



2 October, 2017

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**RE: Consultation on a Technical, Policy and Licensing Framework for Spectrum in the 600 MHz Band, as published in the Canada Gazette, Part 1, 19 August 2017, Notice No. SLPB-005-17 – Comments**

The Railway Association of Canada (RAC) welcomes the opportunity to comment on the *Consultation on a Technical, Policy and Licensing Framework for Spectrum in the 600 MHz*, published on August 4<sup>th</sup>, 2017.

**The Railway Association of Canada**

The RAC is a trade association that advocates on behalf of Canada's freight, intercity, commuter and tourist rail businesses. Its freight members move more than \$280 billion worth of goods across our country each year, while passenger railways transport close to 82 million passengers annually. The RAC also counts a growing number of industrial railways and railway supply companies in its associate membership. The Canadian railway network is the third largest and transports the fourth largest volume of goods in the world. As such, RAC members are the backbone of Canada's transportation system.

RAC members employ close to 33,000 people in Canada in railway operations, technology, safety, security, and leadership positions. This highly productive workforce moves close to 70 per cent of all intercity surface goods and half of the nation's exports every year—delivering Canadian products to the country and the world.

RAC's mission is to work with governments and communities across the country to ensure that Canada's rail sector remains globally competitive, sustainable, and most importantly, safe. Governments turn to RAC to help them develop rail-related new regulations, rules, and standards. RAC also provides outreach, research and public education to ensure that Canadians are aware of the critical role rail plays in Canadian economy.

Members of RAC are currently examining ways to improve railway communication and railway safety using modern communication technologies. This requires looking at various options, such as wide-band spectrum to accommodate integrated Train Control applications and to increase its voice and data capability in railway yards and rights of way in congested areas.

As the entity responsible for managing the majority of the spectrum used by railways in Canada, the RAC was mandated by its members to seek spectrum in the 600 MHz band.

### **Background:**

In June 2013, the Transportation Safety Board of Canada (TSB) released its investigation report R12T0038, following its investigation into the derailment of VIA Rail passenger train no. 92 near Burlington, Ontario, in 2012. One of recommendations in the investigation report was the following:

(Recommendation R13-01)

*“The Department of Transport require [sic] major Canadian passenger and freight railways implement physical fail-safe train controls, beginning with Canada’s high-speed rail corridors.”*

Following this recommendation, Transport Canada’s Advisory Council on Railway Safety (ACRS) established the Train Control Working Group, which was given the mandate to study existing and developmental fail-safe train control systems, also known as Enhanced Train Control (ETC), and evaluate their suitability for Canada’s railway operations, with a special focus on high-speed rail corridors. The Working Group was tasked to summarize its findings with a focus on how technologies and systems could best address TSB Recommendation R13-01. Although a specific technology or combination of train technologies have yet to be determined, a common factor amongst all technologies reviewed by the WG was the need for a reliable wireless communication infrastructure to support ETC.

Furthermore, other applications that would benefit from a High-Speed data system include:

- Locomotive event recorder downloads at speed
- Video transmissions of gates and crossing status
- Defect detectors/warning devices
- Tag readers
- Collision avoidance for track vehicles
- Border crossing clearance
- Electronic interrogation of rail switching devices
- Road/rail intersection warnings
- High speed passenger train communications
- Freight manifest access in event of an emergency to assist Public Safety agencies

Any future project of high speed passenger train, such as Via Rail’s dedicated passenger rail track within the Québec City – Windsor corridor project, would greatly benefit from a high-speed data system to operate.

### **RAC Responses**

**Q1A**—ISED is seeking comments on its proposal to implement a set-aside as a pro-competitive measure in the auction process for the 600 MHz band.

**RAC Response:** The RAC is requesting that ISED set aside one 5+5 MHz block for railways, similar to what was done for Public Safety in the 700 MHz band. The industry is actively looking

at establishing a common high-speed broadband network in Canada, which would contribute to meet present and future need for train control systems.

In 2015, the International Union of Railways (UIC), began working on the User Requirements Specification (URS) for a Future Railway Mobile Communications System (FRMCS) to replace GSM-R. These requirements are under development in the 3GPP standardization bodies to ensure that the entire URS is covered within the LTE standards. Under the current plan the replacement for GSM-R will be available from 3GPP Release 15 onwards. The UIC was motivated to replace GSM-R due to the obsolescence, narrow band performance and issues of adjacent band interference. UIC is defining the next generation broadband communications for railway operations to meet different requirements of railway operation – Operations, Safety, and Customer Services. The aim is to use standard technologies like LTE, and not a specialized system like GSM-R.

The RAC has recognized UIC efforts to improve railway communication and in turn commissioned its own whitepaper to examine current Railway Radiocommunication Systems and report on advances that are being made in railway communication globally to provide improved railway traffic control, passenger safety and improved security for train operations in the 2020s. Once the report is published a copy will be made available to ISED.

**Q1B**—*ISED is seeking comments on its proposal to set aside 30 MHz of spectrum in the 600 MHz band for eligible entities and to have open bidding (no pro-competitive measures) on the remaining 40 MHz in the band.*

**RAC Response:** As per our response to Q1A, we believe that railways should be exempted from competitive bidding as the immediate need for new spectrum will be driven by public safety considerations. We will therefore refrain from commenting on this issue.

**Q1C**—*ISED is seeking comments on its proposal to limit the eligibility criteria to bid on set-aside spectrum to those registered with the CRTC as facilities-based-providers,<sup>6</sup> that are not national incumbent service providers, and that are actively providing commercial telecommunication services to the general public in the licence area of interest, effective as of the date of application to participate in the 600 MHz auction.*

**RAC Response:** As per our response to Q1A, we request that railways be exempted from competitive bidding. We will therefore refrain from commenting on this issue.

**Q1D**—*ISED is seeking comments on its proposal to limit the transferability of the set-aside spectrum for the first five years of the licence term.*

**RAC Response:** As per our response to Q1A, we request that railways be exempted from competitive bidding. We will therefore refrain from commenting on this issue.

**Q2**—*ISED is seeking comments on its proposal to use Tier 2 service areas across the country, except in the three Territories (Yukon, Northwest Territories and Nunavut) where Tier 4 service areas would apply.*

**RAC Response:** RAC concur with this proposal. However, a customized service area encompassing 70 km on both sides of the rail network, like the one used for its Spectrum

License could also be used for railway licensing. A combination of Tier 3 or 4 service areas is also an option.

**Q3—ISED is seeking comments on:**

*a) the proposal to use generic licences;*

**RAC Response:** The RAC would like to underline that should ISED agree with RAC's proposal, six 5+5 MHz blocks of spectrum will be available. It is up to ISED to distribute them amongst eligible and general bidders.

*b) the proposal to categorize all blocks won by set-aside-eligible bidders as set-aside blocks.*

**RAC Response:** As per our response to Q1A, we request that railways be exempted from competitive bidding. We will therefore refrain from commenting on this issue.

**Q4—ISED is seeking comments on:**

*a) the use anonymous bidding during the auction; and*

*b) the information that will be disclosed to bidders during the clock rounds, as described in annex A (which would also apply to the CCA with a modified activity rule set out in annex B) and annex C.*

**RAC Response:** As per our response to Q1A, we request that railways be exempted from competitive bidding. We will therefore refrain from commenting on this issue.

**Q5—ISED is seeking comments on:**

*a) The advantages and disadvantages of the three auction formats being considered for the 600 MHz auction:*

*i. Combinatorial clock auction, using the WARP-based activity rule (annex A);*

*ii. Combinatorial clock auction, using the GARP-based activity rule (annex B);*

*iii. Enhanced combinatorial clock auction (annex C).*

*b) Where there is a preference for one of the options, respondents are asked to provide a rationale and explanation.*

**RAC Response:** As per our response to Q1A, we request that railways be exempted from competitive bidding. We will therefore refrain from commenting on this issue.

**Q6—ISED is seeking comments on:**

*a) The proposal that winners of more than one block in a single service area be assigned contiguous blocks; and*

*b) The proposed structure of the assignment stage, including the order of the assignment rounds and the combination of service areas into a single assignment round.*

**RAC Response:** As per our response to Q1A, we request that railways be exempted from competitive bidding. We will therefore refrain from commenting on this issue.

**Q7—ISED is seeking comments on the proposed methodology for incrementing prices during the clock rounds, as described in annex A.**

**RAC Response:** As per our response to Q1A, we request that railways be exempted from competitive bidding. We will therefore refrain from commenting on this issue.

**Q8**—*ISED is seeking comments on the proposed Affiliated and Associated Entities rules that would apply to bidders in the 600 MHz auction.*

**RAC Response:** As per our response to Q1A, we request that railways be exempted from competitive bidding. We will therefore refrain from commenting on this issue.

**Q9**—*ISED is seeking comments on the proposed rules prohibiting collusion and other communication rules, which would apply to bidders in the upcoming 600 MHz auction.*

**RAC Response:** We agree that it is imperative to prevent collusion amongst bidders and that the proposed rules are adequate.

**Q10**—*ISED is seeking comments on its proposal to issue spectrum licences in the 600 MHz band with a 20-year licence term and the proposed wording of the condition of licence above.*

**RAC Response:**

- As is the case with private commercial spectrum, we believe that the spectrum set aside for railway uses should be renewed annually.
- The licence conditions listed in section 11 do not apply to the private commercial service and therefore, new licence conditions will need to be drafted.

**Q11**—*ISED is seeking comments on the proposals on the condition of licence related to transferability and divisibility, and the proposed wording above.*

**RAC Response:** transferability and divisibility does not apply to private commercial service. We will therefore refrain from commenting on this issue.

**Q12**—*ISED is seeking comments on the proposed deployment condition of licence as stated above.*

**RAC Response:** The RAC agrees that firm license conditions related to deployment should be drafted. However, the deployment plan described in appendix “F”, based on population coverage, would not apply to a railway communication network. The RAC would prepare a specific deployment plan, to be approved by ISED, based on the same 5-10-15 years’ timeframe suggested for the public commercial service.

**Q13**—*ISED is seeking comments on proposed conditions of licence outlined in annex G that would apply to licences issued through the proposed auction process for spectrum in the 600 MHz band.*

**RAC Response:** As per our response to Q1A, we request that railways be exempted from competitive bidding. We will therefore refrain from commenting on this issue.

**Q14**—*ISED is seeking comments on the proposed opening bids as presented in table 1.*

**RAC Response:** As per our response to Q1A, we request that railways be exempted from competitive bidding. We will therefore refrain from commenting on this issue.

**Q15**—*ISED is seeking comments on the proposed eligibility points for spectrum licences in the 600 MHz as outlined in table 2, and pre-auction deposits as outlined above.*

**RAC Response:** As per our response to Q1A, we request that railways be exempted from competitive bidding. We will therefore refrain from commenting on this issue.

**Q16**—*ISED is seeking comments on the proposed renewal process for spectrum licences in the 600 MHz band.*

**RAC Response:** As is the case with private commercial spectrum, we believe that the spectrum set aside for railway uses should be renewed annually.

Thank you again for giving us the opportunity to take part in this important consultation process. For further information, please do not hesitate to contact me or Mr. Daniel Lafrenière, Director, Spectrum, and Telecommunications, at (613) 564-8102, or by e-mail at [dlafreniere@railcan.ca](mailto:dlafreniere@railcan.ca)

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael Bourque", with a horizontal line extending to the right.

Michael Bourque  
President & CEO