographic areas.

All factors considered, Industry Canada is satisfied that the policy advantages of adopting a single criterion to define new entrants across Canada outweigh any potential benefits of regionally or locally specific criteria.

- 1.7** *In response to questions seeking clarification with respect to the definition and application of new entrant status, specifically:*
- *If a new entrant resulting from the 2008 AWS auction were to subsequently grow its market share in the Canadian wireless market beyond 10 percent through merger or corporate acquisition or similar means within the initial 10-year term, would that entity continue to be designated as a new entrant?*

Answer:

The term “new entrant” as used in the AWS Policy Framework for this auction and in any conditions of licence arising from this AWS Policy Framework applies only to an entity that is licensed for spectrum obtained in this auction process.

An entity that qualifies as a new entrant and is eligible to bid on the set-aside spectrum,

retains this designation for the term of its licence even if its market share grows to exceed the 10 percent national market share threshold. Specifically, this means that the entity would continue to benefit from the provisions of this policy with respect to in-territory roaming for the initial five-year period and, if it qualifies as a national new entrant, for the full 10-year in-territory roaming provided that roll-out conditions are met.

Licences obtained through the set-aside cannot be transferred for five years to companies that do not meet the criteria to be a new entrant. The Minister of Industry retains the authority to review any requests for licence transfers under the *Radiocommunication Act*.

1.8 *In response to questions seeking clarification as to how Industry Canada established the opening bids.*

Answer:

The opening bids are based on dollar per megahertz per population (\$/MHz/pop) in each service area. The opening bids for this auction were calculated by using the lower of either: (1) current annual licence fees for (non-auctioned) PCS and cellular licences; or (2) the average of the 2001 PCS auction results in each service area.

For all licences, except two (i.e., Southern Ontario and Southern Quebec), the opening bids are determined by the results of the 2001 PCS auction because these values are lower than the annual PCS/cellular licence fees being paid by existing operators for a licence in that area. In Southern Ontario and Southern Quebec, the opening bid is based on the annual PCS/cellular licence fee paid by existing operators (because these values are less than the winning bids for those areas in the 2001 PCS auction).

All values have been adjusted to account for the net present value of money and calibrated, where necessary, using 2001 Census data. Also, values are adjusted as licence fees are annual whereas auctioned licences are for a 10-year term.

1.9 *In response to questions seeking clarification as to why roll-out conditions are required for the 10 MHz PCS Expansion Band.*

Answer:

The AWS Policy Framework for this auction states that, for the PCS Expansion Band: “The opening bids and roll-out conditions for this spectrum are the same as for the AWS band which are outlined in Annexes 1 and 2.” These will be applied in the same manner as proposed for licences for AWS spectrum. Roll-out targets will be considered both in the eventual renewal of licences following the initial 10-year term and in considering any application from a national new entrant for extension of in-territory roaming beyond the initial five years.

- 1.10** *In response to questions seeking clarification as to whether only entities that meet the requirements of a “radiocommunications carrier” will be entitled to participate in the AWS auction, and entities that meet only the requirements of a “radiocommunications user” will not be allowed to participate.*

Answer:

Licences for AWS and the PCS expansion bands will be issued only to companies eligible to operate as radiocommunication carriers. An entity that is currently a radiocommunication user or is not yet operating may bid; however, it must demonstrate that it meets the eligibility requirements of section 10 of the *Radiocommunication Regulations* before licences are issued. Within 10 business days after the close of the auction, all successful bidders are required to submit documentation demonstrating compliance with the Canadian ownership and control requirements.

However, for the 1670-1675 MHz spectrum, both radiocommunication users and carriers will be eligible to hold licences. Should a successful bidder wish to use the band 1670-1675 MHz as a radiocommunication carrier, that bidder will be required to submit documentation demonstrating compliance with the Canadian ownership and control requirements within 10 business days after the close of the auction. Successful bidders wishing to utilize this spectrum for broadcasting purposes will be required to obtain a licence from the CRTC and meet those requirements. While distribution of broadcasting services is an application for which the band 1670-1675 MHz may be particularly well suited, applicants are cautioned that an award of a radio authorization for 1670-1675 MHz does not convey any rights under the *Broadcasting Act*.

- 1.11** *In response to questions seeking clarification on when the AWS spectrum will first be made available for use.*

Answer:

The spectrum for AWS is available for use following the issuance of licences and in accordance with the transition policy as described in *Canada Gazette* Notice No. DGTP-002-07 of February 16, 2007. The transition policy allows for the notification of radio systems that are currently using the spectrum and will be relocated with the implementation of AWS.

- 1.12** *In response to questions seeking clarification about applicability of rules of the Framework for Spectrum Auctions in Canada to the AWS Licensing Framework, including whether a fee may apply at the end of the 10-year licence term.*

Answer:

In general, the rules specified in the Framework for Spectrum Auctions in Canada still apply to spectrum licences that will be awarded through the AWS auction, including that: “A public consultation regarding the renewal of the licence will commence no later than two years prior to the end of the licence term if the Department foresees the possibility that it will not renew this licence or if renewal fees are contemplated.”

Consistent with the approach outlined in the AWS Policy Framework, licence renewal will be subject to a public consultation to be initiated in year eight. Question 5.8 provides more detail on licence renewal.

2. Responses to Clarification of the AWS Policy Framework relative to Roaming

2.1 *In response to questions seeking clarification as to the nature of roaming and what services are included in mandated roaming.*

Answer:

Roaming enables a subscriber already served by one carrier's network (home network) to originate or terminate traffic on another carrier's network (host network) when out of range of the home network. Accordingly, a subscriber cannot roam unless he or she is already served on another radio access network. A new entrant must therefore be offering service on its own network before its subscribers may benefit from roaming on another network. The AWS Policy Framework seeks to foster facilities-based competition through this auction. Accordingly, mandated roaming as prescribed in the policy does not include resale.

The policy states that roaming arrangements must be offered where technically feasible. Given the wide range of roaming agreements currently in place both domestically (in Canada and in other countries) and internationally, across networks operating with a range of technologies, Industry Canada does not anticipate that technical feasibility will be an impediment to roaming.

The roaming offered must provide connectivity for digital voice and data services regardless of the spectrum band or underlying network technology used, provided that the roamer's device is capable of accessing the host network. Access to the public switched network and the Internet are within the intent of the policy for mandated roaming. A subscriber with an appropriate device should be able to roam between CDMA and GSM networks, and their subsequent versions.

It is the intent of the policy to encourage the deployment of advanced networks that provide the greatest choice of basic and advanced services available at competitive prices to the greatest number of Canadians.

As a general principle, roaming should provide a roamer with the ability to access voice and data services offered by the roamer's home network at a level of quality comparable to that offered for similar services by the host network carrier to its own subscribers. For greater certainty, the policy does not require a host network carrier: to provide to a roamer a service which that carrier does not itself provide to its own subscribers; nor to provide to a roamer a service, or level of service, which the roamer's home network carrier does not itself provide.

The policy states that roaming will be offered at commercial rates that are reasonably

comparable to rates that are currently charged to others for similar services. Industry Canada notes that there exist in Canada, and in other jurisdictions, domestic roaming arrangements which may serve as a basis for comparison in addition to international roaming arrangements. Industry Canada expects good faith negotiations in arriving at commercial arrangements between carriers. Should binding arbitration be required, this process should take into account the policy intent.

The terms and conditions of in-territory and out-of-territory roaming should be essentially the same.

Recognizing the related costs and technical issues, the policy does not require seamless communications hand-off between home and host networks (i.e. which ensures no interruption of communications in progress). Industry Canada notes, however, that this service is clearly in the interest of consumers where it can be made readily available.

Roaming should provide for the origination and termination of calls that are completed automatically without the need for any special facilitating action by the customer.

Nothing in the policy, however, is intended to limit the ability of carriers to conclude commercial agreements not mandated by this policy.

2.2 *In response to questions seeking clarification as to when roaming can begin.*

Answer:

The AWS Policy Framework states that roaming in-territory could begin: "...commencing with the date of issuance of their licence". Consistent with the clarification provided in question 2.1, above, under this policy, a licensee's subscribers may begin roaming as soon as the licensee is offering service on its own radio access network and a roaming agreement is in place. Negotiations for roaming agreements can begin at any time. The five-year period for mandatory in-territory roaming begins upon issuance of the licence.

2.3 *In response to questions seeking clarification as to whether a licensee must provide voice roaming if no voice services are offered.*

Answer:

No. Consistent with the response under Question 2.1, the policy does not require a host network carrier: to provide to a roamer a service which that carrier does not itself provide to its own subscribers; nor to provide to a roamer a service, or level of service, which the roamer's home network carrier does not itself provide.

2.4 *In response to questions seeking clarification on when the in-territory mandated roaming provision ends.*

Answer:

Incumbents will be required to make roaming available to new entrants within the new entrant's licensed service areas, at commercial rates, for a period of five years. The policy intent is to enable market entry while new entrants are building out their networks. Accordingly, the policy does not foresee that roaming obligations in-territory would continue in geographic areas where a new entrant has built-out network facilities.

There is no intent to mandate roaming within the coverage footprint of a new entrant. Industry Canada notes that the coverage footprint may be smaller geographically than a licensed service area. Roaming would continue to be required in areas within the new entrant's licensed service territory, outside its coverage footprint.

Industry Canada notes that the five-year mandated roaming may be extended for an additional five years to new national entrants as per the AWS Policy Framework.

2.5 *In response to questions seeking clarification on (a) whether new entrants must provide roaming to each other and (b) if new entrants are required to support in-territory roaming to each other.*

Answer:

(a) Yes. The AWS Policy Framework states that: "...Industry Canada will be requiring that, where technically feasible, cellular, PCS and AWS licensees offer automatic digital roaming on their networks: to all cellular, PCS and AWS licensees outside their licensed area, ..." This statement includes all cellular, PCS and AWS licensees whether they are new entrants or incumbents.

(b) Yes. For the same reasons noted in (a); however, it should be noted that mandated in-territory roaming is time limited. Nothing in this policy, however, prevents additional commercial agreements among carriers.

2.6 *In response to questions seeking clarification on the criteria for a group of new entrants to qualify as cooperating to provide a national service for the purpose of in-territory roaming.*

Answer:

The AWS Policy Framework provides for "national new entrants" to obtain in-territory roaming for an additional five years if the spectrum is used in accordance with the specified roll-out targets.

"A national new entrant is defined as a new entrant that has acquired licences for all Tier 2 or Tier 3 service areas, or a combination of Tier 2 and Tier 3 service areas, covering all of Canada in the AWS or PCS bands. This definition includes a group of new entrants collectively holding all Tier 2 or Tier 3 service areas, or a combination of

Tier 2 and Tier 3 service areas, covering all of Canada in the AWS or PCS bands and cooperating to provide a national service.”

To clarify, a group of new entrants may be formed to act collectively as a national new entrant in one of two ways. Before the application date for the auction, a group of bidders could identify themselves as Associated Entities, which must be disclosed at the time of bidder application. In this case, they would bid together as a single entity in the auction. Alternatively, a group of new entrants could come together after the auction, following the deadline for final payment. In the latter case, to qualify as a “national new entrant,” they would have to hold, together, licences covering the required national service area; and demonstrate to Industry Canada that they are collaborating to provide a national service. This would include considerations such as joint marketing, interconnected networks and contractual agreements enabling consumers to obtain a national service. To benefit from the additional five years of in-territory roaming, such a group would need to meet the policy provisions, including roll-out. Once Industry Canada is satisfied that such a group qualifies as a “national new entrant,” the group would then inform other licensees with whom they have roaming arrangements.

Consistent with the rules governing participation in the auction, a group could not be formed during the period between bidder application and the final payment by all members of the group.

2.7 *In response to questions seeking clarification as to whether roaming will apply to other mobile bands now or in the future.*

Answer:

The mandated roaming provisions apply to cellular, PCS and AWS bands. Whether similar provisions should apply to other mobile bands would require consultations at a future date.

2.8 *In response to questions seeking clarification of the meaning of the term “licensed area” in the phrase: “...to all cellular, PCS and AWS licensees outside of their licensed area, for at least the 10-year term of the AWS licences...”*

Answer:

The term “licensed area” in the policy refers to the total geographic area in which a licensee holds any cellular, PCS or AWS licence. Mandated out-of-territory roaming is to be available to any such licensee in a territory where it has no licences in any of the cellular, PCS or AWS bands.

For example, if a carrier has a combination of cellular, PCS or AWS licences which together cover all of Canada, then its licensed area is all of Canada and it does not have access to the provisions for mandated out-of-territory roaming.

For example, if a carrier has a cellular, PCS or AWS licence only in a particular tier 2 area, the provisions for mandated out-of-territory roaming apply outside that tier 2 area.

2.9 *In response to questions seeking clarification as to whether incumbent carriers are permitted to roam on the networks of regional and/or national new entrants that may result from the AWS auction, e.g. in rural areas covered by a new entrant but not by incumbent licensees.*

Answer:

As described in section 2.8 above, out-of-territory roaming is not mandated where a carrier holds a cellular, PCS or AWS licence for the area in question. Nothing in the policy, however, limits the ability of carriers to conclude commercial agreements not covered by the policy.

2.10 *In response to questions seeking clarification that, subsequent to the initial AWS new entrant five-year roll-out period, incumbent licensees will not be required to provide roaming to new entrant licensees in any area where the new entrant AWS licensee has spectrum licences or has spectrum usage rights (e.g. leased spectrum or is a member of a group designated to be a national new entrant).*

Answer:

The AWS Policy Framework provides that national new entrants who have substantially met the five-year roll-out requirements outlined in their conditions of licence, as determined by Industry Canada, may have mandated roaming in their licensed area for an additional five years. National new entrants are defined in the AWS Policy Framework. This question, however, adds a consideration of leased spectrum. Leased spectrum can be obtained through the issuance of a subordinate licence. Licences issued as a subordinate licence have similar spectrum usage rights and obligations to the primary licence. Accordingly, subordinate licences have similar rights and obligations when considering them under the provisions for mandated roaming.

2.11 *In response to questions seeking clarification on whether mandated roaming arrangements will support public WLAN/GSM roaming.*

Answer:

The AWS Policy Framework indicates that Industry Canada will be requiring that, where technically feasible, cellular, PCS and AWS licensees offer automatic digital roaming on their networks to all cellular, PCS and AWS licensees. Consequently, roaming onto WLAN facilities is outside the scope of this policy. However, agreements can be made between operators.

2.12 *In response to questions seeking clarification on what Industry Canada means by “at least” in the reference to out-of-territory roaming: “...for at least the 10-year term of the AWS licences.”*

Answer:

The AWS licences may be issued with varying start dates at the end of the auction. The objective is to provide certainty to the licensees that this policy provision will continue for at least the term on the AWS licences which is 10 years. The Minister of Industry retains discretion to apply the policy or a similar policy to licences in the AWS spectrum that are renewed after the initial licence term or to other licences which may terminate later than the initial AWS licences.

2.13 *In response to questions seeking clarification on how Industry Canada will treat a request from a group of new entrants for an additional five-year extension to the in-territory roaming provision, in the event that one or more of the licensees in the group has not met the specified roll-out targets.*

Answer:

The AWS Policy Framework indicates that Industry Canada will take into account the roll-out targets in considering any application from a national new entrant for extension of in-territory roaming beyond the initial five years. Industry Canada will consider the specific circumstances of a request at that time.

2.14 *In response to questions on penalties for unnecessarily delaying the roaming requests.*

Answer:

The proposed conditions of licence will set out requirements for licensees to respond to requests for information, to respond to proposals to enter into a roaming agreements and to conclude negotiations and enter into a final agreement. If an agreement is not completed within the timelines, then the parties will be subject to an arbitration process, which will compel the parties to complete the roaming agreements with assistance from an arbitrator, if needed.

Parties who do not follow the established time frames or who foster delay and fail to negotiate in good faith may be subject to proceedings based on a breach of conditions of licence. Industry Canada would consider appropriate action at that time based on the circumstances.

2.15 *In response to questions on access to the international roaming arrangements currently in place between the incumbents and the U.S./international service providers.*

Answer:

Mandated roaming applies to roaming within Canada and not to international roaming.

2.16 *In response to clarification questions as to whether a licensee in the band 1670-1675 MHz can benefit from the mandatory roaming provisions applied to cellular, PCS and AWS licences.*

Answer:

The mandatory roaming provisions do not apply to the band 1670-1675 MHz because it is not a cellular, PCS or AWS band. Although the band 1670-1675 MHz is being licensed in the mobile service and is suitable for a wide range of applications, there is insufficient information at this time to apply the provisions related to mandated roaming in this band. As noted in other questions, the application of mandated roaming provisions to other mobile bands would be the subject of future consultations.

3. Responses to Clarification of the AWS Policy Framework on Antenna Tower and Site Sharing

3.1 *In response to questions seeking clarification on the policy as it relates to Industry Canada's jurisdiction over antenna tower and site sharing and to prohibit exclusive site arrangements.*

Answer:

As part of the Minister of Industry's authority over radiocommunication, the Minister may approve each site on which radio apparatus, including antenna systems, may be located and approve the erection of all masts, towers and other antenna-supporting structures; and may set conditions of any radio authorization. The proposed condition requiring arbitration for commercial disagreements over sharing would ensure that sharing can be facilitated in a timely manner.

The proposed conditions relating to exclusive site arrangements do not interfere with the rights of landlords. A landlord would have to willingly waive any exclusivity provisions in the lease. To facilitate tower sharing, the conditions of licence would require the licensee to waive an exclusivity clause. Licensees who delay or who act in bad faith may be subject to proceedings based on a breach of their conditions of licence.

Anyone proposing to install an antenna system (a proponent) is subject to compliance with Client Procedures Circular CPC-2-0-03 in respect of antenna siting. Additionally, CPC-2-0-03 has been recently updated and provides that antenna proponents and owners/operators of existing antenna systems should retain records such as analyses, correspondence and engineering reports relating to the use of existing infrastructure and sharing. In addition to other requirements of CPC-2-0-03, before building a new antenna-supporting structure, the proponent must first consider sharing an existing antenna system, modifying or replacing a structure if necessary. This procedure also stipulates that proponents are not normally expected to build a new antenna-supporting structure where it is feasible to use an existing structure unless a new structure is preferred by the land-use authority.

3.2 *In response to questions seeking clarification on technical feasibility as it relates to antenna tower and site sharing.*

Answer:

In Canada, recent estimates indicate that 60 percent of all cellular and PCS antenna sites are shared. In the United States, an industry exists that is based solely on leasing tower infrastructure. Given the foregoing, Industry Canada is of the view that in the vast majority of cases, sharing will be technically feasible and that the primary consideration will be one of cost. Where disagreement exists over cost, it can be dealt with either through commercial negotiations or through the binding arbitration process if necessary.

However, if a dispute arises over whether sharing is, or is not, technically feasible, Industry Canada will make a timely determination on the matter. Further details on this matter will be included in the conditions of licence.

3.3 *In response to questions seeking clarification on possible changes to CPC-2-0-03.*

Answer:

In *Canada Gazette* Notice No. DGRB-010-07, Industry Canada indicated that consequential amendments to CPC-2-0-03, may also be effected pursuant to the consultation process. CPC-2-0-03, which came into effect on January 1, 2008, outlines requirements related to use of existing infrastructure (sharing). More specifically, before building a new antenna-supporting structure, proponents must first consider sharing an existing antenna system, modifying or replacing a structure if necessary. CPC-2-0-03 deals primarily with procedures regarding a new site or tower and any modifications to the procedures would only be minor, such as referring to the new conditions of licence and additional consultation is not warranted at this time.

3.4 *In response to questions seeking clarification on the sharing process.*

Answer:

Every person proposing to install an antenna system (a proponent) is to follow CPC-2-0-03 in respect of antenna siting. These procedures describe the process that can lead to the sharing of an existing antenna site.

Separate from CPC-2-0-03, the proposed condition of licence to mandate sharing would ensure that sharing agreements are negotiated and finalized in an efficient manner, on the basis of reasonable commercial rates and with assistance from an arbitrator, if required.

Under the proposed condition, licensees would not have to establish public lists of available antenna sites for the use of others. However, site information may be derived from radio frequency assignment information on Industry Canada's website at <http://sd.ic.gc.ca/engdoc/main.jsp>.

A licensee's own future needs for tower or antenna space may be considered if they are well documented, reasonable and near term but these needs are not considered a matter of technical feasibility. Longer term future needs alone will not be considered a reason not to share. Regarding preferential locations on towers, if it is not technically feasible to allow multiple users to access the same placement through, for example, multicoupling, the presumption would be that a greater value will be placed on the preferential location, which is a commercial dispute that can be dealt with through negotiation and binding arbitration if necessary.

The operation of a radiocommunication system relies on more than just access to an antenna supporting structure. In order to be considered to be negotiating in good faith and as part of the conditions of licence for mandatory tower and site sharing, licensees must offer at reasonable commercial rates, access to ancillary equipment and services.

Any disagreements that may arise regarding costs associated with sharing will be subject to negotiation and, if necessary, the binding arbitration process.

3.5 *In response to questions seeking clarification on the process and costs associated with sharing.*

Answer:

The final conditions of licence for antenna tower and site sharing, mandated roaming and timelines related to the arbitration process will be published in a notice to appear in the *Canada Gazette*. That Gazette notice is expected to be available within the next week and will also be posted on the Department's website. Clarification questions received that relate to these issues will be answered in that document.

4. Responses on Collusion

PROHIBITION OF COLLUSION

Preamble

Section 5.3 of the AWS Licensing Framework entitled Participation in the Auction, sets out the policy intent with respect to Affiliates and Associated Entities and bidding, namely:

“All bids must be from unrelated competitors in order to preserve the integrity of competitive bidding. Therefore, only one member of an Affiliate relationship or Associated Entity will be permitted to become a qualified bidder. This is based on the principle that only competitors should be permitted to participate in the auction. Affiliated and Associated Entities must, therefore, decide prior to the application deadline which entity will apply to participate in the auction.”

In accordance with the above, the penultimate paragraph of section 5.3.3, Presumption of Affiliate and Associated Entity Status, the sentence

“Should the entities fail to provide all the relevant information in a timely fashion to allow the Department to complete its determination, or if the Department is not satisfied five business days prior to the date set for the mock auction that an association does not exist, then only one of those Associated Entities will be permitted to become a qualified bidder in the same service area.”

should read

“Should the entities fail to provide all the relevant information in a timely fashion to allow the Department to complete its determination, or if the Department is not satisfied five business days prior to the date set for the mock auction that an association does not exist, then only one of those Associated Entities will be permitted to become a qualified bidder.”

Collusion, including but not limited to bidding by Associated Entities, may be determined at anytime. Colluding parties are subject to penalties that may include but are not limited to forfeiture of deposits, auctioned licence payments and licences.

Interested parties are reminded that the provisions of the *Competition Act* apply independently of, and in addition to, the provisions of the AWS Policy and Licensing Frameworks.

4.1 *In response to a question on companies forming unincorporated associations to participate in the auction.*

Answer:

Any Associated Entities, including unincorporated associations, must bid as a single entity.

4.2 *In response to a question on whether debt or equity financing arrangements are prohibited under Section 5.2 of DGRB-011-07.*

Answer:

Any party may obtain financing as they see fit; however, Applicants must disclose any debt or equity financing agreements that relate to Affiliates, Associated Entities or competitors prior to the auction.

Please also note that financing arrangements with all third parties (whether they are involved in the auction or not) will also be disclosed later in the process as part of CPC-2-0-15, Canadian Ownership and Control, under Financing, section 6.

- 4.3** *In response to a question seeking clarification on whether the Department will accept multiple letters of credit from Associated Entities of the same applicant, which when taken together, would equal the total amount required for the bidding points requested by the associated applicant.*

Answer:

Yes, the Department will accept multiple letters of credit from Associated Entities. Please note that the Associated Entities will be jointly and severally liable for any amounts owing under the auction. If needed, Industry Canada will draw from one or more of the Letters of Credit at its discretion.

- 4.4** *In response to questions seeking clarification on the participation of Associated Entities in the AWS auction.*

Answer:

As stated in the AWS Licensing Framework and reiterated above, only one member of an Affiliate relationship or Associated Entity will be permitted to become a qualified bidder. Affiliated and Associated Entities must, therefore, decide prior to the application deadline which entity will apply to participate in the auction.

- 4.5** *In response to questions seeking clarification on the definition of competitors.*

Answer:

The definition of competitor included in the AWS Licensing Framework – “any entity, other than the applicant, its Affiliates or Associated Entities, which could potentially be a bidder in this auction based on its qualifications, abilities or experience” – applies to this licensing process in its entirety, from the application deadline to the final payment deadline. If a question regarding the status of an entity as a competitor arises, the Department would apply that definition on a case-by-case basis.

- 4.6** *In response to questions seeking clarification on Associated Entities (which includes Affiliates), related agreements and arrangements, plus disclosure of the same.*

Answer:

As outlined in the AWS Policy and Licensing Frameworks, the existence of any agreements, arrangements or understandings related to any partnerships, joint ventures, agreements (including agreements in principle) to merge, consortia or any arrangements, agreements or understandings of any kind, either explicit or implicit, relating to the acquisition of the licences being auctioned or relating to the post-auction market structure, must be disclosed in writing to the Department at the time of application.

Only one entity per group of Associated Entities (which includes affiliated companies) is eligible to participate in the auction. Any discussions or negotiations after the application deadline which create an association with competitors (i.e. any explicit or implicit

agreement relating to the acquisition of the licences being auctioned or to the post-auction market structure) during the auction process are prohibited and will be considered to be collusion. Any applicant who has formed part of such an association outside of the Associated Entity will be disqualified from participating in the auction and may be subject to revocation of licences obtained in the AWS auction. Therefore, all such contact with competitors must be suspended from the application deadline until the final deadline for payment on high bids.

Parties to a consortium agreement disclosed to Industry Canada in accordance with the Associated Entities rule are allowed to modify the terms of such agreement after the application deadline, or to enter into further detailed agreements intended to give effect to a general agreement, as long as the amendments do not involve any new competitors. The application will then be subject to approval by Industry Canada.

All bidders must not cooperate, collaborate, discuss or negotiate **any agreements** with competitors which pertain to policies implemented and licences offered in this auction, between the application date and the deadline for the final payment on high bids. Once licences have been issued, licensees may transfer licences, subject to departmental approval, to other companies provided that they meet the conditions of licence.

An agreement to offer sell-buy options or buy-sell options or to offer another actual or potential bidder access to the applicant's network, or spectrum that it may obtain during the AWS auction, is not prohibited by the rules prohibiting collusion as long as it is fully disclosed to the Department at the time of application. No such agreement is permitted to be made from the time that applications are submitted until after the deadline for final payments on licences won during the auction.

Refer to section 5.3.2, Associated Entities, of the AWS Licensing Framework for a definition of Associated Entities, and to section 5.3.3, Presumption of Affiliate and Associated Entity Status, or details on the case-by-case affiliation test conducted to determine de facto control.

4.7 *In response to questions seeking clarification of what information will be made public and the timing of its publication.*

Answer:

Sections 1-8 of the application will be published on Industry Canada's website. This includes information such as the Applicant's name, address, beneficial ownership information, and whether the applicant is applying as a new entrant. The information provided in Box A of section 9, Revenue, of the *Application to Participate in the Auction for Spectrum Licences for Advanced Wireless Services and other Spectrum in the 2 GHz Range* will be treated in accordance with the *Access to Information Act* relating to third party information.

4.8 *In response to questions seeking clarification on the relationship between the Competition Act and the AWS Policy and Licensing Frameworks.*

Answer:

The provisions of the *Competition Act* apply independently of, and in addition to, the provisions of the AWS Licensing Framework. As such, where an arrangement or agreement captured by subsection 47(1) of the *Competition Act*, and is not exempted by subsection 47(3) by reason of the arrangement or agreement being between corporations that are affiliates of one another, notification under the *Competition Act* will be required. Parties should note that, with respect to corporations, “affiliate” is defined in the *Competition Act* by reference to *de jure* control, whereas “affiliate” for the purposes of the AWS Licensing Framework is determined by reference to *de facto* control (or control in fact). As such, an agreement or arrangement that may be permissible under the anti-collusion rules of the AWS Licensing Framework by reason of being between affiliates (as determined by reference to control in fact) may still require notification under the *Competition Act* where those parties would not be considered “affiliates” under the *Competition Act*.

The anti-collusion rules of the AWS Licensing Framework permit agreements or arrangements regarding the amount to be bid, bidding strategies, or the particular licence(s) on which the applicant or competitors will or will not bid provided those agreements or arrangements are between entities that are Associated Entities.

4.9 *In response to questions seeking clarification on the term of the prohibition of collusion and its application in the event of a change in the opening of the auction.*

Answer:

- (a) The auction application form contains a declaration that the applicant will be required to sign certifying that the applicant has not entered into and will not enter into any agreements or arrangements of any kind with any competitor regarding the amount to be bid, bidding strategies or the particular licence(s) on which the applicant or competitors will or will not bid, until the deadline for the final payment on high bids.
- (b) This certification will stand whether the date of the opening day of bidding is changed or not.
- (c) Applicants that jointly form an association after the application deadline and before the close of the auction will be disqualified from participating in the auction as separate bidders and licences obtained in this process may be subject to revocation.
- (d) Collusion, including but not limited to bidding by Associated Entities, may be determined at anytime.

4.10 *In response to questions seeking clarification of Industry Canada's process for determining the satisfactory rebuttal of affiliation.*

Answer:

As outlined in the AWS Licensing Framework, in making its determination, Industry Canada will generally request and review the type of information listed in the *Declaration of Ownership and Control by Provisional Winners of Spectrum Licences in the 2 GHz Range Including AWS, PCS and the Band 1670-1675 MHz* (<http://ic.gc.ca/spectrumbauctions>). The Department reserves the right to request additional information.

5. Responses on Definition of Licences

5.1 *In response to a question seeking clarification on Canadian ownership and control.*

Answer:

The determination of Canadian ownership and control is comprised of a number of elements. Further information can be found in Client Procedures Circular, *Canadian Ownership and Control* (CPC-2-0-15), on the Department's website at <http://ic.gc.ca/epic/site/smt-gst.nsf/en/sf01763e.html>.

Individuals are eligible to be issued radio licences as a radiocommunication carrier provided that they are:

- (I) a citizen within the meaning of subsection 2(1) of the *Citizenship Act* who is ordinarily resident in Canada, or
- (ii) a permanent resident within the meaning of subsection 2(1) of the *Immigration Act* who is ordinarily resident in Canada, and who has been ordinarily resident in Canada for not more than one year after the date on which that person first became eligible to apply for Canadian citizenship.

Therefore, a U.S. citizen may only be eligible to hold a licence as a radiocommunication carrier if he/she also falls into one of the two categories noted above.

NAFTA recognizes that Canada reserves certain ownership and control provisions related to radiocommunication and telecommunications and, therefore, it does not affect the applicability of the *Radiocommunication Regulations* in this case.

5.2 *In response to a question seeking clarification on geographical maps of each block.*

Answer:

Descriptions and maps of the service areas that the Department uses for all competitive licensing processes may be found in the *Service Areas for Competitive Licensing* document located on the Department's website at http://ic.gc.ca/epic/site/smt-gst.nsf/en/h_sf01627e.html. The population associated with each service area is based on Statistics Canada 2001 census information.

5.3 *In response to a question seeking clarification on whether, in the event of a liberalization in the Canadian ownership and control, foreign entrants would be eligible to acquire or lease licences acquired through a set-aside.*

Answer:

The Department cannot anticipate what ownership and control regulations will exist in the future.

5.4 *In response to a question seeking clarification on whether the requirement to invest a minimum of 2 percent of adjusted gross revenues in eligible research and development activities is to be averaged over five years or whether it is to be averaged over the 10-year licence term.*

Answer:

To be consistent with previous auction policies, the Department will modify the condition of licence by replacing the first paragraph in the AWS Licensing Framework with:

All licensees must invest, as a minimum, 2 percent of their adjusted gross revenues resulting from their operations in this spectrum **averaged over the 10-year term of the licence**, in eligible research and development activities related to telecommunications. Eligible research and development activities are those which meet the definition of scientific research and experimental development adopted in the *Income Tax Act*. Adjusted gross revenues are defined as total service revenues, less inter-carrier payments, bad debts, third party commissions, and provincial and goods and services taxes collected. AWS licensees with less than \$5 million in annual gross operating revenues are exempt from research and development expenditure requirements, except where they have affiliations with licensees that hold other licences with the research and development condition of licence and where the total annual gross revenues of the affiliated licensees are greater than \$5 million.

5.5 *In response to a question seeking clarification on when Industry Canada intends to consult on the Framework for Spectrum Auctions in Canada document.*

Answer:

Industry Canada intends to consult on an update to the Framework for Spectrum Auctions in Canada in the coming year. The consultation will likely raise a number of specific areas that the Department feels require updating, one of which is the renewal of long-term spectrum licences. At that time, stakeholders will have an opportunity to comment on any part of the Framework. The renewal process developed through that consultation may apply to all auctioned licences, past and future, including AWS.

5.6 *In response to a question asking if forbearance of a condition of licence is made public.*

Answer:

The only condition of licence that contains forbearance is lawful intercept. If Industry Canada were to forebear on any other condition of licence, it would normally be the Department's intention to make this information public.

5.7 *In response to a question seeking clarification on annual reporting requirements.*

Answer:

Industry Canada has taken into consideration comments received on the annual reporting requirements and will update section 4.12 of the AWS Licensing Framework by replacing the first bullet with:

- an update on the implementation and spectrum usage of Advanced Wireless Services, Personal Communications Services and/or services in the band 1670-1675 MHz, within the area covered by the licence.

5.8 *In response to questions seeking clarification of licence term, roll-out obligations and renewal of licence.*

Answer:

The first paragraph of section 4.1, Licence Term, in the AWS Licensing Framework will be replaced as follows:

The AWS licences will be issued for a 10-year term similar to other spectrum licences. At a minimum of two years before the end of this term, and any subsequent terms, the licensee may apply for licence renewal for an additional licence term of up to 10 years. AWS licence renewal will be subject to a public consultation process initiated in year eight. That public consultation will take into consideration the extent of geographic coverage across the licensed area, among other factors specified in the AWS Policy Framework. Where conditions of licence have been met and the licensee can demonstrate

geographic coverage which is at a minimum consistent with the roll-out targets set out in Annex 2 to the AWS Policy Framework, the AWS licences will have *a high expectation of renewal*.

In the context of the Framework for Spectrum Auctions in Canada, the Department intends to launch a public consultation on the nature and details of the licence renewal process. The renewal process developed through that consultation may apply to all auctioned licences, including AWS.

5.9 *In response to questions seeking clarification concerning licence transfers.*

Answer:

As outlined in the AWS Licensing Framework, departmental approval is required for each proposed transfer of a licence, whether the transfer is in whole or in part. The licensee must apply to Industry Canada in writing. The transferee(s) must also provide an attestation and other supporting documentation demonstrating that it meets the eligibility criteria and all other conditions, technical or otherwise, of the licence. This provision applies for the entire term of the licence.

6. Responses on Auction Design and Operation

6.1 *In response to questions seeking clarification about the opening round number, available licences and daily scheduling of auction rounds.*

Answer:

Bidding will commence on both set-aside and non set-aside licences in Round 1, and continue daily with rounds opening at times that respect the time differences between the East and West coasts to the extent possible. Both set-aside and non set-aside licences will be available simultaneously, but bidder screens for new entrants and incumbents will show only licences for which they are eligible to bid (i.e. new entrants will see both set-aside and non set-aside licences whereas incumbents will see only non set-aside licences).

6.2 *In response to questions seeking clarification about the “start date” of the auction for the purpose of determining eligibility points for the auction and whether it is possible to change eligibility thereafter.*

Answer:

Bidder eligibility points for the auction will be determined according to the information and the financial deposit provided by bidders with their application, which is due on March 10, 2008. Bidders may not change their eligibility points after this date.

6.3 *In response to questions seeking clarification about the relationship between Tiers 1, 2, 3 and 4.*

Answer:

For a comprehensive view of these service areas, bidders should consult the document Service Areas for Competitive Licensing available at http://ic.gc.ca/epic/site/smt-gst.nsf/en/h_sf01627e.html.

6.4 *In response to questions seeking clarification related to the requirement for bidders to identify service areas of interest; the subsequent use of points during the auction; and the provision of additional financial deposits.*

Answer:

Please take note of the revised *Application to Participate in the Auction for Spectrum Licences for Advanced Wireless Services and other Spectrum in the 2 GHz Range*: applicants are no longer required to indicate the licences on which they wish to bid.

Bidders should carefully review the first bullet of section 6.1 of the AWS Licensing Framework entitled Key Features of the Simultaneous Multiple-Round Ascending Auction (SMRA) Design, and Section 6.2, Bidder Eligibility Points. These sections identify the use of “points” to establish the required financial deposit. Note that points may not be increased during the auction and that “Points have been established to provide bidders with maximum flexibility to transfer them among the available licences.”

Section 5.4.1, Financial Deposits, notes that Industry Canada reserves the right to request additional financial deposits. The need to exercise this right may arise if bids rise to such a level that the initial financial deposit is insufficient to cover potential financial penalties.

6.5 *In response to questions seeking clarification related to the likelihood of reductions in these or other bids.*

Answer:

Bidders should review section 6.8, Opening Bids, with respect to the circumstances under which these bids may be reduced and paragraph 6 of section 6.9, Withdrawal of Bids and Related Penalties, with respect to the conditions under which Industry Canada may consider reducing a required bid.

6.6 *In response to questions seeking clarification about bidding rules.*

Answer:

A jump bid occurs when a bidder who is already the high bidder on a licence places a bid on the same licence in the next round. During the bidding round, jump bids are allowed but they do not count towards meeting the activity rule given that the bidder already has

the standing high bid on the licence in question. A jump bid will, therefore, generate a message from the auction software alerting the bidder to the fact that a jump bid has been made. Bidding insufficient eligibility points will also result in an automated message to the bidder and offer the remedy of placing a waiver to maintain eligibility. Bidders may enter and withdraw bids as many times as they wish during the bidding round, but only the final bidding submission will be valid at the end of each round.

6.7 *In response to questions seeking clarification about bid increments and stage transitions and Industry Canada’s announcements about these events.*

Answer:

In general, bid increments are chosen to the extent possible to move bids predictably and expeditiously towards stage transition and market-clearing prices with the magnitude of bid increments reflecting the underlying value and demand for the spectrum in question. To better understand Industry Canada’s intent of setting these variables in support of an efficient assignment of spectrum licences, bidders may wish to carefully read the Department’s position on stage transition and bid increments in sections 6.3 and 6.5 of the AWS Licensing Framework.

Note that these variables are set the same for both set-aside and non set-aside licences with notification of the changes normally occurring two rounds before the change is implemented.

6.8 *In response to questions seeking clarification about waivers.*

Answer:

Bidders should carefully read section 6.6 of the AWS Licensing Framework entitled Activity Rule Waivers, and note that Industry Canada does retain discretionary power to award additional waivers.

6.9 *In response to questions seeking clarification about the conditions required for the auction to close, including “exceptional circumstances.”*

Answer:

As described in section 6.6 of the AWS Licensing Framework, if bidders submit insufficient bids in a round, they will receive a warning from the Auction Management System (AMS) that will offer them the option to use a waiver to maintain their eligibility in subsequent rounds. If they select that option, the auction will remain open without the requirement of a proactive waiver because new bids were submitted along with their waiver.

However, if no new bids or withdrawals are entered with the waiver, the auction will follow the rule specified in section 6.7, Proactive Waivers.

There are only two ways for the auction to close:

- if, following a round in which there is no activity, a proactive waiver is not submitted, or
- under the unspecified, “exceptional circumstances” noted in the licensing document, which is included to guard against an unanticipated event.

6.10 *In response to questions seeking clarification about withdrawal penalties.*

Answer:

The additional penalty referred to section 6.9 of the AWS Licensing Framework, Withdrawal of Bids and Related Penalties, is for withdrawals made in more than five rounds of the auction.

Example: Bidder A withdrew standing high bids in rounds 5, 10, 11, 20 and 21. If Bidder A wishes to withdraw in round 30, that bidder will pay a penalty that is the greater of (a) 2 percent of the withdrawn standing bid or (b) \$10,000, which will be in addition to regular withdrawal penalties as described in section 6.9 of the AWS Licensing Framework.

6.11 *In response to questions seeking clarification about the file formats for round by round bidding results.*

Answer:

The exported file formats will be .dbf and .txt. Further information on these files will be made available with the AWS Bidder Information Document, which will be provided to the bidders prior to the auction.

6.12 *In response to questions concerning whether Industry Canada will respond to inquiries after the clarification deadline, including during the auction.*

Answer:

At any time after the January 22, 2008 deadline for submitting clarification questions on the AWS Policy and Licensing Frameworks, Industry Canada will only respond to questions concerning the application process or how to participate in the auction.

6.13 *In response to questions on the complaint and escalation process regarding the deviation from the rules and policy during the bidding process.*

Answer:

Questions or comments regarding deviation from the rules and policy during the bidding process should be directed to the AWS Auction Manager.

6.14 *In response to questions seeking clarification of bidding by new entrants.*

Answer:

An applicant that qualifies as a new entrant may bid on any spectrum in the auction.

As outlined in the AWS Licensing Framework, bidders may withdraw their standing high bids; however, to encourage meaningful bids and to ensure that no loss of revenue occurs as a result of such withdrawals, a bid withdrawal penalty corresponding to the potential loss of auction revenue caused by this withdrawal will be imposed (see section 6.9 of the AWS Licensing Framework).

6.15 *In response to questions seeking clarification of provisions for a delay between the start of the auction and the submission of financial deposits.*

Answer:

Industry Canada reserves the right to change the date of the auction after the financial deposits have been submitted with applications on March 10, 2008.

The length of the delay between receipt of financial deposits and the new date of the auction would be taken into consideration by Industry Canada in determining whether to return the financial deposits received with applications and to request replacements at a later date.

6.16 *In response to questions seeking clarification of auction milestones.*

Answer:

Certain milestones for the AWS auction have been modified to accommodate the consultation on proposed conditions of licence to mandate roaming and antenna tower and site sharing and to prohibit exclusive site arrangements: the deadline for receipt of applications to participate in the AWS auction has been changed by one week to March 10, 2008. The auction will take place expeditiously.

6.17 *In response to questions seeking clarification of licences available for bidding.*

Answer:

The reference to “licences on which they are qualified to bid” in section 6.1 of the AWS Licensing Framework distinguishes between non-set aside spectrum and spectrum set aside for new entrants.

6.18 *In response to questions seeking clarification of unassigned or returned spectrum, the second phase of the auction and licence transferability and exchanges.*

Answer:

When a spectrum licence is returned to Industry Canada, the Department will make the associated spectrum available for re-licensing in a timely manner.

As outlined in the AWS Licensing Framework, this auction process will continue in a second phase, if required, which will commence no less than **one year following** the cessation of bidding in the first phase. A *Canada Gazette* notice will be issued, marking the commencement of the second phase of the auction and inviting interested parties to submit applications for unassigned licences.

Licences acquired through the set-aside may not be transferred or leased to, or divided among companies that do not meet the criteria of a new entrant, for a period of five years from the date of issuance. Departmental approval is required for each proposed transfer of a licence, whether the transfer is in whole or in part. The licensee must apply to Industry Canada in writing. The transferee(s) must also provide an attestation and other supporting documentation demonstrating that it meets the eligibility criteria and all other conditions, technical or otherwise, of the licence.

Please note that section 4.2, Licence Transferability and Divisibility, of the AWS Licensing Framework will be soon amended as follows: Industry Canada will consider requests from licensees, whether new entrants or incumbents, to exchange spectrum blocks in the same geographic territory provided that the amount of non-set aside spectrum is equal to or greater than the set aside spectrum and the Department may grant such requests based on the merits of the proposal and conformity with the policy objectives.

6.19 *In response to questions seeking clarification of subordinate licensing, transferability and limitations on set-aside spectrum, terms and conditions and timing of applications.*

Answer:

Client Procedures Circular, *Licensing Procedure for Spectrum Licences for Terrestrial Services* (CPC-2-1-23), available on Industry Canada's website at <http://ic.gc.ca/epic/site/smt-gst.nsf/en/sf01875e.html>, outlines the general terms and conditions of subordinate licences. As indicated in section 5.6.1, Subordinate Licensing, subsection 5, subordinate licences are not divisible or transferable.

6.20 *In response to questions seeking clarification of the responsibility of applicants/bidders with regard to participation in a spectrum auction.*

Answer:

Industry Canada makes no representations or warranties about the use of this spectrum for particular services. Applicants should be aware that this auction represents an

opportunity to become a licensee, subject to certain conditions and regulations. An Industry Canada auction does not constitute an endorsement by the Department of any particular services, technology or product, nor does a spectrum licence constitute a guarantee of business success. Applicants are responsible for ensuring that the band in question and proposed conditions of licence are suitable for their technological and business plans before proceeding as they would with any business venture.

6.21 *In response to questions seeking clarification related to bidder information that may be available during the auction.*

Answer:

Bidders should review the first paragraph in section 6.1 of the AWS Licensing Framework, which states: “The identities of all bidders, the licences on which they are qualified to bid, and their initial levels of eligibility points will be made public prior to the commencement of bidding. Information on the bids placed by all bidders will be made available after each round.”

7. Responses on Auction Software

7.1 *In response to a question on the output format.*

Answer:

Several documents which contain important information and instructions for the qualified bidder to effectively participate in the auction, including a copy of the output format, will be included as part of the bidder mail-outs. These mail-outs will be sent **five to seven weeks** prior to the start of the mock auction.

8. Responses to the Process and Procedural Questions, Including Deposits and Payments

8.1 *In response to questions seeking clarification on ownership and control.*

Answer:

Within 10 days of the cessation of bidding, each provisional licence winner is required to submit all eligibility documentation listed in the *Declaration of Ownership and Control*, and a signed copy of the *Declaration of Ownership and Control*. The submission of eligibility documentation is required so that Industry Canada can make a determination on the compliance of the provisional winner with the eligibility criteria under the *Radiocommunication Regulations*.

Industry Canada is satisfied with the current process for ensuring compliance with Canadian ownership and control requirements.

Industry Canada will pursue its evaluation and analysis of entities that have won a licence expeditiously to ensure that they indeed demonstrate compliance with the ownership and control requirements.

In the event that a provisional licence winner does not, in the opinion of Industry Canada, comply with the Canadian ownership and control requirements, the Department will require that the provisional licence winner make changes in order to become compliant. If the provisional winner fails to comply with the Canadian ownership and control requirements within 60 days of being notified by Industry Canada of the required changes, the provisional licence winner will forfeit its right to be issued any licences offered in this auction process or any licences already issued to it in this process and will be subject to the penalties.

8.2 *In response to questions seeking clarification on a subsequent licensing process for the unsold licences.*

Answer:

Licences that remain unsold upon cessation of bidding may be made available upon continuation of the auction in a second phase. This subsequent licensing process will not take place for at least a year following the end of the first phase of bidding.

8.3 *In response to questions on what type of information will be posted on Industry Canada's website regarding the list of applicants and qualified bidders.*

Answer:

A list of applicants, including their financial deposits and eligibility points, will be made public on Industry Canada's website on **March 14, 2008**. The publication of this list in no way qualifies the applicants to participate in the auction.

A list of all qualified bidders, their desired initial level of eligibility points, calculation of required financial deposit and beneficial ownership information will be made public on Industry Canada's website on **March 31, 2008**.

If options held by any person, including existing shareholder(s) of an applicant, have the potential, once exercised, to increase beneficial ownership in the applicant to 10 percent or greater, details with respect to this interest must be attached to the applicant's application form.

8.4 *In response to a question on how applicants can correct any deficiencies identified by Industry Canada in their filings.*

Answer:

After the closing date for the submission of applications, Industry Canada will review the applications submitted, including any associated documents, and the letters of credit. An opportunity will be provided to the applicants to make any necessary amendments to any errors identified in the application, associated documents, or letters of credit. Upon completion of this review, those applicants who have submitted acceptable application materials, including the accompanying financial deposit, will be designated as qualified bidders.

8.5 *In response to a question on the time frame for the return of an applicant's letter of credit once the auction has closed.*

Answer:

The letter of credit will be returned to the applicant shortly after the receipt of the final payment. If a bidder withdraws either before or during the auction and has incurred no penalties, and is not a standing high bidder on any licence, the bidder may request that the letter of credit be returned by notifying the Manager, Wireless Networks. Upon having verified that these conditions have been met, the letter of credit will be returned with the shortest possible delay.

8.6 *In response to questions seeking clarification on "exceptional" circumstances under which Industry Canada would accept applications and associated documentation after the deadline.*

Answer:

Please note that the deadline for receipt of applications and financial deposits to participate in the auction has been extended to March 10, 2008. Industry Canada reserves the right to accept applications and associated documentation after the deadline, but prior to publication of the list of applicants. Industry Canada will exercise its discretion in determining whether such an application will be accepted, if necessary, on a case-by-case basis.

8.7 *In response to a question seeking clarification on whether the results of the consultation will be made public prior to the application deadline.*

Answer:

The results of the consultation will be made public so that all those affected are aware of the changes prior to the deadline for auction applications.

8.8 *In response to a question seeking clarification on whether the 2006 wireless revenue will be made public.*

Answer:

Information provided from applicants on the 2006 wireless revenue will be treated in accordance with subsection 20(1) of the *Access to Information Act*.

8.9 *In response to questions on the same consulting company advising two or more bidders participating in the AWS auction.*

Answer:

The department does not allow the same consulting company to advise more than one applicant.

8.10 *In response to questions seeking clarification on the provision of interest payments.*

Answer:

There is no provision for the payment of interest in relation to the payment of the sum of standing high bids and penalties (if any) by provisional winners during the period of time from the payment to the issuance of a licence.

9. Responses on Technical and Engineering Issues

9.1 *In response to questions seeking clarification as to whether spectrum holders in adjacent bands using alternative technologies, such as FDD or TDD who are first to market will have priority and which party will be required to sacrifice spectrum for the purpose of implementing guard bands.*

Answer:

The technical rules were published on February 22, 2008, on Industry Canada's website (refer to [Canada Gazette Notice No. SMSE-006-08](#)), establishing limits such as maximum radiated power and out-of-band emission masks for AWS stations. In general, these rules were developed to accommodate systems using FDD techniques. Systems using TDD technology may also operate provided that their technical characteristics can operate within the technical rules developed for FDD systems.

Possible interference resulting from the operation of two AWS systems operating in adjacent blocks may occur even though the technical specifications of both the Standard Radio System Plan (SRSP) and Radio Standards Specifications (RSS) are met. The resolution of those conflicts should be through mutual arrangements between the affected parties following consultation and coordination. When potential conflicts between systems cannot be resolved, Industry Canada shall be so advised, whereupon following

consultations with the parties concerned, the Department will determine the necessary modifications and/or schedule of modifications.

9.2 *In response to a question seeking clarification on whether any band carries any advantage over another.*

Answer:

In general, the lower the frequency band, the greater the propagation (range) of a signal. Signals in higher frequency bands are more susceptible to propagation impediments such as atmospheric absorption, rain fade (attenuation), reflections, etc. Also, signals in lower bands are better at penetrating through walls than signals in higher frequency bands. One of the reasons that over-the-air television signals are broadcast in the lower frequency bands is so that these signals can penetrate through walls.

In addition, lower frequencies tend to be more congested; hence, there is less bandwidth available for multi-media and other bandwidth-intensive applications.

The radio spectrum is divided into several frequency bands, each possessing characteristics peculiar to it which determine the usage appropriate to that band. Each band has been allocated by international agreement at a World Radiocommunication Conference (WRC) to one or more radio services or for specific usages. Sponsored by the International Telecommunication Union (a United Nations agency), WRCs are held to extend, review and revise frequency allocations among the various uses.

After WRC conferences, and when Canada's needs change, Industry Canada allocates specific frequency bands to services to satisfy domestic communications requirements. The official regulatory provisions that pertain to frequency allocations in Canada are contained in the *Canadian Table of Frequency Allocations* and the related spectrum policies. The Canadian Table of Frequency Allocations is available on the Department's website at <http://ic.gc.ca/epic/site/smt-gst.nsf/en/sf08531e.html>.

9.3 *In response to questions seeking clarification as to whether all bands are capable of carrying 3G technology or only the newer bands.*

Answer:

Industry Canada has released frequency bands in the 800 MHz, 1.6 GHz, 2 GHz and 2.3/3.5 GHz range, which are all capable of supporting services that use third-generation (3G) cellular and other technologies. In general, 3G technologies require large bandwidths; hence, not all bands can support large-bandwidth services and applications.

9.4 *In response to questions seeking clarification as to why is there a limit to the amount of spectrum available. At a certain point, do the airwaves just become more crowded? The United States has 10 times the population in a smaller land mass. Therefore, shouldn't we be able to have almost unlimited spectrum or at least 10 times more per person than in the United States?*

Answer:

Yes. Radio frequency spectrum is a finite public resource. The amount and type of spectrum that can be made available at any given time are dependent on a range of international and domestic factors. In this instance, the spectrum being made available for auction has characteristics and is of sufficient amount to allow for next-generation, i.e. bandwidth-intensive wireless services.

(Source: AWS Policy Framework, page 3)

The relationship between population density and spectrum availability is a complex issue. In deploying a wireless network, for example, there are trade-offs between the amount of infrastructure required and the amount of spectrum needed to provide a particular service. High population densities would support a greater deployment of infrastructure, which would reduce the amount of spectrum required – that is, frequencies could be reused more often.

9.5 *In response to questions seeking clarification on whether larger blocks can carry more information and the advantage of any frequency band versus another for example, whether there would be better reception or range in the 2000 MHz band vs. the 1600 MHz band.*

Answer:

In general, the lower the frequency band, the greater the propagation (range) of a signal. While there is a marginal difference in signal range between the 2000 MHz and the 1600 MHz band, there is a bigger difference in signal range between the 700 MHz band, for example, and the 2000 MHz band.

9.6 *In response to questions seeking clarification on the deployment of AWS systems in block A related to the operation of the Broadcast Auxiliary Systems (TV pick-up) in the band 2025-2110 MHz.*

As per section 9 of SRSP-513, normal practice in deploying an AWS system would require the licensee to consult and coordinate with licensees in adjacent bands. Any potential for interference should be resolved at this consultation stage, through mutual arrangements such as additional filtering, antenna positioning and/or other engineering measures.

Coordination with other operators, whether in-band or adjacent band, is not exclusive to AWS operators in block A. All AWS licensees will have to consider other AWS operators in adjacent blocks and/or service operators in adjacent bands and address any potential for interference to other blocks and other bands. Similarly, operators in adjacent bands will have to address the potential for interference to the AWS band. The potential for interference in-band or between bands is greater in highly congested areas, and all licensees are responsible for ensuring the co-existence of services.

Industry Canada has examined the potential for interference from AWS base stations operating in sub-block A (2110-2120 MHz) into the TV pick-up band, which operates from 2025-2110 MHz. The Department concluded that the potential for interference is low and could be mitigated through the application of radio engineering practices as described above. Similarly, if TV pick-ups were to interfere with AWS operations, TV pick-up operators would be required to mitigate such interference.

It is important to note that Canada has implemented a 12 MHz digital band plan for TV pick-up use. It is recognized that new 12 MHz digital equipment will have improved interference performance over analog equipment.

With regard to cross-border interference, the separation distances are great enough to offset any potential for interference between AWS systems and TV pick-ups (BAS, as they are called in the United States). In the unlikely event that interference could occur between AWS operators and BAS operators, there are long-standing practices in place between Canada and the United States to address interference and ensure co-existence.