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Spectrum Management and Telecommunications Policy

Client Procedures Circular

Spectrum Licence Fee Calculations for Cellular and Incumbent Personal Communications Services (PCS)

Client Procedures Circulars describe the various procedures or processes to be followed by the public when dealing with Industry Canada. The information contained in these circulars is subject to change without notice. It is therefore suggested that interested persons consult the nearest district office of Industry Canada for additional details. While every reasonable effort has been made to ensure accuracy, no warranty is expressed or implied. As well, these circulars have no status in law.

Comments and suggestions may be directed to the following address:

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All [spectrum publications](http://strategis.gc.ca/spectrum) are available on the Internet at:
<http://strategis.gc.ca/spectrum>.

1. Principle

The radio frequency spectrum is a natural resource to which all Canadians are entitled access. Industry Canada endeavours to provide this access with a minimum administrative burden to clients while ensuring the efficient use of the radio frequency spectrum.

2. Mandate

Under section 5 of the *Radiocommunication Act*, the Minister may issue spectrum licences in respect of the utilization of specified radio frequencies within a defined geographic area. The Minister may fix the terms and conditions of any such licence. In accordance with section 19 of the *Department of Industry Act*, the Minister may fix spectrum licence fees in respect of the rights and privileges provided.

3. Background

On December 20, 2003, the Department released Gazette Notice DGRB-006-03 entitled *Spectrum Licensing Policy for Cellular and Incumbent Personal Communications Services (PCS)*. This notice announced the release of the Department's policy for the transition of cellular and incumbent PCS licences to spectrum licences thus eliminating the requirement for radio licences.

Concurrently, the Department released Canada Gazette Notice DGRB-005-03 entitled *Radio Authorization Fees for Wireless Telecommunication Systems that Operate in the Radio Frequency Bands 824.040 MHz to 848.970 MHz, 869.040 MHz to 893.970 MHz or 1850 MHz to 1990 MHz*. With this notice, the Minister of Industry, pursuant to section 19 of the *Department of Industry Act*, fixed the fees, effective April 1, 2004, for spectrum licences to be issued to cellular and incumbent PCS licensees. Copies of the above-mentioned documents are available on the [Spectrum Management and Telecommunications Web site](http://strategis.gc.ca/spectrum) at: <http://strategis.gc.ca/spectrum>.

Through this document, the Department sets out the procedures for the administration of associated spectrum licences. This includes detailed examples for the calculation of spectrum licence fees.

4. Definitions/Interpretation

In this document:

- **Cellular Frequency Band** – the transmit and receive frequencies in the radio frequency band 869.040 MHz to 893.970 MHz and the transmit and receive frequencies in the radio frequency band 824.040 MHz to 848.970 MHz.
- **Personal Communication Services Frequency Band** – the transmit and receive frequencies in the radio frequency band 1850 MHz to 1990 MHz.

- **Service Area** – the defined geographic area specified in the radio authorization.
- **Person** – the number of individual people in a census area as determined by Statistics Canada in the 2001 Census and as specified for the service area in the radio authorization.
- **Renewal Fee** – the annual fee payable for the continuance in force of the radio authorization until the radio authorization expires.
- **Partitioning** – the division of the geographic dimension of a spectrum licence.
- **Disaggregation** – the division of the bandwidth dimension of a spectrum licence.

5. Policy

5.1 Licensing

Applicants for unassigned cellular or PCS spectrum may contact any Industry Canada district office to process their requests. Details on application requirements are provided in Client Procedures Circular 2-1-23, *Licensing Procedures for Spectrum Licences for Terrestrial Services (CPC-2-1-23)*. Application procedures for cellular and PCS licensees wishing to transfer or divide their existing spectrum licence(s) are also outlined in CPC-2-1-23.

5.2 Licence Fees

The Minister of Industry, pursuant to section 19 of the *Department of Industry Act*, fixed the fees for cellular and PCS licensees (except PCS licensees subsequent to the 2001 PCS auction) in Gazette Notice DGRB-005-03, published in the *Canada Gazette*, Part I on December 20, 2003. For cellular or PCS spectrum usage, the fee rate of \$0.03512361 per MHz per person over the geographic area of their spectrum licence was established. Furthermore, the minimum yearly fee for a spectrum licence was set at \$1,000. This fee will be charged on an annual basis, payable in full by March 31 of each year.

The Minister also determined that for incumbent cellular and PCS licensees, the fee rate would be implemented over a seven-year period before the full measure of the new fee becomes payable. Implementation will be graduated based on the difference between licence value effective April 1, 2003 and the amount payable for fiscal year 2010/2011. This graduated implementation will apply to both incumbent licensees notified that they will be receiving an increase in their current annual licence fees and to those notified that they will be receiving a decrease in their fees, including situations where licence partitioning and frequency disaggregation takes place.

Cellular and PCS licensees may transfer their licence(s) in whole or divide the licence in both bandwidth (i.e. disaggregation) and geographic dimensions (i.e. partitioning); however, any transfer, partitioning or disaggregation of a spectrum licence must first obtain approval from the Minister, in accordance with the procedures set out in Section 5.6 of CPC-2-1-23. The Department will not refund to the transferer any prorated licence fees for the fiscal year in which the transfer takes place nor will it charge the

recipient issuance fees. The recipient will be billed the appropriate fees as part of the subsequent annual renewal. If the fee for the licence is subject to a graduated implementation (either a notified increase or decrease), the recipient will assume the same graduated fee schedule for the licence as was determined for the transferer.

To help explain how the annual renewal fees will be implemented for the transition of existing cellular and PCS licensees, the Department has provided in this CPC a number of scenarios which demonstrate how the fees will be calculated. In these scenarios, Company ABC, an incumbent PCS licensee, has one spectrum licence for 10 MHz of PCS spectrum for Tier Area 2-11, located in Saskatchewan. The 2001 census population for that area was 974,915 hence the 2010/2011 renewal fee would be \$342,425 -- calculated as: 10 MHz (spectrum) x 974,915 (population) x \$0.03512361 (fee rate). For the transition period, the annual renewal fee is calculated using the appropriate formula set out in Section 8.(1) of Canada Gazette Notice DGRB-005-03, where:

- **A** is the adjusted annual fee expressed as a dollar value per MHz per person for the then-current fiscal year;
- **B** is the old annual fee expressed as a dollar value per MHz per person for the fiscal year 2003/2004; for the fiscal year 2004/2005 and for subsequent fiscal years, B is the previous fiscal year's applicable annual fee expressed as a dollar value per MHz per person;
- **C** is the annual new fee of \$0.03512361 per MHz per person; and
- **D** is the applicable adjustment factor.

5.3 New Party Cellular Licence Fees

Radio Systems Policy 019, *Policy for the Provision of Cellular Service by New Parties* (RP-019), applies to cellular licensees only. The Department will accept bona fide letters of intent from potential new service providers outlining proposals to offer specified services in one particular cellular sub-band, within a geographic area that is not being served by any cellular service provider or that is being served by only one cellular service provider.

Should the two parties agree to the transfer, the licence fees to be paid will be as per the transition scheme outlined in Gazette Notice No. DGRB-005-03.

Should the two parties be unable to come to an agreement and should the Department agree to authorize the new party applicant, the Department will revoke that portion of the geographic area with the applicable spectrum and assign it to the new party. Therefore, this new party application would be treated as a new application and would not be transitioning over the remaining period outlined in Gazette Notice No. DGRB-005-03.

Scenario 1: Fee Increase

In this scenario, incumbent Company ABC has been notified by the Department that their spectrum licence renewal fee will see an increase over the seven-year graduated implementation plan. Therefore, the 2003/2004 renewal fee for their spectrum licence valued at \$250,000 is less than the determined 2010/2011 renewal fee of \$342,425. A graduated annual fee increase calculation would then be employed as shown in the table below. To determine the renewal fee for each respective fiscal year, the following formula would be used:

$$\text{Fee} = \text{Spectrum (in MHz)} \times \text{population (2001 census data)} \times A, \text{ where } A = B + [D \times (C - B)]$$

For example, based upon PCS spectrum of 10 MHz, a population of 974,915, and $A = 0.026997597$, the licence renewal fee for the fiscal year 2004/2005 would be \$263,204.

Year	A \$/MHz/pop	B \$/MHz/pop	C \$/MHz/pop	D	Fee \$	Increment \$
2004/2005	0.02699759	0.02564326	0.03512361	0.142857	263,204	13,204
2005/2006	0.02835192	0.02699759	0.03512361	0.166665	276,407	13,204
2006/2007	0.02970625	0.02835192	0.03512361	0.2	289,611	13,204
2007/2008	0.03106059	0.02970625	0.03512361	0.25	302,814	13,204
2008/2009	0.03241494	0.03106059	0.03512361	0.333335	316,018	13,204
2009/2010	0.03376927	0.03241494	0.03512361	0.5	329,222	13,204
2010/2011	0.03512361	0.03376927	0.03512361	1	342,425	13,204

Scenario 2: Fee Decrease

In this scenario, incumbent Company ABC has been notified by the Department that their spectrum licence renewal fee will see a decrease over the seven-year graduated implementation plan. Therefore, the 2003/2004 renewal fee for their spectrum licence valued at \$400,000 is more than the determined 2010/2011 renewal fee of \$342,425. A graduated annual fee decrease calculation would then be employed as shown in the table below. To determine the renewal fee for each respective fiscal year, the following formula would be used:

$$\text{Fee} = \text{Spectrum (in MHz)} \times \text{population (2001 census data)} \times A, \text{ where } A = B - [D \times (B - C)]$$

For example, based upon PCS spectrum of 10 MHz, a population of 974,915 and $A = 0.04018556$, the licence renewal fee for the fiscal year 2004/2005 would be \$391,775.

Year	A \$/MHz/pop	B \$/MHz/pop	C \$/MHz/pop	D	Fee \$	Decrement \$
2004/2005	0.04018556	0.04102921	0.03512361	0.142857	391,775	(8,225)
2005/2006	0.03934191	0.04018556	0.03512361	0.166665	383,550	(8,225)
2006/2007	0.03849825	0.03934191	0.03512361	0.2	375,325	(8,225)
2007/2008	0.03765459	0.03849825	0.03512361	0.25	367,100	(8,225)
2008/2009	0.03681092	0.03765459	0.03512361	0.333335	358,875	(8,225)
2009/2010	0.03596727	0.03681092	0.03512361	0.5	350,650	(8,225)
2010/2011	0.03512361	0.03596727	0.03512361	1	342,425	(8,225)

Scenario 3: Calculation of Fees for a Licence Transfer in Whole

In this scenario, Company ABC has been notified by the Department that the 2003/2004 renewal fee for their spectrum licence is valued at \$250,000, and will undergo annual fee increment increases over the seven-year graduated implementation plan, as shown in the table below.

Year	A \$/MHz/pop	B \$/MHz/pop	C \$/MHz/pop	D	Fee \$	Increment \$
2004/2005	0.02699759	0.02564326	0.03512361	0.142857	263,204	13,204
2005/2006	0.02835192	0.02699759	0.03512361	0.166665	276,407	13,204
2006/2007	0.02970625	0.02835192	0.03512361	0.2	289,611	13,204
2007/2008	0.03106059	0.02970625	0.03512361	0.25	302,814	13,204
2008/2009	0.03241494	0.03106059	0.03512361	0.333335	316,018	13,204
2009/2010	0.03376927	0.03241494	0.03512361	0.5	329,222	13,204
2010/2011	0.03512361	0.03376927	0.03512361	1	342,425	13,204

In fiscal year 2006/2007, Company ABC transfers its entire spectrum licence to Company XYZ. Beginning in fiscal year 2007/2008, Company XYZ would assume the remainder of the same graduated fee schedule that was originally notified to Company ABC, as shown in the following table.

Year	A \$/MHz/pop	B \$/MHz/pop	C \$/MHz/pop	D	Fee \$	Increment \$
2007/2008	0.03106059	0.02970625	0.03512361	0.25	302,814	13,204
2008/2009	0.03241494	0.03106059	0.03512361	0.333335	316,018	13,204
2009/2010	0.03376927	0.03241494	0.03512361	0.5	329,222	13,204
2010/2011	0.03512361	0.03376927	0.03512361	1	342,425	13,204

For example, based upon the formula:

Fee = Spectrum (in MHz) x population (2001 census data) x A, where $A = B + [D \times (C - B)]$,
Company XYZ's renewal fee for the 2007/2008 fiscal year would be \$ 302,814.

Scenario 4: Calculation of Fees for a Licence Partitioning

In this scenario, Company ABC has been notified by the Department that the 2003/2004 renewal fee for its spectrum licence is valued at \$250,000, and will undergo annual fee increment increases over the seven-year graduated implementation plan, as shown in the table below.

Year	A \$/MHz/pop	B \$/MHz/pop	C \$/MHz/pop	D	Fee \$	Increment \$
2004/2005	0.02699759	0.02564326	0.03512361	0.142857	263,204	13,204
2005/2006	0.02835192	0.02699759	0.03512361	0.166665	276,407	13,204
2006/2007	0.02970625	0.02835192	0.03512361	0.2	289,611	13,204
2007/2008	0.03106059	0.02970625	0.03512361	0.25	302,814	13,204
2008/2009	0.03241494	0.03106059	0.03512361	0.333335	316,018	13,204
2009/2010	0.03376927	0.03241494	0.03512361	0.5	329,222	13,204
2010/2011	0.03512361	0.03376927	0.03512361	1	342,425	13,204

During fiscal year 2006/2007, Company ABC partitions its spectrum licence by transferring all 10 MHz of spectrum in a specified geographic area, the population of which is 200,000, to Company XYZ. Company ABC would therefore be left with a spectrum licence for 10 MHz covering a geographic area whose remaining population is now 774,915 (reduced from the original 974,915 population value).

The fee schedules for the two new spectrum licences, calculated to begin for fiscal year 2007/2008, will be based on the original graduated annual fee schedule of Company ABC and be apportioned according to the population that each covers. The sum of the renewal fees for the two companies will be equal to the original annual renewal fee amount of Company ABC.

As a result, Company ABC's revised graduated fee schedule would be:

Year	A \$/MHz/pop	B \$/MHz/pop	C \$/MHz/pop	D	Fee \$	Increment \$
2007/2008	0.03106059	0.02970625	0.03512361	0.25	240,693	10,495
2008/2009	0.03241494	0.03106059	0.03512361	0.333335	251,188	10,495
2009/2010	0.03376927	0.03241494	0.03512361	0.5	261,683	10,495
2010/2011	0.03512361	0.03376927	0.03512361	1	272,178	10,495

Company XYZ's corresponding graduated fee schedule would be:

Year	A \$/MHz/pop	B \$/MHz/pop	C \$/MHz/pop	D	Fee \$	Increment \$
2007/2008	0.03106059	0.02970625	0.03512361	0.25	62,121	2,709
2008/2009	0.03241494	0.03106059	0.03512361	0.333335	64,830	2,709
2009/2010	0.03376927	0.03241494	0.03512361	0.5	67,539	2,709
2010/2011	0.03512361	0.03376927	0.03512361	1	70,247	2,709

Scenario 5: Calculation of Fees for a Licence Disaggregation

In this scenario, Company ABC's 2003/2004 renewal fee for its spectrum licence is \$250,000 and they have been notified by the Department that they will undergo annual fee increments over the course of the seven-year graduated implementation plan. During fiscal year 2006/2007, Company ABC disaggregates its spectrum licence by transferring 5 MHz of spectrum for service area 2-11 to Company XYZ.

The fee schedules for the two new spectrum licences, calculated to begin for fiscal year 2007/2008, will be based on the original graduated annual fee schedule of Company ABC and be apportioned according to the remaining spectrum assigned to each. The sum of the renewal fees for the two companies will be equal to the original annual renewal fee of Company ABC.

The original graduated annual fee schedule for Company ABC was:

Year	A \$/MHz/pop	B \$/MHz/pop	C \$/MHz/pop	D	Fee \$	Increment \$
2004/2005	0.02699759	0.02564326	0.03512361	0.142857	263,204	13,204
2005/2006	0.02835192	0.02699759	0.03512361	0.166665	276,407	13,204
2006/2007	0.02970625	0.02835192	0.03512361	0.2	289,611	13,204
2007/2008	0.03106059	0.02970625	0.03512361	0.25	302,814	13,204
2008/2009	0.03241494	0.03106059	0.03512361	0.333335	316,018	13,204
2009/2010	0.03376927	0.03241494	0.03512361	0.5	329,222	13,204
2010/2011	0.03512361	0.03376927	0.03512361	1	342,425	13,204

Company ABC's revised graduated fee schedule would be:

Year	A \$/MHz/pop	B \$/MHz/pop	C \$/MHz/pop	D	Fee \$	Increment \$
2007/2008	0.03106059	0.02970625	0.03512361	0.25	151,407	6,602
2008/2009	0.03241494	0.03106059	0.03512361	0.333335	158,009	6,602
2009/2010	0.03376927	0.03241494	0.03512361	0.5	164,611	6,602
2010/2011	0.03512361	0.03376927	0.03512361	1	171,213	6,602

Company XYZ's corresponding graduated fee schedule would be:

Year	A \$/MHz/pop	B \$/MHz/pop	C \$/MHz/pop	D	Fee \$	Increment \$
2007/2008	0.03106059	0.02970625	0.03512361	0.25	151,407	6,602
2008/2009	0.03241494	0.03106059	0.03512361	0.333335	158,009	6,602
2009/2010	0.03376927	0.03241494	0.03512361	0.5	164,611	6,602
2010/2011	0.03512361	0.03376927	0.03512361	1	171,213	6,602

6. References

The following documents are available on the [Spectrum Management and Telecommunications Web site](http://strategis.gc.ca/spectrum) at: <http://strategis.gc.ca/spectrum>.

- Gazette Notice No. DGRB-005-03 — *Radio Authorization Fees for Wireless Telecommunication Systems that Operate in the Radio Frequency Bands 824.040 MHz to 848.970 MHz, 869.040 MHz to 893.970 MHz or 1850 MHz to 1990 MHz.*
- Gazette Notice No. DGRB-006-03 — *Spectrum Licensing Policy for Cellular and Incumbent Personal Communications Services (PCS).*
- Client Procedures Circular 2-1-23, *Licensing Procedures for Spectrum Licences for Terrestrial Services (CPC-2-1-23).*
- Radio Systems Policy 019, *Policy for the Provision of Cellular Services by New Parties (RP-019).*
- *Service Areas for Competitive Licensing.*

7. Contact

For further information concerning the procedures outlined in this document or related matters, you may contact:

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