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Spectrum Management and Telecommunications

# **Decisions on Conditions of Licence Regarding Research and Development and Learning Plans**

Aussi disponible en français

**Canada**

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## 1. Intent

1. The intent of this document is to announce two decisions related to conditions of licence for spectrum and satellite licences. It announces Industry Canada's decision to modify a condition of licence requiring licensees to invest a portion of their adjusted gross revenues in research and development (R&D) activities. This issue was raised in the public consultation process initiated in April 2009 through *Canada Gazette* notice DGRB-001-09 — *Consultation on Revisions to the Framework for Spectrum Auctions in Canada*.<sup>1</sup> Industry Canada subsequently stated that the decision with regard to the R&D condition of licence would be the subject of a separate paper. As a result of this current decision, Industry Canada will be updating GL-03 — *Guidelines for Compliance with the Radio Authorization Condition of Licence Relating to Research and Development*,<sup>2</sup> accordingly.

2. This document also announces Industry Canada's decision not to apply a condition of licence requiring certain licensees in the 2500 MHz band to invest in a Learning Plan;<sup>3</sup> however, the revised condition of licence on R&D, as set out in this decision paper, will apply. Comments on this issue were received following the issuance of *Canada Gazette* notice DGRB-005-09 — *Consultation on Transition to Broadband Radio Service (BRS) in the Band 2500-2690 MHz*.<sup>4</sup>

## 2. Mandate

3. With due regard to the objectives of the *Telecommunications Act*, the Minister of Industry, through the *Department of Industry Act*, the *Radiocommunication Act* and the *Radiocommunication Regulations*, is responsible for spectrum management in Canada. As such, the Minister is responsible for developing national policies and goals for spectrum resource use, as well as ensuring effective management of the radio frequency spectrum.

4. In making its decisions regarding the R&D and Learning Plan conditions of licence, Industry Canada was guided by several relevant objectives as outlined below. In 1993, the objectives of the Canadian telecommunications policy were formally set out in the *Telecommunications Act*. One of these objectives is:

- "...to stimulate research and development in Canada in the field of telecommunications and to encourage innovation in the provision of telecommunications services."<sup>5</sup>

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<sup>1</sup> See Industry Canada's document DGRB-001-09 — *Consultation on Revisions to the Framework for Spectrum Auctions in Canada* (<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf09371.html>), April 2009.

<sup>2</sup> See Industry Canada's *Guidelines for Compliance with the Radio Authorization Condition of Licence Relating to Research and Development* (<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01638.html>), April 2007.

<sup>3</sup> Learning Plan projects were in lieu of R&D requirements. As part of the 1999 comparative licensing process, applicants were required to submit Learning Plans, including funding commitments which responded to local needs.

<sup>4</sup> See Industry Canada's document DGRB-005-09 — *Consultation on Transition to Broadband Radio Service (BRS) in the Band 2500-2690 MHz* (<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf09300.html>), March 2009.

<sup>5</sup> See *Telecommunications Act*, Part I, paragraph 7(g) (<http://laws-lois.justice.gc.ca/eng/acts/T-3.4/page-2.html#h-6>).

5. A renewed [Spectrum Policy Framework for Canada](#) was established by Industry Canada in 2007 as the policy foundation for Canadian spectrum management. In it, a single policy objective was adopted: “To maximize the economic and social benefits that Canadians derive from the use of the radio frequency spectrum resource.”<sup>6</sup> The *Spectrum Policy Framework for Canada* also includes eight Enabling Guidelines,<sup>7</sup> including the following:

- Spectrum management practices, including licensing methods, should minimize administrative burden and be responsive to changing technology and marketplace demands.

### 3. Research and Development Condition of Licence

#### 3.1 Background

6. In 1983, Cantel (now Rogers) made a commitment in its cellular licence application to purchase handsets from Canadian manufacturers only. This commitment was later modified to a requirement that 2% of the company’s adjusted gross revenues be allocated to R&D with respect to mobile cellular technology and services. In 1991, a similar R&D condition of licence was applied to the regional telephone companies’ five-year cellular special authorizations. This R&D condition of licence is currently incorporated in most long-term spectrum licences.<sup>8</sup>

7. Although the exact wording among licences varies slightly, the stated conditions require licensees to invest a minimum of 2% of their adjusted gross revenues from the use of the spectrum, averaged over the term of the licence, in eligible R&D activities. In order to demonstrate compliance with this condition of licence, licensees are required to submit annual reports to Industry Canada. Compliance is assessed at the end of the licence term.

8. In April 2009, Industry Canada issued *Canada Gazette* notice DGRB-001-09 — *Consultation on Revisions to the Framework for Spectrum Auctions in Canada*.<sup>9</sup> Among other issues, comments were specifically sought on “the continued need for the condition of licence requiring that licensees invest a percentage of their adjusted gross revenues in R&D.”

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<sup>6</sup> See Industry Canada’s [Spectrum Policy Framework for Canada](#) (<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08776.html>), June 2007.

<sup>7</sup> [Ibid.](#), Section 4.4, Enabling Guidelines.

<sup>8</sup> The condition of licence appears on Cellular, Personal Communications Services (PCS), Advanced Wireless Services (AWS), Broadband Radio Service (BRS), 2.3 GHz, 3.5 GHz, 24 GHz, 38 GHz, 800 MHz Air-to-Ground licences and some satellite licences. Radiocommunication carriers whose business has less than \$5 million in annual gross operating revenues are exempt from the R&D condition of licence in all of the above-mentioned bands, except for Cellular and PCS.

<sup>9</sup> See Industry Canada’s DGRB 001-09, [Consultation on Revisions to the Framework for Spectrum Auctions in Canada](#) (<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf09371.html>), April 2009.

9. From 2007 to 2012, Canada's annual growth in Information and Communications Technologies (ICT) Business Enterprise on R&D (BERD) declined by approximately 1.6%<sup>10</sup> annually. Compared to other OECD countries for which the data is available over the 2007-2010 period, Canada experienced negative annual growth in BERD (-7%), whereas other OECD countries, including Korea, Italy and the United States, saw an annual growth increase in ICT BERD.<sup>11</sup>

### 3.2 Summary of Comments

10. Comments and/or reply comments on this issue were received from 12 respondents, including incumbent wireless carriers, new entrants, satellite service providers, industry associations and a coalition of small independent telecommunications companies. These respondents were: Bell Mobility Inc. (Bell Mobility), Bragg Communications Inc., Canadian Independent Telephone Company Joint Task Force (on behalf of l' Association des Compagnies de Téléphone du Québec (ACTQ), the Canadian Alliance of Publicly-Owned Telecommunications Systems (CAPTS) and the Ontario Telecommunications Association (OTA)), Canadian Wireless Telecommunications Association (CWTA), MTS Allstream Inc., Rogers Communications Inc. (Rogers), Saskatchewan Telecommunications (SaskTel), Satellite Industry Association (SIA), SkyTerra (Canada) Inc., Telesat Canada, TELUS Communications Company (TELUS) and TerreStar Networks (Canada) Inc.

11. All respondents who commented on this issue supported the elimination of the R&D condition of licence. They argued that licensees would invest in R&D activities on an ongoing basis due to the necessity to be competitive in the marketplace in terms of innovative service offerings. Bragg was of the view that the increased competition resulting from the Advanced Wireless Services (AWS) spectrum auction would further increase the incentive for licensees to undertake R&D activities. Both the CWTA and SaskTel cited the active and growing wireless research centres in Calgary, Montréal, Ottawa, Toronto, Waterloo and Vancouver as clear evidence of the wireless industry's strength in Canada.

12. In addition, all respondents claimed that there were financial and administrative burdens imposed on licensees to track and report on this condition of licence.

13. The CWTA and Rogers stated that no other jurisdiction imposes a comparable obligation on wireless carriers. Rogers argued that the Department has other alternatives for encouraging R&D in Canada.

### 3.3 Discussion

14. R&D is a fundamental part of the telecommunications industry. For large wireless companies, extensive investment in R&D is an important part of the industry's capital spending commitment toward ensuring that the companies maintain globally competitive levels of innovation and the annual reports submitted by licensees to Industry Canada show that, on average, between 2001 and 2010, R&D

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<sup>10</sup> Statistics Canada's CANSIM 358-0024, *Total Intramural R&D expenditures (intentions)*.

<sup>11</sup> Sources include data from the OECD's [STAN Database for Structural Analysis \(ISIC Rev. 4\); Business enterprise R-D expenditure by industry \(ISIC 4\)](http://stats.oecd.org/Index.aspx?DataSetCode=ANBERD_REV4) ([http://stats.oecd.org/Index.aspx?DataSetCode=ANBERD\\_REV4](http://stats.oecd.org/Index.aspx?DataSetCode=ANBERD_REV4)).

expenditures by the major carriers exceeded the 2% requirement.<sup>12</sup> Industry Canada considers that the licence condition is a reasonable requirement for larger companies; however, it acknowledges that it represents a significant burden for smaller companies that are not as well placed to invest in R&D.

15. R&D continues to be recognized as a significant contributing factor to the continuing success of the digital economy in Canada. Maintaining the requirement reaffirms the government's support for research, technology and investment in the current and future prosperity of Canadians. It is important that incentives to promote investment in R&D, including the ICT sector as referenced above, continue to be effective and targeted, in order to maximize effect and minimize burden.

16. In making its decision, Industry Canada considered whether the R&D condition of licence continues to effectively support the objectives of the *Telecommunications Act* (see paragraph 4 above) and with the enabling guidelines from the *Spectrum Policy Framework for Canada* (see paragraph 5 above).

17. Industry Canada considers that increasing the revenue level for an exemption from the R&D requirement would continue to promote R&D expenditures by companies that are well positioned to invest, while reducing the administrative burden, particularly for small and medium-sized enterprises.

18. This decision (outlined below) is consistent with the objectives of the *Red Tape Reduction Action Plan*,<sup>13</sup> which called on the government to reduce red tape to support innovation.

### 3.4 Decision

19. To reduce the burden that may be associated with the condition, businesses with less than \$1 billion in annual gross wireless operating revenues from wireless services in Canada are exempt from R&D expenditure requirements, except where they are affiliated with licensees that are also subject to the R&D condition of licence and where the total annual gross revenues from the provision of wireless services in Canada of the licensee, together with the affiliated licensees, exceed \$1 billion.

20. Licensees that are subject to the condition of licence must submit annual reports signed by an officer of the company. Industry Canada may request an audited statement of R&D expenditures with an accompanying auditor's report and, if so, will provide reasonable notice. Further information regarding reporting requirements and methods of calculation are available in *GL-03 — Guidelines for Compliance with the Radio Authorization Condition of Licence Relating to Research and Development*,<sup>14</sup> which will be updated.

21. The revised condition of licence will apply to all existing spectrum and satellite licences that are currently subject to the R&D condition of licence, as well as to the licences for 700 MHz and 2500 MHz

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<sup>12</sup> Based on an assessment of PCS and Cellular licences at the end of the licence terms.

<sup>13</sup> See *Red Tape Reduction Action Plan* (<http://www.tbs-sct.gc.ca/rtrap-parfa/rtrapr-rparfa-eng.asp#s31>).

<sup>14</sup> See *GL-03 — Guidelines for Compliance with the Radio Authorization Condition of Licence Relating to Research and Development* (<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01638.html>).

spectrum. Also, the section of the annual reporting condition of licence related to R&D will be amended accordingly.

22. Based on the above considerations, the wording for the condition of licence is as follows:

**The licensee must invest, as a minimum, 2 percent of its adjusted gross revenues resulting from the use of this licence, averaged over the 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*, as amended from time to time. Adjusted gross revenues are defined as total service revenues, less inter-carrier payments, bad debts, third party commissions, and provincial goods and services taxes collected. The licensee is exempt from research and development expenditure requirements if it, together with all affiliated licensees that are subject to the research and development condition of licence, has less than \$1 billion in annual gross operating revenues from the provision of wireless services in Canada, averaged over the term of the licence. For this condition of licence, an affiliate is defined as a person who controls the carrier, or who is controlled by the carrier or by any person who controls the carrier, as per subsection 35(3) of the *Telecommunications Act*.**

#### **4. Learning Plan Condition of Licence**

##### **4.1 Background**

23. When the *Policy and Licensing Procedures*<sup>15</sup> were issued for Multipoint Communications Systems (MCS) licences in the 2500 MHz band in June 1999, an important element noted in the policy measures for this band involved learning. Industry Canada decided that “the demonstration by applicants of innovative means to promote learning [would] be a prominent element in the comparative licensing process being used for MCS at 2500 MHz.”<sup>16</sup> Applicants for MCS licences were required to submit Learning Plans that responded to local learning needs as part of their applications and to specify the level of funding that would be committed. A Learning Plan condition of licence was subsequently attached to commercial MCS spectrum licences in the 2500 MHz band at that time.<sup>17</sup>

24. Following the award of the MCS spectrum licences, the designated usage for this band changed internationally and in Canada. The impetus for this change was the decision made in 2000 at the World Radiocommunication Conference (WRC-2000) to identify the band 2500-2690 MHz for International Mobile Telecommunications-2000 (IMT-2000) radio services, also known as third generation mobile or 3G services. The identification of this band by the International Telecommunication Union (ITU) created significant interest, as it is a band that is globally harmonized for mobile service use.

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<sup>15</sup> See Industry Canada’s DGRB-006-99, [Multipoint Communications Systems in the 2500 MHz Range, Policy and Licensing Procedures](http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01858.html) (http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01858.html), June 1999.

<sup>16</sup> Ibid.

<sup>17</sup> In Manitoba only, Industry Canada has issued radio licences to school boards for educational purposes, which do not include a Learning Plan requirement.

25. In November 2001, the Minister of Industry announced that Canada would introduce mobile allocations, in addition to fixed allocations, throughout the band 2500-2690 MHz.
26. In March 2006, Industry Canada adopted a spectrum utilization policy that allows for flexible use of spectrum in the band 2500-2690 MHz.<sup>18</sup> In making its decision, Industry Canada recognized that market demand should play a role in the development of new services for Canadians; that mobile spectrum is very valuable; and that there were numerous technological advances occurring in the 2500 MHz band.
27. In March 2009, Industry Canada issued *Canada Gazette* notice DGRB-005-09 — *Consultation on Transition to Broadband Radio Service (BRS) in the Band 2500-2690 MHz* (also known as the BRS consultation). In this document, Industry Canada proposed that certain interim conditions apply to BRS licences issued to MCS and Multipoint Distribution Service (MDS)<sup>19</sup> incumbents pursuant to the 2006 policy.
28. The Department proposed conditions of licence that aligned with conditions of licence for similar services (e.g. Cellular, Personal Communications Services (PCS) and AWS), including the requirement to invest in R&D,<sup>20</sup> and the DGRB-005-09 BRS consultation sought comments on these proposed conditions (comments and reply comments on the issue of R&D were set out in Section 3 above).
29. Although the application of a Learning Plan condition of licence to BRS licences was neither proposed nor discussed in the BRS consultation paper, Inukshuk provided comments on this matter. Inukshuk stated that the Learning Plan condition of licence should be eliminated when these MCS licences are replaced with BRS licences. In Inukshuk's view, the Learning Plan condition was imposed strictly as part of the comparative licensing process and policy for MCS. Furthermore, such a condition is inconsistent with other mobile spectrum licences, such as Cellular, PCS and AWS licences.<sup>21</sup> No other comments were received on this issue.

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<sup>18</sup> See Industry Canada's DGTP-002-06, [Policy Provisions for the Band 2500-2690 MHz to Facilitate Future Mobile Service](http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08551.html) (http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08551.html), March 2006.

<sup>19</sup> MDS is a point-to-multipoint distribution system (i.e. a fixed "wireless cable" system) intended for reception by the public, which is authorized by the Canadian Radio-television and Telecommunications Commission (CRTC) under the [Broadcasting Act](http://laws-lois.justice.gc.ca/eng/acts/B-9.01/) (http://laws-lois.justice.gc.ca/eng/acts/B-9.01/).

<sup>20</sup> The Department proposed that "all licensees operating as radiocommunication carriers must invest, as a minimum, two 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."

<sup>21</sup> See [comments submitted by Inukshuk Wireless Partnership](http://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/dgrb-005-09-BelleEtAl-comments.pdf/$FILE/dgrb-005-09-BelleEtAl-comments.pdf) (http://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/dgrb-005-09-BelleEtAl-comments.pdf/\$FILE/dgrb-005-09-BelleEtAl-comments.pdf), June 2009.

30. Subsequent to the completion of the 2009 BRS consultation process, members of Learning Plan Advisory Committees<sup>22</sup> advised that they had been unaware of this consultation process. Industry Canada therefore invited committee members to submit comments. In their letter dated March 30, 2010, committee members requested, among other things, that Industry Canada reinstate the Learning Plan condition of licence in all licences in the band 2500-2690 MHz in perpetuity.

## 4.2 Discussion

31. The Learning Plan condition of licence required licensees to invest funds on an annual basis in compliance with their Learning Plan commitments, in order to advance the Government of Canada's socio-economic policy objectives. Licensees have been required to file annual reports outlining progress made with respect to their Learning Plan commitments.

32. Although the Learning Plan requirement previously applied to all MCS licences in the 2500 MHz band, MDS authorizations did not have the same requirement. Furthermore, some MCS licensees were able to fulfil their Learning Plan commitments during the initial licence term.

33. The MCS licences originally issued with these obligations have come to the end of their term. New BRS licences have been issued for commercial mobile broadband services. Some newly issued licences include a condition of licence requiring that licensees invest in specific Learning Plan projects previously committed to, and noted that a departmental decision concerning R&D and Learning Plans was forthcoming. Consequently, it is appropriate at this juncture to modify the conditions to align these licences with similar spectrum licences.

34. Industry Canada recognizes the importance of education as a key determinant in the socio-economic prosperity of the country. The Department also recognizes the concerns raised by the Learning Plan Advisory Committees and by the Inukshuk Wireless Partnership. However, it is appropriate at this time to review terms and conditions of licences with a view to better align them with similar licences and services, such as Cellular, PCS and AWS. In addition, many wireless companies support education-related initiatives regardless of any requirement to do so through this licence condition.

## 4.3 Decision

**35. Once Industry Canada is satisfied that specific funding commitments made prior to the publication of this decision paper (SLPB-002-14) by applicable licensees have been fulfilled, and that any cumulative carry-overs have been invested to the satisfaction of Industry Canada, the relevant BRS licences will be amended such that a condition of licence requiring licensees to invest in a Learning Plan will not apply and the R&D condition of licence will apply, as stated in Section 3.4 above.**

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<sup>22</sup> Learning Plan Advisory Committees were responsible for reviewing and evaluating funding proposals submitted by applicants and for making recommendations to licensees concerning which funding proposals should receive financing from Learning Plan commitments.

## **5. Obtaining Copies**

36. All spectrum-related documents referred to in this paper are available on the [Spectrum Management and Telecommunications website](http://www.ic.gc.ca/spectrum) at <http://www.ic.gc.ca/spectrum>.