BY EMAIL to Spectrum.Operations@ic.gc.ca

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Manager,
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Response to Canada Gazette, Part 1, August 2012, Consultation on a Policy, Technical and Licensing Framework for Use of the Public Safety Broadband Spectrum in the Bands 758-763 MHz and 788-793 MHz (D Block) and 763-768 MHz and 793-798 MHz (PSBB Block) SMSE-007-12.

Dear Sir,

The following are reply comments of the Utilities Telecom Council of Canada (“UTC Canada”) in relation to the above-referenced Gazette Notice and Consultation Paper.

Summary
The comments on the record overwhelmingly support allocating the 10 megahertz of the D block spectrum to public safety. The comments that were filed on the record also support including utilities and other critical infrastructure industries (CII) as Category 2 public safety entities for purposes of access to the 700 MHz public safety broadband network, consistent with the comments that were filed by UTC Canada. Further, the comments support the use of the network by utilities and CII on a day-to-day basis, as well as during emergencies. Moreover, the comments support providing dynamic priority access to utilities and other CII during emergencies. The comments confirm that dynamic prioritization is supported by LTE as a technical matter, and can be accomplished as a practical matter without affecting public safety communications. In that regard, the comments do overwhelmingly support LTE as a technology that would promote interoperability and economies of scale. However, Industry Canada should not mandate using LTE.

UTC Canada provides the following detailed replies to the comments that were filed on the record in response to the consultation.
Part A – Policy and Technical Framework for Use of the D Block

In Part A of its consultation, the Department asks the following question:

A-1 Comments are being sought on Industry Canada’s proposal to designate the D block (758-763 MHz and 788-793 MHz) for public safety broadband use.

Response:

The Department should designate the D-Block for public safety broadband use.

The overwhelming number of comments on the record echo UTC Canada’s support for designating the 758-763 MHz and 788-793 MHz (D Block) for public safety use. As numerous comments point out, allocating the D Block will align the public safety spectrum with the allocation in the United States, thereby promoting interoperability as well as equipment availability.¹ UTC Canada also reiterates its recommendation that fees for public safety spectrum be set to recover the Department’s costs to administer this spectrum. As UTC Canada explained in its comments, this will promote greater and more efficient use of the spectrum. Moreover, because public safety users use the spectrum to protect the safety of life, health and property, thus providing a valuable public service, it is not appropriate to levy a market-based fee from these users for the use of the spectrum.

Part B – Use of the 700 MHz Spectrum Designated for Public Safety Broadband

In Part B of its consultation, the Department also asks the following questions:

B-1 Under what circumstances should Category 2 users have access to the 700 MHz public safety broadband network (e.g. for day-to-day operations, only in emergencies)?

B-2 In the context of the 700 MHz public safety broadband network, which entities/organizations should be covered under Category 3?

¹ See e.g. Comments of the Canadian Advanced Technology Alliance at 2-3; Comments of the Canadian Electricity Association at 1; Comments of the Canadian Interoperability Technology Interest Group (CITIG) at 1; Comments of Calgary at 1-2; Joint Response of Federal, Provincial, Territorial Authorities, Federation of Canadian Municipalities and the Tri-Services Chiefs Associations on behalf of the First Responder and Emergency Management Communities (Collectively and hereinafter, “Canadian Public Safety Community”) at 1-3; Comments of E-Comm (Emergency Communications for Southwest British Columbia Incorporated) at 1-2; Comments of General Dynamics at 2-3; Comments of Harris Canada Systems, Inc. at 2-3; Comments of Imperial Oil Limited 2-4; Comments of Motorola at 2, 4-9; Comments of National Public Safety Telecommunications Council at 3-5; Comments of Ontario at 2; Comments of the Radio Advisory Board of Canada at 2-3; and Comments of the Royal Canadian Mounted Police at 6.
B-3 Under what circumstances should Category 3 users have access to that network (e.g. for day-to-day operations, only in emergencies)?

Response:

The Department should reclassify electric utilities as Category 2 public safety users.

UTC Canada supports the comments favouring the inclusion of utilities and other CII as Category 2 users. The Canadian Public Safety Community supported including utilities among those entities that should be considered as public safety Category 2 users. The Canadian Public Safety Community went on to explain that Industry Canada should include users who are not normally involved in public safety but: 1) may be part of an emergency/major event plan; or 2) are involved in ensuring the “safety of the public” and that “it is in the interest of public safety to specifically include emergency management organizations in Category 1 and utilities and others in Category 2 and 3.” The Canadian Public Safety Community also noted that “the use of public safety broadband for low priority static monitoring of utility infrastructure is a legitimate public safety activity, as well as an opportunity to create economic viability in a public safety broadband network.”

As the Canadian Electricity Association (CEA) explained, Canada’s National Strategy for Critical Infrastructure concluded that “disruptions of critical infrastructure could result in catastrophic loss of life, adverse economic effects, and significant harm to public confidence,” and Canada’s Action Plan for Critical Infrastructure establishes a collaborative, multi-stakeholder approach to strengthening critical infrastructure resiliency. UTC Canada agrees with the CEA that “[t]he re-categorization of electric utilities [as

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2 Comments of the Canadian Electricity Association at 1 (“Electric utilities should be re-classified as Public Safety Category 2 in RP-25.”); and Joint Response by Federal, Provincial, Territorial Authorities and Federation of Canadian Municipalities together with the First Responders Community at 4 (stating “the broad public safety community suggests that the categories of users as defined by IC for the Radio System Policy RP-25 be modified as follows: ...Category 2 – Forestry, public works, utilities, public transit, hazardous material clean-up, border protection, airport security, and any other agencies contributing to public safety,” emphasis added.) (hereinafter “Joint Response” or “Canadian Public Safety Community”)

3 Joint Response of the Canadian Public Safety Community at 4.

4 Id. at 5.

5 Id. at 5.


7 Id. at 2.

Category 2 public safety] will be consistent with the principals of the National Strategy and the Action Plan, in that it will enhance the protection of critical Infrastructure while increasing public safety.”

Other comments support providing access to the PSBN more generally by electric utilities and other CII. Motorola Solutions Canada stated that “utilities and other critical infrastructure industries should be allowed access to the PSBN for day-to-day operations, provided that local public safety command can manage specific priority assignments on a real time basis for all users on the PSBN.” Similarly, Alcatel-Lucent stated that “[p]erhaps the greatest network synergies between government first responders and non-government organizations can be found with utilities.” As further evidence of the interest of CII in partnering with public safety on the PSBN, Imperial Oil Limited filed comments in response to the consultation, supporting access by “certain industrial and commercial users who are not carriers and provide significant economic benefits to Canada,” such as petroleum companies. These comments point out the support that exists for including utilities as Category 2 public safety users and more generally for access to the public safety broadband network.

Moreover, these comments universally support access on a day-to-day basis and for priority access during emergencies. With regard to priority access, Alcatel-Lucent commented that “Category 1 users – police, fire and emergency medical services – likely will be the primary users of the spectrum, but the determination of priority among users may vary based on any number of factors, and LTE technology has the capability to assign multiple levels of priority as required.” As an example, Alcatel-Lucent stated that “in a rural area adjacent to a hydro-electric facility, it may make sense for utility personnel to have priority over public transit personnel, contrary to what their default priority Categories might indicate.” It also added that “fires, power outages, etc. may require different sets of first-responders to receive priority at any given time. LTE provides the capability to respond.”

Motorola agreed that, “Category 2 and Category 3 users, including utilities and other critical infrastructure industries, should be allowed access to the PSBN for day-to-day

9 Comments of Canadian Electricity Association at 2.


11 Comments of Alcatel-Lucent at 5 (adding that, “[i]ndeed, the Canadian Electricity Association and Utilities Telecom Council have been active in this proceeding and voiced their interest in use and supporting deployment of the public safety broadband network.”)

12 Comments of Imperial Oil Limited at 2, visited at http://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/SMSE-007-12-Imperial-Comments.pdf/$FILE/SMSE-007-12-Imperial-Comments.pdf.

13 Comments of Alcatel-Lucent at 5-6.

14 Id.
operations, provided that local public safety command can manage specific priority assignments on a real time basis for all users on the PSBN.\footnote{15} Furthermore, Motorola urged the Department “to allow day-to-day operations by Category 2 users on the PSBN to enable greater economies of scale for all categories of users, including Category 1 users, on the PSBN, to provide Category 2 users with on-going broadband communications, and to enable interoperability as needed among all agencies on the network, not just during emergencies.”\footnote{16}

As Alcatel-Lucent explained, “there are also very practical benefits to providing everyday access (as opposed to emergency-only access) to a wide array of users. First, during emergencies, those responding should be well-trained on the communications systems on which they rely. Regular use of communications systems is the best training. First responders would likely (and justifiably) not be comfortable relying on seldom-used communications equipment during pressure situations. Second, permitting wide use of the public safety spectrum on a day-to-day basis would facilitate adoption of a network and device ecosystem for the PSBB Block and D Block. It would be prohibitively expensive to ask governmental and non-governmental entities to purchase radio equipment only to be activated in case of emergency, while they must continue to fund separate day-to-day mobile communications for their employees. Those governmental and nongovernmental users that wish to use public safety spectrum should be encouraged to migrate all of their operations to that spectrum block.”\footnote{17}

Public safety comments on the record also support priority access and day-to-day access by Category 2 and 3 users. The Canadian Advanced Technology Alliance conducted a survey of public safety entities, which “reveal[ed] that most respondents agreed that both Category 2 & 3 users should have access to the network on a day-to-day basis.”\footnote{18} It agreed that “the technologies exist to allow for prioritization of service that would be afforded Category 1 users in times of possible network congestion,” and recognized that “having Category 2 & 3 users trained and familiar with the use of the network will be critical during a time of crises and often Category 2 & 3 users can be as important to managing a crisis as the Category 1 responders.”\footnote{19} It also recognized that “expanding the user base adds greater incentive to vendors to develop technology and applications for

\footnote{15} Comments of Motorola at 3.

\footnote{16}Id. at 9-10 (adding that “The same arguments for allowing Category 2 use for day-to-day operations apply to Category 3 users, defined by the Department as other government agencies and certain non-governmental organizations or entities, such as hydro and gas utilities. Motorola urges the Department to allow utilities and other critical infrastructure industries (CII) that have a need to communicate and coordinate with public safety agencies access to the PSBN on a day-to-day and emergency basis. Allowing such day-to-day operation by utilities and other CII entities (hereafter grouped and referred to as utilities) should be subject to the prioritization levels set by local public safety command.”)

\footnote{17} Comments of Alcatel-Lucent at 3.

\footnote{18} Comments of the Canadian Advanced Technology Alliance at 6.

\footnote{19}Id.
UTC Canada supports these comments, which demonstrate widespread support and sound reasoning for allowing access by utilities and other CII on a day-to-day basis and priority access during emergencies. As UTC Canada explained in its comments, utilities provide a foundation for and protect public safety, and including them as Category 2 users would promote interoperability and sustainability of the network. Moreover, access by utilities can be accommodated through priority access mechanisms and governance models. Therefore, UTC Canada reiterates its request to include utilities and CII as Category 2 public safety users and to provide day-to-day access as well as priority access during emergencies.

Also in Part B of its consultation, the Department asks the following questions:

**B-12** Which technical measure or measures, if any, should Industry Canada consider mandating to address radio interoperability requirements?

**B-13** Should Industry Canada mandate a specific technology? If so, under which standard or standards?

**Response:**

The Department should not mandate LTE, although it is likely that public safety users will decide to adopt it.

**B-12 and B-13**

Comments on the record generally support the adoption of LTE as a means of promoting interoperability as well as priority access.

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20 Id.

21 See Comments of Canadian Public Safety Community at 6 (stating that “if Category 2 and 3 agencies are not permitted to use their interoperable devices day-to-day, they will not have the necessary equipment or familiarity with applications to be of prompt assistance when required.”) See also Comments of the Royal Canadian Mounted Police (RCMP) at 3 (stating “The RCMP believes that priority access needs to be available regardless of the system or technology implemented. LTE does have the capability. If and how various levels of priority are implemented can be discussed during the design and governance stages.”) Also stating that “[t]here are valid scenarios where Category 2 users can contribute to resolving day-to-day events as well as in emergencies. To exclude these users from participation and not have potential access to their systems and information may be detrimental to public safety. However, the incident commander or other designated official must have the ability and discretion to apply control on access from the Category 2 (and 3) users as well control over Category 1 users during emergencies.”)

22 Comments of Alcatel-Lucent at 2, 8; Comments of General Dynamics at 5-6; Comments of Harris Canada Systems Inc. at 6; Comments of Motorola Canada at 16-18.
provides many benefits, it also agrees with comments on the record that the Department should not mandate LTE, even though public safety will generally adopt it.

As the Canadian Advanced Technology Alliance stated, “CATA does not believe that mandating these mechanisms will be required as it is anticipated that the PSNE or sub-licensees would have these conditions contractually-bound within the service level agreements they create with their commercial carrier. Our survey responses demonstrate that the majority of respondents believe Industry Canada should mandate these mechanisms. And certainly this would be required under a scenario where the spectrum is auctioned off with provisos to carriers requiring them to provide a public safety network. However in the preferred scenario where a PSNE (and/or regional PSNEs) negotiate these terms contractually as the spectrum owners, there would be no need for an Industry Canada mandate for these mechanisms.”

Similarly, Bell Mobility also stated that “rather than mandating a specific mechanism, an alternative would be to insure the efficient use of spectrum which would encompass best practices related to radio congestion mitigation techniques such as priority access as well as deployment. A single entity holding the licence and governing how the spectrum is utilized would serve to ensure interoperability as well as priority access and pre-emption.”

Given the wide support for LTE on the record, it is expected that the public safety community will adopt it for the PSBN. Therefore, and bearing in mind the Department’s customary technology-neutral approach, UTC Canada submits that there is no need for the Department to mandate its adoption.

**Conclusion**

UTC Canada thanks the Department for the opportunity to file these reply comments on the Department’s PSBN 700 MHz spectrum proposals that are of great interest to our members.

Yours sincerely,

[original signed by]

Alourdes Sully
Chairman of the Board
Utilities Telecom Council of Canada

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23 Comments of the Canadian Advanced Technology Alliance at 11.

24 Comments of Bell Mobility at 7.