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Policy Framework for Fixed-Satellite Service (FSS) and Broadcasting- Satellite Service (BSS)

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1. Introduction

Industry Canada's *Policy Framework for the Provision of Fixed Satellite Services* was first published in 1998, following a consultation to implement Canada's obligations under the World Trade Organization Agreement on Basic Telecommunications. The policy framework was subsequently revised in 2005 in order to incorporate a revision to the government's satellite-use policy to permit the use of specialized foreign satellites for direct reception of broadcasting services by the public. Further direction on licensing fixed-satellite service (FSS) and broadcasting-satellite service (BSS) satellites was provided in a statement issued by Industry Canada following the 2006 satellite licensing initiative, namely that comparative review processes would be used to assign FSS and BSS licences.

This 2013 revision incorporates a number of significant changes for FSS and BSS, including the following:

- (1) The expansion of the scope to include the broadcasting satellite service (BSS);
- (2) The implementation of a first-come, first-served (FCFS) licensing process following the 2012 *Consultation on the Licensing Framework for Fixed-Satellite Service (FSS) and Broadcasting-Satellite Service (BSS) in Canada*; and
- (3) The removal of restrictions on ownership and control of Canadian satellite carriers effected through changes to the *Telecommunications Act*.

2. Policy Objectives

Canada faces unique geographical challenges, including a widely dispersed population and many rural and remote communities. In this context, satellites play a vital role in Canada's telecommunications and broadcasting infrastructure in that they are currently the only means of reaching some of these communities, many of which are located in the North. In licensing commercial satellites, Industry Canada's primary objectives continue to be helping to ensure that Canadian satellite users have access to the satellite capacity that they need in order to carry out their respective functions and helping to ensure that services are available throughout Canada, including the North. In order to fulfill these objectives, Industry Canada recognizes the need to maintain a licensing framework that is attractive when compared with other jurisdictions.

3. Policy Framework for Canadian FSS and BSS Satellites

3.1 General

This policy framework deals with FSS and BSS satellites, which use spectrum for fixed and broadcasting satellite services allocated in the International Telecommunication Union's (ITU) *Radio Regulations* and in the *Canadian Table of Frequency Allocations*. This policy framework does not apply to mobile satellite services, except to the extent that these Canadian networks use FSS spectrum to

support the provision of mobile satellite services.¹ As the provision of telecommunications and broadcasting services in Canada is subject to the *Telecommunications Act* and the *Broadcasting Act*, satellite operators could also be subject to regulation by the Canadian Radio-television and Telecommunications Commission (CRTC).

3.2 Licensing of Canadian FSS and BSS Satellite Spectrum

3.2.1 FSS and BSS Spectrum Available

The *Canadian Table of Frequency Allocations 9 kHz to 275 GHz* (2009 edition) allocates many bands of spectrum for fixed and broadcasting satellite services. Specific requirements for different bands or services may be established in the future. Until such time as these service rules are in place, Industry Canada requires that applications for commercial use of FSS and BSS satellite spectrum request entire sub-bands, as identified in Annex A. If the sub-band is not identified in Annex A, applications requesting only part of the bands identified in the *Canadian Table of Frequency Allocations* will be assessed on a case-by-case basis.

Requests to use spectrum that is limited to use only by the Government of Canada must be supported by the Department of National Defence.

3.2.2 Treatment of Licence Applications

Industry Canada will consider applications from prospective satellite operators that are ready to use the spectrum at the requested geostationary orbital positions (GSO) or non-geostationary orbit(s) (NGSO) on a first-come, first-served basis. As the FCFS process could be subject to abuse where a competing demand for licences exists, Industry Canada is implementing safeguard measures to help ensure that spectrum is assigned only to applicants that are, in fact, ready to use the spectrum.

Industry Canada's Client Procedure Circular 2-6-02, *Licensing of Space Stations*, sets out the application information requirements and the processing and treatment of applications, as well as post-authorization procedures for Canadian satellites.

3.2.3 Requirements and Assessment Criteria

Eligibility to Hold Licences — The applicant must be an entity that is eligible to hold a licence under the *Radiocommunication Act* and *Radiocommunication Regulations* as a radiocommunication user, service provider or carrier, as appropriate. Restrictions on the ownership and control of Canadian satellite carriers were removed from the *Telecommunications Act* under the *Budget Implementation Act* in 2010.

Canadian Direction and Control — The licensee must have direction and control over the licensed satellite, which may be achieved through the use of physical control facilities in Canada or by way of contractual control with certain additional requirements.

¹ See RP-007, *Policy Framework for the Provision of Mobile Satellite Service Via Regional and Global Satellite Systems in the Canadian Market*, revision 2, published March 1999.

Regulatory Requirements — The satellite must comply with regulatory requirements and spectrum utilization policies, specifically with the ITU's *Radio Regulations* and with Canadian spectrum allocation and spectrum utilization policies. For services provided outside of Canada, applicants will not be required to comply with Canadian spectrum policies.

Satellite Coordination — The satellite network must be successfully coordinated internationally and notified via the applicable ITU procedures and regulations, as well as coordinated with other potentially affected Canadian satellites and terrestrial networks, where required. It is the responsibility of satellite network operators to participate at their own expense and on an ongoing basis in coordination activities, with a view to protecting their networks and fulfilling ITU obligations.

Canadian Coverage — Industry Canada remains committed to requiring Canadian coverage for satellite networks positioned between and including 70°W and 130°W of the geostationary arc (the "Canadian arc"), and considers coverage to include the concepts of area, signal strength and capacity. Industry Canada recognizes the significant economic costs of maintaining coverage to all regions of Canada in the absence of market demand, and is therefore implementing the following approach.

For any geostationary orbit (GSO) satellite to be positioned between (and including) 70°W and 130°W, operators will be required to cover the entire Canadian territory visible from the satellite. Operators must reserve 50 percent of the satellite capacity for use by Canadians for a minimum period of six months from licence issuance, during which time Industry Canada will expect a reasonable effort be made to market the capacity to Canadian users. For any NGSO satellite, operators will be required, to the extent possible from the satellite's position in orbit, to cover the entire Canadian territory visible from the satellite. NGSO satellite operators must reserve an amount of satellite capacity for use by Canadians that is proportional to the Canadian territory covered vis-à-vis the entire territory covered from the position in orbit. Specific requirements for different bands or services may be established in the future and will be subject to additional consultation.

Industry Canada may grant a waiver from the coverage requirement under exceptional circumstances or if the operator can demonstrate that Canadian needs will be met, as follows: (i) there is adequate capacity on existing Canadian satellites to meet known demand; (ii) Canadian customers are not ready to commit to purchase; and (iii) there are other opportunities on future licensed satellites for Canadians to obtain capacity. If a waiver is granted, the licence would specifically exclude those areas, and other operators may apply for and obtain a licence to serve those areas, subject to coordinating their use of the spectrum. Industry Canada expects licensed operators to coordinate with future applicants that wish to provide complementary coverage allowing for the provision of services in Canada, unless they can demonstrate that it is technically not possible to do so.

Industry Canada finds that this initial reservation of capacity for use in Canada is a reasonable measure that provides a meaningful opportunity for Canadian users to acquire Canadian FSS and BSS capacity. It also provides flexibility for Canadian operators to pursue other markets if there is no Canadian demand.

Technical Plans — Industry Canada will assess technical plans to ensure: (1) compliance with applicable ITU technical requirements; (2) compliance with Canadian coverage requirements; (3) coexistence with other assignments for Canadian satellites; and (4) minimum spectrum efficiency. Industry Canada also intends to develop service rules for satellite bands, against which it will assess applications.

Satellite Implementation Milestones — Industry Canada expects that it will receive applications with well-developed plans for the use of the spectrum at the requested orbital positions or NGSO orbits, whether located in the Canadian arc or elsewhere. Industry Canada has established a five-year time frame with predetermined milestones for the implementation of satellite projects. Strictly enforced milestones are intended to ensure that licensees make diligent and timely progress in the construction and implementation of their satellites and in the provision of service.

Adherence to these milestones, demonstrated through progress in construction and the launch of a satellite, will help to ensure that valuable spectrum is not held by licensees that are unable or unwilling to proceed with their plans. Industry Canada will strictly enforce the established milestones and does not anticipate granting milestone extensions in the absence of extraordinary circumstances. Where milestones have been missed and have not been extended, Industry Canada will initiate a revocation process aimed at making the spectrum available for others.

3.2.4 Public Benefit Obligations

Industry Canada remains committed to the objective of helping to ensure that Canadian satellite users have access to the satellite capacity that they need, and that services are available throughout Canada. In balancing this objective with the need to minimize the regulatory and administrative burdens placed on licensees, the public benefit condition of licence will remain in place for future FSS and BSS satellites, but at a reduced level of 0.5% of adjusted gross revenue for the particular satellite. The public benefit conditions of licence that are set out in existing licences, under which satellites are operational at the time of publication of this document, will continue to apply as they are currently written.

3.2.5 Use of Spectrum Outside Canada

Canadian authorizations for space stations should not be construed in any way as giving the licensee any rights to operate earth stations, nor to otherwise provide satellite services in any country other than Canada. Should any party intend to operate earth stations or to provide satellite services outside of Canada using the proposed space station, Industry Canada recommends that the party consult with the appropriate regulatory authorities of the administrations concerned.

3.2.6 Space Debris Mitigation

For geostationary satellites, the satellite, at the end of its life, must be removed from the GSO region in a manner consistent with Recommendation ITU-R S.1003-2, *Environmental Protection of the Geostationary Satellite Orbit*. For non-geostationary satellites, at the end-of-life of the satellite, the licensee must implement space debris mitigation measures in accordance with industry best practices so as to minimize adverse effects on the orbital environment.

3.2.7 Satellite Use Policy to Accommodate Broadcasting Services to the Canadian Public

A policy statement concerning the use of Canadian satellite facilities, as it applies to broadcasting undertakings, is set out in a 2005 collaborative statement issued jointly by Industry Canada and Canadian Heritage. For the full text of the statement, see Annex B.

3.3 Foreign Authorized Space Stations by WTO Members

3.3.1 General

In keeping with the 1998 and 2005 frameworks, foreign-owned and controlled space stations continue to be permitted to provide domestic and international service. The primary mechanism to ensure compliance with the policy provisions contained in this document is via the earth station licensing process.

Industry Canada's Client Procedure Circular 2-6-01, *Procedure for the Submission of Applications to License Fixed Earth Stations and to Approve the Use of Foreign Fixed-Satellite Service (FSS) Satellites in Canada*, describes the earth station licence application procedure that accommodates the use of foreign FSS satellites. This circular also sets out a procedure to obtain approval for the use of foreign FSS satellites in the Canadian market.

3.3.2 Assessment Criteria

Industry Canada may approve requests to use non-Canadian satellites that have been authorized by WTO members. Such requests will be assessed on a case-by-case basis to ensure that:

- The satellite station has been authorized by a WTO member administration;
- The satellite network has been successfully coordinated via the appropriate ITU procedures and regulations (if coordination has not been completed, approval may be granted subject to successful completion); and
- The satellite station complies with Canadian spectrum policy requirements, and in particular, with respect to frequency allocations, utilization and efficiency, orderly deployment and coexistence with other radio services and stations authorized for use in the same and adjacent frequency bands.

3.4 Foreign-Authorized Space Stations by Non-WTO Members

Industry Canada may consider, on a case-by-case basis, requests to use non-Canadian satellites which have been authorized by a non-WTO administration.

4. Related Documents

Industry Canada website:

SMSE-006-13 *Decisions on the Licensing Framework for Fixed-Satellite Service (FSS) and Broadcasting-Satellite Service (BSS), Implications for Other Satellite Service in Canada, and Revised Fee Proposal -*
<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10602.html>

RP-007 *Policy Framework for the Provision of Mobile Satellite Service Via Regional and Global Satellite Systems in the Canadian Market -*
<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01310.html>

- CPC-2-6-01 *Procedure for the Submission of Applications to License Fixed Earth Stations and to Approve the Use of Foreign Fixed-Satellite Service (FSS) Satellites in Canada - <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01940.html?Open&pv=1>*
- CPC-2-6-02 *Licensing of Space Stations - <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01385.html>*
- CPC-2-6-06 *Guidelines for the Submission of Applications to Provide Mobile Satellite Services in Canada - <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01036.html>*
- Canadian Table of Frequency Allocations 9 kHz to 275 GHz - <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf09686.html>*
- ITU Radio Regulations - <http://www.itu.int/pub/R-REG-RR-2012>*
- SP 3-30 GHz *Revisions to Spectrum Utilization Policies in the 3-30 GHz Frequency Range and Further Consultation - <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf05617.html?Open&pv=1>*
- SP 1-3 GHz *Amendments to the Microwave Spectrum Utilization Policies in the 1-3 GHz Frequency Range - <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01918.html?Open&pv=1>*
- Radiocommunication Regulations - <http://laws-lois.justice.gc.ca/eng/regulations/SOR-96-484/>*
- Radiocommunication Act - <http://laws-lois.justice.gc.ca/eng/acts/R-2/index.html>*

Annex A – List of Sub-Bands of FSS and BSS Spectrum

Bands		Space-to-Earth	Earth-to-Space
FSS	C	3700-4200 MHz	5925-6425 MHz
	Extended	17.7-18.3 GHz	27.5-28.35 GHz
	Ka	18.3-18.8 GHz	28.35-28.6 GHz /29.25-29.5 GHz
	Ka	19.7-20.2 GHz	29.5-30.0 GHz
	Ku	11.7-12.2 GHz	14.0-14.5 GHz
	Extended Ku	10.95-11.2 GHz/11.45-11.7 GHz	13.75-14.0 GHz
		10.7-10.95 GHz/11.2-11.45 GHz	12.75-13.25 GHz
	Other Ka	18.8-19.3 GHz	28.6-29.1 GHz
	X	7250-7750 MHz	7900-8400 MHz
BSS	Ku	12.2-12.7 GHz	17.3-17.8 GHz
	Ka	17.3-17.8 GHz	24.75-25.25 GHz

Annex B – Statement on the Utilization of Fixed-Satellite Services Facilities for Broadcasting Services

As of March 1, 2000, Canada's commitments to the WTO Agreement on Basic Telecommunications services provide full flexibility in the use of fixed satellite facilities for the transport of telecommunications services within Canada and between Canada and the United States. This includes the transport of broadcasting services such as, the transport of program feeds for news gathering, delivery of network programs to affiliates, and the delivery of programming services to distribution undertakings.

Existing rights of the Government of Canada and the Canadian Radio-television and Telecommunications Commission (CRTC) to regulate Canadian satellite facilities are not affected.

The telecommunications services covered by the agreement exclude "telecommunications services supplied for the transmission of services regulated under the Broadcasting Act where such services are intended for direct reception by the public." More specifically, Direct-to-Home (DTH) broadcasting services whether they use fixed satellites or direct broadcasting satellites (DBS) are excluded from this agreement.

In 1995, the Government of Canada clarified its satellite-use policy to the CRTC in the context of Direct-to-Home (DTH) satellite broadcasting distribution. The policy did not contemplate situations where Canadian satellite(s) would not be available to accommodate a particular broadcasting service. In 2004, in response to a request from the CRTC, the government carried out a public consultation that proposed changes to the policy which would permit expanded use of foreign satellites in exceptional cases.

Effective September 26, 2005, the government amended its satellite-use policy to permit the use of foreign specialized satellite facilities for the transmission of Canadian subscription satellite radio services. In this context, where a Canadian broadcasting undertaking wishes to use foreign satellite facilities, the Canadian policy concerning the use of satellite facilities for direct reception of broadcasting services by the public should now be interpreted as follows:

- (i) The undertaking should make use of Canadian satellite facilities to carry (i.e. receive and/or distribute to Canadians) all Canadian programming services but may use either Canadian or non-Canadian satellite facilities to carry foreign originated services that are intended primarily for foreign audiences and are authorized, in whole or in part, for distribution by the CRTC;
- (ii) In exceptional circumstances, where no Canadian satellite facilities are available to accommodate specialized satellite delivery of a digital satellite subscription radio service to the public, including vehicular reception, the use of foreign satellite facilities is permitted to provide Canadian programming services; and
- (iii) In the case of emergencies leading to lack of availability of Canadian satellite facilities for broadcasting undertakings, back-up arrangements with foreign satellite operators could be utilized, on an interim basis, with appropriate authorization.

Note: Specialized satellite delivery in the context of provision (ii) is meant to differentiate unique satellite transmission/reception, such as for vehicular reception, not achievable by conventional Canadian satellite facilities used for DTH, e.g. direct broadcast satellite and fixed satellite in the 12 GHz range.

In the case of a pay-per-view or multi-channel Direct-to-Home (DTH) undertaking using either fixed satellites or Direct Broadcasting Satellites (DBS), the Canadian component would be carried on Canadian satellites while the foreign component could use either Canadian or foreign satellites.

This policy statement is the result of a collaboration between Industry Canada and Canadian Heritage, following a public consultation on proposed amendments to the policy. Effective September 26, 2005, this policy supersedes the clarification provided to the CRTC on June 14, 1995, which was signed by the Deputy Minister of Industry Canada and the Deputy Minister of Canadian Heritage.

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