

Copyright Board  
Canada



Commission du droit d'auteur  
Canada

**Date** 2008-02-22

**Citation** Files: Public Performance of Musical Works 2003-2007 and Public Performance of Sound Recordings 2003-2007

**Regime** Collective Administration of Performing Rights and of Communication Rights  
*Copyright Act*, section 68(3)

**Members** Mr. Justice William J. Vancise  
Mr. Stephen J. Callary  
Mrs. Francine Bertrand-Venne

**Proposed Tariffs Considered** RE-DETERMINATION

**Statement of Royalties to be collected by SOCAN and NRCC in respect of commercial radio for the years 2003 to 2007**

**Reasons for decision**

**I. INTRODUCTION**

[1] This case is rather unique. The Federal Court of Appeal in a unanimous decision<sup>1</sup> found, after noting that the Board was subject to review only on the grounds of patent unreasonableness, that the Board's reasons delivered in its decision of October 14, 2005,<sup>2</sup> respecting the quantification of the royalty increase warranted intervention by reason that the Board failed to adequately explain that quantification. The matter was remitted to the Board to "re-determine the issues in respect of which the reasons have been found to be inadequate":<sup>3</sup> the historical undervaluation of music and the greater efficiencies achieved by the industry through its use of music.

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<sup>1</sup> *Canadian Association of Broadcasters v. Society of Composers, Authors and Music Publishers of Canada and Neighbouring Rights Collective of Canada*, 2006 FCA 337 (hereafter, *CAB v. SOCAN*).

<sup>2</sup> [Decision of the Board dated October 14, 2005](#) certifying the *SOCAN-NRCC Commercial Radio Tariff, 2005-2007* (hereafter, *Commercial Radio 2005*).

<sup>3</sup> *CAB v. SOCAN*, para. 24.

[2] A panel, consisting of two members who did not participate in the original decision and the Vice-Chairman, was constituted to rehear the issue of the quantification of the tariff in accordance with the Court's order. For the reasons set out below, we come to the same conclusions as in the Board's decision of October 2005.

## II. HISTORICAL REVIEW

[3] The Society of Composers, Authors and Music Publishers of Canada (SOCAN) and the Neighbouring Rights Collective of Canada (NRCC) each filed proposed tariffs for the use of their repertoire by commercial radio stations for the years 2003-2007 pursuant to section 67.1(1) of the *Copyright Act*.<sup>4</sup>

[4] The history of the relevant tariffs is fully described in *Commercial Radio 2005*.<sup>5</sup> Suffice it to say that most stations have paid 3.2 per cent of their advertising revenues for the right to communicate musical works since 1978, while stations using protected musical works less than 20 per cent of their broadcast time have paid at a rate of 1.4 per cent since 1991. These rates had not changed until the October 2005 decision.

[5] Since 1997, the communication by telecommunication of an eligible, published sound recording entitles both the maker of the sound recording and the performer to an equitable remuneration. In 1999, the Board set the tariff based on a one to one ratio between rights of authors of musical works and performers and makers. The rate was set at 1.44 per cent to reflect NRCC's repertoire with a low-use rate of 0.63 per cent and a monthly fee of \$100 for all talk radio stations. Pursuant to subparagraph 68.1(1)(a)(i) of the *Act*, all stations are entitled to a preferential rate of \$100 per year on their first \$1.25 million of advertising revenues.

[6] On October 14, 2005, the Board certified for SOCAN a tariff of 3.2 per cent on the first \$1.25 million of advertising revenues and 4.4 per cent on the excess. The rate for low-use stations was set at 1.5 per cent. The Board reaffirmed that NRCC's rate would be the same as for SOCAN, before being adjusted for the relative importance of the eligible repertoire. In 2005, that adjustment was equal to 50 per cent. Therefore the certified tariff was 2.1 per cent on advertising revenues of more than \$1.25 million and 0.75 per cent for low-use stations.

[7] The Canadian Association of Broadcasters (CAB) applied for judicial review to set aside the Board's decision for two reasons: (1) the failure of the Board to consider an objection by the CAB to the proposed tariffs, and (2) inadequacies in the Board's reasons.

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<sup>4</sup> R.S.C. 1985, c. C-42 (the "*Act*").

<sup>5</sup> *Supra*, note 3, pp. 1-7.

[8] The Court dismissed the first ground, which it characterized as a failure to consider the cumulative royalty burden, finding that it was not persuaded that the Board erred in law by failing to consider a relevant factor which it was statutorily bound to consider.

[9] Prior to the hearing for judicial review “CAB abandoned its challenge to the sufficiency of the evidence to support the Board’s finding that radio stations are now able to make more efficient use of music to attract particular audiences. But it argued that the Board’s reasons do not provide an adequate explanation of its conclusion that this factor warranted an increase in the tariff of between 5 and 10 %, and its decision to select the mid point, 7.5 %.”<sup>6</sup>

[10] During the hearing before the Court, the CAB “conced[ed] that the Board’s finding that the existing rate had historically undervalued music to a radio station’s revenues [was] rationally supported by the evidence, and [did] not challenge it.”<sup>7</sup> It only challenged the quantification of the amount of the underestimation of the value of music, contending that there is nothing in the record to explain that quantification.

[11] The Court was therefore left with a single issue: the adequacy of reasons. That is, did the Board’s reasons provide an adequate explanation of its conclusions that (a) the more efficient use of music warranted an increase of between 5 and 10 per cent and its decision to select the mid-point, and (b) the historical undervaluation of music warranted an increase of between 10 and 15 per cent.

[12] The Court recognized the Board was faced with a failure by the CAB to put in evidence the relevant rates of return earned by radio stations which made a significant use of music and those that did not. It recognized as well that the parties have a responsibility to produce relevant evidence. It seems to us odd that a party can fail to provide any relevant evidence on this substantive issue and then claim on the basis of procedural fairness that the Board’s reasons are inadequate. The Board is not an inquisitorial tribunal. The parties have the responsibility to provide us with the necessary information to establish a tariff. Indeed, we asked for further economic information on the central issue during this re-determination.

[13] In the end, the Court found that: “The inadequacies of the Board’s reasons respecting the quantifications of the royalty increases attributable to both the historical undervaluation of music, and the greater efficiencies achieved by the industry through its use of music, in my opinion warrant the intervention of the Court.”<sup>8</sup> As a result, it set aside the decision and remitted

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<sup>6</sup> *Supra*, note 1, para. 20.

<sup>7</sup> *Supra*, note 1, para. 13.

<sup>8</sup> *Supra*, note 1, para. 23.

it to us to re-determine “the issues in respect of which the reasons have been found to be inadequate.”<sup>9</sup>

### III. RE-DETERMINATION

[14] Following receipt of the Court’s decision, the Board advised the parties in an Order of November 28, 2006 (see Appendix A) that:

The only issues that will be the subject of the re-determination are:

(A) the amount by which the tariff rates should be increased to account for the important historical undervaluation of music; and

(B) the amount of the efficiencies achieved through the use of music, the share of these efficiencies that should go to those who hold rights in music and the amount by which the tariff rates should be increased as a result.

There will be no re-determination of any other issue addressed in the Board’s decision.

[15] In the same Order, the Board also set out in detail how the parties would present their evidence.

[16] The CAB asked the Board to clarify whether it could present new facts or whether it was limited to the record as it existed. The parties were advised on January 12, 2007 that “parties can supply any evidence that is required to establish the facts needed to document, support or apply an expert’s proposed methodology, and only such evidence.”

[17] To further clarify how the issues identified in the Order of November 28, 2006 would be dealt with at the hearing, the Board set out, in a notice of June 18, 2007, the facts that are not in dispute and that form the factual matrix for the reconsideration. These are [references in brackets are to the relevant pages of the 2005 decision]:

- Music is worth more than the Board previously thought. [page 19]
- SOCAN’s repertoire has been historically undervalued. [page 19]
- Royalties represent too small a percentage of programming expenses. [page 19]
- Through their submissions before other agencies, radio stations have demonstrated repeatedly that they value music more than what they have been willing to concede before this Board. [page 20]
- By requesting to “flip” from the AM to the FM band or to broadcast less spoken word, stations demonstrated that music is worth more to them than what is currently paid for it. [page 20]
- Radio generally now uses music more efficiently than in 1987, in part due to an increased

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<sup>9</sup> *Supra*, note 1, para. 24.

- use of music, generating more revenues. [page 25]
- Using more music has allowed stations to reduce the use of spoken word content, for financial and operational reasons. This simple substitution results in higher profits. [page 25]
- Part of radio's ability to better target consumers by station format is attributable to music. [page 25]
- Music is now used and emphasized much more in radio programming than it was in 1987. [page 25]
- Music is used in branding. Branding can increase revenues by allowing for better focus and therefore, a more targeted, more saleable audience. [page 26]

[18] These are findings of fact which will be used in explaining the new quantification we are required to perform as a result of the Court's order.

#### **IV. EVIDENCE AND POSITION OF THE PARTIES**

[19] NRCC called Mr. Rob Young (Senior Vice-President, Planning and Research, PHD Canada) to give evidence concerning the more efficient use of music by radio broadcasters. Mr. Young compared the 2001 and 2006 data in three markets (Toronto, Vancouver and Calgary) and concluded that the number of radio stations who are able to effectively target a specific population by age and sex has increased in all three, with the largest increase found in the Calgary market (80 per cent). Mr. Young also testified that advertising revenues of radio broadcasters increased by 30.77 per cent between 2000 and 2005, compared to an overall media increase of just 15 per cent. This translates into a yearly average increase in advertising revenues of \$85.7 million over the increase in advertising revenues of all other media.

[20] After identifying a number of possible reasons for the faster growth of radio advertising revenues, Mr. Young estimated that 30 per cent of that growth can be attributed to the more efficient use of music. Based on this estimate, Mr. Young stated that radio broadcasters should pay an additional \$26 million (30 per cent of \$85.7 million) per year for music, which corresponds to 2.2 per cent of radio five-year average revenues. NRCC argues that half of this increase should go to the rights owners and proposes an additional 1.1 percentage point to the rate to compensate for the increased efficiency in the use of music.

[21] NRCC then called Mr. A. Scott Davidson (Chartered Accountant, Chartered Business Valuator, and Partner of Cole & Partners) who calculated historical financial ratios for the years 2000 to 2005 with respect to programming expenses as a proportion of both total expenses and total advertising revenues. When these calculations were compared to rates for companies whose business models are similar to commercial radio stations, Mr. Davidson found that key input costs ranged from 35 to 86 per cent of operating expenses and 31 to 79 per cent of revenues. Ratios in the Canadian television industry ranged from 72 to 74 per cent for operating expenses and 31 to 79 per cent of revenues.

[22] Based on this comparison, NRCC contended that the historical undervaluation of music should be set at 20 per cent. The rate would be adjusted by 10.6 per cent to account for the increased musical use and further adjusted for the efficient use of music, that is, one half of the 2.2 percentage points increase (or 1.1 percentage point) to arrive at a final SOCAN rate of 5.3 per cent.

[23] SOCAN called Mr. Stanley Liebowitz, Professor of Economics, University of Texas, to provide an economic analysis of the historical undervaluation of music and the efficiencies achieved through the use of music. We examine his evidence and theories later on in this decision.

[24] The CAB responded to the Board's many requests and suggestions that it provide more detailed information and evidence to support its position on the appropriate tariffs. It called Mr. Steven Globerman, Professor of International Business, Western Washington University, to provide an economic analysis and to offer an alternative to the economic position advanced by Professor Liebowitz. We examine his evidence and theories at greater length later on in this decision.

[25] The CAB also commissioned Mr. Michel Houle (Consultant, Cultural Industry and Communications) to analyze the undervaluation and the efficient use of music. In Mr. Houle's opinion, the impact of the increased efficiency of music on the revenues of radio stations cannot be measured directly, but can only be inferred after the impact of all other possible factors have been considered. After examining the growth in advertising revenues of all media (including radio) between 1998 and 2002, Mr. Houle concludes that only a small share (about 17 per cent) of the radio stations revenues could potentially be attributed to the more efficient use of music.

[26] He also examined the growth in the total number of radio stations, as well as the industry consolidation. He concluded that the latter, because of its exceptional importance as well as its concentration in time (most consolidation activity took place between 1998 and 2002), entirely explains the increase in advertising revenues. He thus found no impact of increased music efficiency on advertising revenues. In addition, in Mr. Houle's opinion, none of the personalized formats (i.e., those involving naming stations "Bob" or "Jack") had any impact on the increased revenues in the 1998 to 2002 timeframe because they were all developed after 2002.

[27] On the historical undervaluation of music, he noted that between 1996 and 2002, royalties paid to SOCAN increased more than total programming expenses. Thus, if undervaluing existed prior to 1996 it must have corrected itself by then.

[28] Mr. Houle concluded that the flip from AM to FM was not based on the increased use of music. Instead, the move was due to technical difficulties with the AM signal and the decrease in the number of listeners to AM stations. He concluded his assessment by finding that the 10 per

cent adjustment the Board applied to take into account the historical undervaluation of music should be significantly reduced.

[29] The CAB called Mr. Jeff Osborne (President of Ozworks Marketing Communications) to comment on Mr. Young's report and evidence. For many years, Mr. Osborne was in the same business as Mr. Young and now advises companies on marketing. Contrary to Mr. Young, Mr. Osborne concluded that the driving factor of advertising sales was gross rating points. In his opinion, narrow targeting of sub-groups of the population was not an important factor in the advertisers' decision to buy radio ads.

[30] Lastly, the CAB called a radio panel (consisting of Messrs. Pierre-Louis Smith, Vice-President, Policy and Chief Regulatory Officer, CAB; J.J. Johnston, General Manager, Corus Entertainment; Alain Strati, Vice-President, Business and Regulatory Affairs, Rogers Media) to explain the operation of commercial radio stations in a regulated market. The panel discussed the effects of increased flexibility afforded to radio broadcasters following changes in the regulatory framework mandated by the Canadian Radio-television and Telecommunications Commission (CRTC), the effects of the multiple licence ownership policy and industry consolidation and the differences in the CRTC regulatory policies for French language stations.

## **V. ECONOMIC EVIDENCE**

[31] The parties used different approaches to arrive at their rate proposals. SOCAN and NRCC used a three-step approach, where the impact of each factor the Board identified is quantified and cumulated to obtain a final rate. The CAB, for its part, presented a framework that seeks to incorporate all of these factors within a single, global analysis. The CAB also submitted evidence in support of the value of two of the individual factors within the global framework.

### **A. SOCAN**

[32] Professor Liebowitz uses the 3.2 per cent rate as the starting point and applies an incremental approach similar to that used in *Commercial Radio 2005*. First, he applies the increase of 10.6 per cent used by the Board to reflect the fact that commercial radio now uses more music than in 1987. He then increases the rate by 27.4 per cent to account for the historical undervaluation of SOCAN's repertoire. Finally, he adds 5.75 percentage points to the rate to reflect the fact that radio now uses music more efficiently than in 1987.

[33] Professor Liebowitz examines the evolution of program expenses over time to calculate his estimate of the historical undervaluation of music. He claims this category of costs is most closely related to communication rights since it represents creative elements. Professor Liebowitz identifies two periods for which revenue growth was almost the same, 1972-1989 and 1993-2005 and then notes that between 1972 and 1989, program expenses increased by 82.1 per cent while advertising revenues only increased by 54.7 per cent. SOCAN royalties are expressed

as a percentage of revenues, therefore Professor Liebowitz concludes that there is a gap of 27.4 percentage points between the growth of SOCAN royalties and that of program expenses. During the 1970s, the tariff increased from 2.85 to 3.2 per cent, an increase of 10.9 per cent, which, if deducted from the 27.4 per cent, would result in a “net” gap of 16.5 per cent. In Professor Liebowitz’s opinion, the reason for the increase in the rate was not to make up for the fact that payments for creative input were outpacing advertising revenues and therefore concludes that the adjustment of 27.4 per cent is more appropriate.

[34] Professor Liebowitz then examines the period between 1993 and 2005. During that period, the growth pattern of program expenses and revenues is reversed compared to the previous period. Professor Liebowitz argues this does not mean the undervaluation of music was reduced as a result. Instead, between 1993 and 2005, there were regulatory changes that shifted demand from non-music inputs to music inputs (for instance, a reduction in the spoken word requirement led to more music being used). In his opinion, when these shifts occur, industry-wide program expenses are a poor proxy for the value of music. He concludes that the 16.5 per cent to 27.4 per cent interval remains an appropriate estimate of the historical undervaluation of music.

[35] Finally, Professor Liebowitz proposes an adjustment for the more efficient use of music by radio broadcasters. He argues that if music-based stations can brand themselves and target their audience more effectively, advertising revenues should increase relative to the size of the audience, everything else being equal. Because FM stations play more music than AM stations, Professor Liebowitz claims that a comparison of advertising revenues per audience person allows him to quantify the benefits of these efficiencies for FM radio stations.

[36] According to him, from 1987 to 2002, AM radio broadcasters converted audiences into advertising revenues better than FM radio broadcasters. This changed in 2003. In 1987, the efficacy of FM stations to generate revenues represented 65 per cent of that of AM stations. In 2003, this proportion was 101 per cent. Professor Liebowitz contends the difference of 37 per cent,<sup>10</sup> which represents the relative increase in advertising revenues of FM stations, is due to enhanced efficiencies.

[37] Professor Liebowitz acknowledges that these efficiencies cannot all be attributed to music, and agrees that part of it could be caused by the increasing size of FM stations relative to AM stations. Professor Liebowitz used regression analysis to estimate that the increased size of FM stations accounts for 7 per cent of the higher FM advertising rates. This leads to a net difference of 30 per cent between FM and AM stations’ advertising rates.

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<sup>10</sup> The actual number is 36. Professor Liebowitz might have obtained 37 because of rounding.



[38] Finally, after taking into account that FM stations revenues account for 77.5 per cent of the industry, Professor Liebowitz finds that the increase in radio revenues for the entire industry due to the more efficient use of music should be 23 per cent.

[39] Professor Liebowitz then argues that a common outcome for the parties when negotiating an important transaction is to split the benefits in half. This implies that 11.5 percentage points should be attributed to the rights owners. If one divides this equally between SOCAN and NRCC, this results in an increase of 5.75 percentage points in the SOCAN rate to account for higher efficiencies achieved by radio broadcasters through the use of music.

[40] The three adjustments proposed by Professor Liebowitz result in a rate between 9.87 and 10.26 per cent for SOCAN. During his testimony however, Professor Liebowitz further adjusted these rates to account for the possibility of double counting between the increase in the royalties paid to SOCAN as a result of higher revenues, and the higher share of revenues that he proposes. This resulted in a revision of the impact of the more efficient use of music from 5.75 to 4.94 percentage points, and a final rate between 9.06 and 9.45 per cent.

[41] In response to a question from the Board, Professor Liebowitz estimated that if the calculation commenced in 1987, the historical undervaluation would be 7.93 per cent (compared to an interval from 16.5 to 27.4 per cent if the start date was 1972). The final rate would then be 8.76 per cent once one adds the impact of the more efficient use of music.

[42] Professor Globerman criticized Professor Liebowitz's approach on two grounds. First, with respect to estimating the historical undervaluation of music, the assumption that payments made by the broadcasters for music would grow at a similar rate as program expenses for the period 1972 to 1989 is unfounded. The differences in supply and demand conditions would lead to growth differences in music and program expenses. No satisfactory explanation was provided by Professor Liebowitz as to why the two would be precisely affected in the same way by market conditions. In addition, Professor Liebowitz did not present any reliable evidence to support the claim that the growth in music expenses in the period 1993-2005 was a true reflection of changes in demand for music, rather than a correction for any past undervaluation.

[43] Second, with respect to the issue of the efficient use of music, Professor Liebowitz failed to provide evidence to document the emergence of better targeted audiences, which he used as the measure of the more efficient use of music. In Professor Globerman's opinion, Professor Liebowitz should have used net revenues rather than gross revenues, because the latter fail to account for the costs involved in attempting to target a particular audience. Professor Globerman also criticizes Professor Liebowitz for failing to consider variables other than the relative size of FM broadcasters that could also explain the higher advertising revenues per audience.

## **B. NRCC**

[44] NRCC uses a similar three-step approach and applies an increase of 20 per cent to the base rate of 3.2 per cent. This first step increase is meant to reflect the amount of historical undervaluation of music based on Mr. Davidson's report. NRCC then applies the 10.6 per cent increase to reflect the higher use of music, and finally applies a further correction of 1.1 percentage point to the base rate. This last correction is based on an estimate provided by Mr. Young that the radio premium attributable to the higher efficiencies in the use of music is 2.2 per cent of advertising revenues. NRCC claims that half of this amount should go to the rights owners.

[45] The successive application of these adjustments results in a SOCAN rate of 5.3 per cent. Although NRCC once again reiterates its disagreement with the respective apportionment of SOCAN and NRCC rights made by the Board (equal value), it "accepts" reluctantly to use it in this instance. Hence, after applying the repertoire correction, NRCC proposes that a tariff of 2.65 per cent applies to the use of its repertoire.

[46] In its final argument, NRCC appears to have changed its methodology and arrived at higher rates, partly relying on SOCAN's evidence. Starting from the 3.2 per cent rate, it first applied the correction of 10.6 per cent for higher music use, resulting in an adjusted rate of 3.54 per cent. It then applied the 27.4 per cent adjustment calculated by Professor Liebowitz to account for the historical undervaluation of music. It further added 1.01 percentage point (as opposed to 1.1 in its statement of case) to account for the more efficient use of music, resulting in a SOCAN rate of 5.52 per cent and a NRCC rate of 2.76 per cent.

[47] NRCC's initial correction of 20 per cent for the historical undervaluation of music is based on the report of Mr. Davidson. As noted above in paragraphs 21 and 22, his report compares programming expenses of radio stations as a proportion of total expenses and revenues with expenses on key inputs of comparable industries, also as a proportion of total expenses and revenues.

[48] Professor Globerman criticized Mr. Davidson for using the concept of "key input", a concept that he argues is economically meaningless. In his opinion, there is no basis to assert that similar proportions of revenues should be spent on specific key inputs in different industries. It is quite possible for a particular input in a production process to be absolutely essential, yet constitute a very small proportion of the total production costs.

[49] We agree with Professor Globerman's criticism that Mr. Davidson's report is not well-grounded in economics. In addition, NRCC appears to use Mr. Davidson's report to select, on a somewhat arbitrary basis, the 20 per cent increase in the rate to reflect historical undervaluation. Given the decision of the Court, this arbitrary approach is not one we will use to provide a justification for a rate increase.

[50] The second adjustment proposed by NRCC, for the increased efficiency in the use of music, is based on a report prepared by Mr. Young that states that music plays a role in the higher performance of radio advertising revenues compared to all mass media advertising revenues. Based on his experience and knowledge of the industry, Mr. Young estimates that 30 per cent of that higher performance can be attributed to the more efficient use of music.

[51] The CAB mainly argues that one person's sense of something is not a very good basis on which to rest a Board decision. It also claims that Mr. Young makes a number of mistakes and misstatements in evaluating the ability of radio to target specific audiences and the role of music in this ability to target. We agree with the CAB. We also agree with the CAB that we should rely as much as possible on sound economically based reports rather than anecdotal evidence. The methodology proposed by NRCC, although it attempts to specifically address the issues defined by the Board, does not provide a coherent and well-structured framework that we can rely on to determine the tariff rate. Thus, we can only reject NRCC's proposed methodology.

### **C. CAB**

[52] The CAB provided us with a broad economic approach to assess the global value of music, rather than simply criticizing SOCAN's and NRCC's proposals. This economic analysis was presented by Professor Globerman. In addition, the CAB called expert evidence to address specific issues dealing with the historical undervaluation of music and the increased efficiency in the use of music. In this respect, it relied on reports authored by Mr. Houle and by Bohn & Associates Media Inc.

[53] We have the same concerns with these two reports as with the NRCC's reports. They provide only partial, anecdotal information, do not offer a comprehensive analysis of the industry, and do not permit a precise enough evaluation of the importance and impact of each of the two factors. In our opinion, they are of little use, if any, in the determination of the tariff.

[54] Another concern we have with most of the CAB's evidence is that it sought to challenge findings of fact which are set out in paragraph 17 of these reasons and which were not open to debate. We did not re-visit those findings.

[55] The broader economic approach to the valuation of music is quite another matter. Professor Globerman does not use the three-step methodology but rather uses an approach that estimates the overall value of music for radio broadcasters. He assumes that the value of music is equal to the price that would be paid by radio broadcasters for music in a competitive market. In such a market, this price will tend to correspond to the incremental revenue derived from the music, or the value of marginal productivity of music. This in turn can be measured by multiplying the average productivity of music by the price paid by advertisers per hour of music audience.

[56] However, radio broadcasters are not in a position where they can increase their use of music at the margin and pay accordingly. The tariff under examination provides radio broadcasters with a blanket licence that, once acquired, allows them to use any amount of music. Strictly speaking, this makes the marginal productivity analysis impossible. To account for this, Professor Globerman argues<sup>11</sup> that music can be compared to an indivisible asset where the marginal productivity framework can be adjusted by focusing on the value of the music repertoire as opposed to the value of an individual song or a minute of song. In this approach, the total revenue associated with music is equal to the value of the marginal product of music (which is also the price of music for the broadcaster) multiplied by the total hours of music broadcast.

[57] Professor Globerman contends that the value of music to the broadcaster is the product of three main variables: the average productivity of music, the net revenue per hour of music audience and the hours of music broadcast.

[58] The average productivity of music is defined as the proportion of total number of hours of music broadcast that is listened to. It is calculated as the ratio of total music listening hours over the total hours of music broadcast. The net revenue per hour of music audience corresponds to the amount of net revenues an hour of listening to the music of a station generates. Professor Globerman calculates this as the difference between total revenues per hour of broadcast and total costs (net of royalties) per hour of music broadcast. The hours of music broadcast measures the total amount of time music is broadcast in a year. The product of the three variables results in the value of music to the broadcasters. According to Professor Globerman, this measurement of the value of music corresponds to the maximum amount that broadcasters would be ready to pay for the use of music. He defines this as the reservation price.

[59] Professor Globerman then selects a time period over which to measure both the historical undervaluation and the increased efficiency of music. Examining a number of the Board's decisions, he concluded that the historical undervaluation referred to by the Board in *Commercial Radio 2005* began in 1997.

[60] Using index values with 1996 as the reference year, Professor Globerman calculates that the average productivity of music has followed a somewhat declining path since 1996. Over the period 1997-2005, the average productivity of music is about 7 per cent lower than what it was in 1996. The net revenues per hour of music audience are estimated by Professor Globerman to be about 85 per cent higher on average over the period 1997-2005 relative to 1996. The total number of broadcast hours has increased on average by 7 per cent over the same period. The

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<sup>11</sup> See also the [decision of the Board dated March 16, 2007](#), certifying the *CSI Online Music Services Tariff, 2005-2007*, para. 46.

result is that the average increase in the reservation price of music estimated by Professor Globerman is about 85 per cent for the period 1997-2005.

[61] Using this methodology, the change in the reservation price must be compared with the change in total revenues of radio broadcasters. Since the SOCAN rate is expressed as a percentage of total revenues, royalties paid by radio broadcasters increase at the same pace as advertising revenues. Thus, to calculate the “reservation tariff rate”, Professor Globerman deducts from the increase in the reservation price the increase in radio broadcasters’ revenues. He then concludes that if all of the increase in the value of music for radio broadcasters were to be transferred to rights owners, the increase needed in the tariff rate for the period 1997-2005 would be 37 per cent. This is equivalent to a rate of 4.4 per cent relative to the previous 3.2 per cent rate.<sup>12</sup>

[62] Professor Globerman then argues that in a competitive market, the competitive price would not vary as much as the reservation price since both rights owners and users would share the increase in the value of the input. The share of the increase in value that would be reflected in the price of music (the “pass-through”) depends on the elasticity of supply in the market.

[63] Because it is impossible to identify the actual degree of pass-through that would occur in a competitive market, Professor Globerman identifies three scenarios about the impact of an increase in the reservation price on the market price. The scenarios examined have pass-throughs of 70, 50 and 40 per cent. The percentage increases in the rate arising from these different hypotheses are 29, 7 and 1 per cent, respectively. This translates into tariff rates of 4.1, 3.4 and 3.23 per cent respectively.<sup>13</sup>

[64] Prior to the hearing, the CAB discovered certain calculation errors in Professor Globerman’s initial report and filed a revised report. After correcting for the errors, the revised report concludes that the percentage increases in the rate arising from the three pass-through hypotheses are respectively 12, 2 and –3 per cent.

[65] The CAB argues that the probable result based on Professor Globerman’s report is that in a competitive market, music rights owners and radio broadcasters would share equally the increase in the value of music. If one uses a 50 per cent pass-through, the CAB proposes that a 2 per cent increase be applied to the rate of 3.2 per cent to account for all factors included in Professor Globerman’s methodology and thus, all of the factors considered by the Board in *Commercial Radio 2005*. Because an increase of 10.6 per cent has already been applied to account for the

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<sup>12</sup> 37 per cent of 3.2 per cent + 3.2 per cent = 4.4 per cent.

<sup>13</sup> 29 per cent, 7 per cent or 1 per cent of 3.2 per cent + 3.2 per cent = 4.1 per cent, 3.4 per cent or 3.23 per cent, respectively.

increase in music use, the CAB concludes that no further increase in the tariff is needed or justified.

[66] We requested that Professor Globerman recalculate the results he obtained by using both 1987 and 1993 as the base year. He could not get sufficient data to go back as far as 1987 but did provide calculations using 1991 and 1993 as base years. He opined during his testimony that 1993 should not be used as a base year since it is an anomalous year, being the only year where revenues declined. Instead he used an average of 1991-1993. He concluded that starting with either 1991, or a 1991-1993 average, and applying a pass-through of 50 per cent, no additional rate increase is required over the 10.6 per cent increase already awarded by the Board for higher music use.

[67] Professor Liebowitz criticizes Professor Globerman's approach for four reasons. First, he argues that Professor Globerman used an inappropriate time period to calculate the average increase that should be applied to the base rate of 3.2 per cent. Professor Liebowitz argues that 2003-2005, not 1997-2005, should be used, by reason that it more closely corresponds to the time period of the tariff. Second, he suggests that Professor Globerman's analysis is premised on a decrease in the use of music by radio broadcasters, contrary to the Board's finding. Hence, an upward correction must be made.

[68] Third, Professor Liebowitz notes that rather than using total revenues for music stations, as was done for total costs, Professor Globerman uses total revenues of all stations. Professor Liebowitz disagrees with this approach, which significantly underestimates the net revenues of music stations. Finally, Professor Liebowitz argues that it is wrong to assume a 50 per cent pass-through, and that the real number would be much higher in favour of rights owners.

[69] Using the Globerman model with the corrections he proposes, Professor Liebowitz concludes that the overall tariff should be 19.04 per cent. Assuming a pass-through of only 50 per cent, he still arrives at a rate of 9.69 per cent.

## **VI. ANALYSIS**

[70] We agree with Professor Globerman's criticism of Professor Liebowitz's approach. The approach used by Professor Liebowitz on the question of historical undervaluation was rejected by the Board in 1993. For the reasons set out in that decision, we agree that music and other programming expenses cannot be assumed to grow at the same rate in the absence of a thorough analysis of supply and demand conditions affecting the various markets demonstrating that that is the case. Such an analysis has not been provided here. More importantly, past evidence has

shown that individual programming inputs rarely grow in lockstep with one another, let alone with overall programming expenses.<sup>14</sup>

[71] We also reject Professor Liebowitz's analysis with respect to the more efficient use of music. We agree that differences in advertising revenues between FM and AM stations are partly a reflection of a more efficient use of music. However, the analysis provided by Professor Liebowitz is incomplete and in our opinion, cannot be relied upon.

[72] Moreover, assuming that the approach is a sound one, Professor Liebowitz stopped short of bringing it to its logical conclusion. He assigned all of the benefits to be paid to copyright holders to those who own the right to communicate and none to those who own the right to reproduce. Yet, *prima facie*, the efficiencies radio stations derive from the use of music are due in part to their ability to reproduce the works and recordings they use.

[73] The CAB argues that because the approach used by Professor Globerman focuses on the broad issue of the value of music, it encompasses all of the factors affecting it. This approach addresses the historical undervaluation of music, the increased efficiency in the use of music, as well as the increase in music use in a simultaneous, interrelated fashion. SOCAN argues that this approach is contrary to the Board's order setting the issues to be re-determined in that it does not allow the CAB to provide specific answers to each of the questions posed by the Board. We essentially agree with SOCAN's comments.

[74] However, we find that Professor Globerman's global approach is useful, economically relevant, comprehensive, and takes into account all the factors identified by the Board, as well as their interrelationships. In addition, as will be seen in paragraph 87, we are not convinced that the final rate increase would be very much different if we were to examine each of the issues independently as the Board did in 2005. Therefore, we will use Professor Globerman's approach with several modifications to determine the appropriate royalty rate.<sup>15</sup>

[75] The first modification is to change the base year on which to apply the methodology. Professor Globerman provided alternative scenarios which included base years of 1991, 1993, a 1991-1993 average and 1996, but did not provide analysis going back further. This does not reflect the actual situation. In *Commercial Radio 2005*, the Board clearly expressed doubts about

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<sup>14</sup> "In order to link music royalties and other programming expenses, one must assume that in a free market, the relative share of production inputs does not change significantly over time. That assumption is explicitly contradicted in Professor Liebowitz's own report. In the period he selected, total programming expenses grew by 494 per cent, but growth rates for individual inputs ranged from 55 per cent to 1112 per cent. The market for none of these is regulated.", 1993 C.B.R. 345, at 352 (footnotes omitted).

<sup>15</sup> In taking this global approach, we note the comment of the Court that the Board "[...] is not bound to quantify each of the components that justify an increase, but may choose simply to explain the reasoning supporting its quantification of the global royalty rate increase.", *CAB v. SOCAN*, *supra*, note 1, par. 19.

the undervaluation of the tariff going back to 1987. In 1987, the Copyright Appeal Board stated that the rate set in 1978 remained fair. Referring to the music use studies, the Appeal Board said: “Whatever the intrinsic interest of these studies, and it is not negligible, the Board failed to discover how the current situation differs from that of preceding years [...]”<sup>16</sup> Later in the decision, responding to the collective societies’ argument that music had greater value because it was the essential thing that allowed differentiation between broadcasters, the Appeal Board concluded that: “It is not readily apparent to the Board just what these factors have to do with assessing the societies’ repertoires and establishing the appropriate tariffs for the types of licences issued to the radio stations by the societies.”<sup>17</sup> In 1993, the Copyright Board stayed the course. In 2005, the Board articulated its decision to increase the rate around three factors. First, music has been undervalued for some time. Second, radio now uses more music than it did *in 1987*. Third, radio uses music more efficiently than it did *in 1987*. The 2005 panel went on to find that “differentiation”, which the 1987 panel had not used to assess the rate, was indeed relevant. Thus, it seems obvious to us that the appropriate base year is 1987, not 1991, 1993 or 1996.

[76] The change in the base year has a number of important implications. First, the financial data provided by Professor Globerman in respect of revenues and expenses of radio broadcasters came from the CRTC. We used the CRTC database to extend this data to 1987. In particular, for total expenses, we used the same definition as Professor Globerman, which consists of the sum of the total operating expenses, depreciation, interest and adjustments. Second, some of the data relating to hours of listening to, or using music, are missing. We are therefore forced to use data provided by Professor Globerman that starts in 1991 and to extend it back to 1987 by extrapolation. This statistical technique essentially extends the trend that can be observed in the existing data to years for which the data is unavailable.

[77] Two variables were extended to 1987 using extrapolation. For *Total hours spent listening*, the trend was calculated using the entire 1991-2005 period. For the *Share of total hours tuned to music formats*, the trend was first calculated using the entire period 1991-2005. However, Professor Globerman indicated during his testimony that the source for this variable was not the same between 1991-2000 and 2002-2005. In addition, the 2001 number did not exist and was created by interpolation. The resulting series displays a dramatic fall after 2000, as shown in Appendix B. Extrapolating the data by using a trend calculated over the full 1991-2005 period could result in the 2002-2005 period having an inappropriate influence on the 1987-1990 numbers. We thus examined an alternative scenario where only the 1991-2000 period was used to calculate the trend. The resulting rates are discussed later.

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<sup>16</sup> *Final Report to the Minister of Consumer and Corporate Affairs for the year 1987*, (1987) 15 C.P.R. (3d) 129, 137 (Cop. Bd.).

<sup>17</sup> *Ibid.*



[78] The second modification to determine the appropriate tariff increase relates to music use. In his calculation of the share of music in total broadcast hours, Professor Globerman assumed that the share of music in programming time was decreasing, at least between 1998 and 2005. This in and of itself ought to have convinced him that 1996 could not be the appropriate base year, since it is contrary to the Board's 2005 finding that music use has increased. This fact cannot be disputed. The appropriate base year is 1987, and as result, we have adjusted the model and provided for a uniform increase in music use between 1987 and 2005.

[79] The increase in music use (music as a proportion of programming time) appears to have no impact on the value of music because of the specific way the model has been constructed. This is because the number of hours of music broadcast is multiplied by the average productivity of music, which is measured as the ratio of listening hours to broadcasting hours. Broadcasting hours in turn are calculated using music use. An increase in music use will lead to a proportionate decrease in average productivity, leaving the product of the two unchanged.

[80] In reality, as Professor Globerman recognized,<sup>18</sup> the link between music use and the value of music to the broadcasters is more complex. When nothing else changes, an increase in music use will lead to higher prices for music, because of the competitive process between broadcasters. Simply put, higher demand leads to higher prices. But the increase in music use could lead to many other changes that would also impact the value of music, and hence the tariff. For instance, an increase in the use of music could lead to a change in the average productivity of music, or in the price that advertisers are willing to pay. The overall impact of these changes on the value of music remains undetermined. This may or may not raise practical issues. We remain convinced however that the data we use reflect the increase in music use since 1987 and that the model, as structured, yields a fair tariff.

[81] The third modification consists of using a different time period to calculate the value of the reservation price of music. Professor Globerman used an average of all years included in the period under study. For the reasons given by Professor Liebowitz, we prefer to use only the years 2003 to 2005, that are part of the tariff period under review.

[82] Fourth, Professor Globerman used all revenues of radio broadcasters in his calculations, but only the costs of music stations to calculate net revenues. Professor Liebowitz criticized the approach arguing that this would lead to a serious underestimation of net revenues. We agree with him and will use both revenues and costs of all radio stations in our analysis. In our opinion, this leads to a better approximation of net revenues of music stations.

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<sup>18</sup> Exhibit CAB-2, par. 33.

[83] Finally, we find a pass-through of 35 per cent in the following manner. First, we assume a general pass-through of 50 per cent as the CAB does. This implies that the increased value of music will be shared equally between radio stations and all music stakeholders, including rights owners. However, rights owners are not the only music stakeholders. Within a radio station, there are music-related expenses other than royalties, such as music director, software, research, etc. A study prepared for the initial hearing<sup>19</sup> to which Professor Globerman refers, suggests that royalties constitute almost 70 per cent of the total music-related expenditures. This means that only 70 per cent of the increased value of music attributable to music stakeholders should go to the rights owners. This effectively leads to a pass-through of 35 per cent.

[84] The tables in Appendix C show the results of the calculations we made using two scenarios. Table 1 shows the results using the 1991-2000 period to calculate the trend for the *Share of total hours tuned to music formats* whereas Table 2 shows the results using the 1991-2005 period.

[85] The two tables indicate that regardless of the scenario examined, net revenues per hour of music audience in 2005 were more than six times higher than in 1987 (column 4). Broadcast music hours were 32 per cent higher in 2005 than in 1987 (column 6), but this was offset by a 23 to 25 per cent lower average productivity of music (column 5).<sup>20</sup> The result is that the reservation price of music is more than six times higher in 2005 than it was in 1987 (column 7). On average, the reservation price for 2003-2005 is between 5.4 and 5.6 times higher than in 1987, depending on the scenario.

[86] If we take into account that broadcasters' revenues doubled since 1987, as well as the share of the benefits that we allocate to the rights owners (35 per cent), we obtain the tariff rate indexes shown in column 8. The average of these indexes for the years 2003 to 2005 is between 134 and 137, depending on the scenario. This means that the value of music for the rights owners, that is the tariff rate, should be increased by either 34 or 37 per cent relative to its 1987 value. Applying these increases to the 3.2 per cent rate, a rate of between 4.3 and 4.4 per cent is obtained.

[87] In *Commercial Radio 2005*, the Board found that the amount of historical undervaluation of music fell in an interval between 10 and 15 per cent, but chose to be careful in its approach and used 10 per cent as the appropriate rate increase. The Board also found that a range between 5 and 10 per cent would adequately reflect the rate increase necessary to reflect the increased efficiencies arising from the use of music, and used the mid-point of this interval, 7.5 per cent.

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<sup>19</sup> Exhibit NRCC-7, page 35, Table 14.

<sup>20</sup> Productivity of music is defined as the number of hours of music broadcast that are being listened to. This is to be distinguished from the efficiency of music, which is defined as the ability of music to generate advertising revenues. The former can thus decrease while the latter increases. Less, but more targeted ears might be listening to music broadcast.

This approach led to an effective rate of 4.2 per cent. Had the Board chosen to use the upper end of the intervals, it would have certified an effective rate of 4.5 per cent.

[88] Our conclusions, then, are very similar to those that were reached in *Commercial Radio 2005*. Applying Professor Globerman's model would justify increasing the effective rate to between 4.3 and 4.4 per cent. In our opinion, however, we should interpret these results cautiously. The quality of a model depends in large part on the quality of the data it uses. The results that models such as this one generate are thus often more indicative of a general trend as opposed to a very specific number (though Professor Globerman himself used specific data points instead of trends). What is clear is that the rate established in 2005 is consistent with the general trend generated by the Globerman model, and is as appropriate now as it was then.

[89] A validation exercise that we performed confirms the appropriateness of this careful approach. The CRTC financial data on revenues and expenses of commercial radio stations are regularly revised, as the Commission receives additional or revised information. We applied the revised Globerman model using the most up-to-date CRTC data. These data show very similar revenues, but slightly higher expenses. As can be seen from Table 3 in Appendix C, the result is that, using these revised data, the appropriate effective rate should increase by 32 per cent, to 4.2 per cent.

## VII. RATES CERTIFIED

[90] We conclude that, relative to 1987, the SOCAN rate must increase by 32 per cent. Since the 1987 Tariff rate was set at 3.2 per cent, this adjustment brings the effective SOCAN rate to 4.2 per cent.<sup>21</sup>

[91] In *Commercial Radio 2005*, the Board concluded that stations with no more than \$1.25 million of annual advertising revenues should continue to pay at a rate of 3.2 per cent. For the same reasons, we also certify this rate for smaller stations.

[92] The Board also concluded that in order to avoid the fact that larger stations benefit from measures that are not intended for them, it had to increase the rate applying to revenues of more than \$1.25 million. The Board's reasoning was that starting from an effective rate of 4.2 per cent, an increase of 0.2 percentage point had to be applied, leading to a rate of 4.4 per cent for revenues above the first \$1.25 million. We apply the same reasoning here.

[93] The Board decided in *Commercial Radio 2005* to set the low-use rate at 1.5 per cent of revenues. This was a smaller increase than for the main rate, because factors such as increased use of music and more efficient music use were not relevant to low-use music stations. The

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<sup>21</sup> 32 per cent of 3.2 per cent + 3.2 per cent = 4.224 per cent.

increase in the rate only took into account the historical undervaluation of music. Although the methodology we use in this decision does not allow for such a detailed decomposition of the individual factors, we believe that the rate of 1.5 per cent is still fair, and adequately represents the value of music, as corrected for the historical undervaluation.

[94] NRCC's rates are set in the same manner as they were in *Commercial Radio 2005*. Subsection 68.1(1) of the *Act* sets at \$100 per year the amount broadcasters pay on the first \$1.25 million of advertising revenues. The rate we set for the remainder of the revenues is 2.1 per cent, which is half the SOCAN effective rate. Similarly, the NRCC rate for low-use stations is set at 0.75 per cent.

### **VIII. TOTAL ROYALTIES**

[95] The rates we certify are the same as the rates certified in *Commercial Radio 2005*. The royalties generated in 2005 by this tariff are thus estimated to about \$48.5 million for SOCAN and \$15.9 million for NRCC. For reasons set out in *Commercial Radio 2005*,<sup>22</sup> we conclude again that the broadcasters are able to pay this new tariff.

### **IX. TRANSITIONAL PROVISIONS**

[96] The tariff we certify applies as of January 1, 2003. In *Commercial Radio 2005*, the Board allowed radio stations to pay amounts owed for past periods as a result of the increase in the tariff free of interest over a two-year period. When the Federal Court of Appeal referred the matter back to the Board, the tariff certified in *Commercial Radio 2005* ceased to have effect. The interim tariff the Board certified on November 24, 2006<sup>23</sup> did three things. It set the same rates as the tariff certified in *Commercial Radio 2005*. It allowed the collective societies to keep the "catch-up" payments made to date. It interrupted those payments pending certification of a new, final tariff. Since the rates we now certify are the same as in 2005, we must now deal with these remaining "catch-up" payments.

[97] Counsel to the CAB suggested that any additional payments be phased over a two-year period. SOCAN and NRCC stated that the proposition "would not be unreasonable". We disagree, for three reasons. First, the tariff has no impact on smaller stations; they continue to pay at the same rate as in 2002. Second, since the tariff we certify is the same as the interim tariff, the "catch-up" payments involve, mostly if not only, amounts owed for the three years ending in December 2005. Close to half of those amounts have already been paid. The remaining amounts are significantly smaller than in the Fall of 2005. Third, radio station operators are

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<sup>22</sup> *Supra*, note 2, p. 38 (Section E. The Industry's Ability to Pay).

<sup>23</sup> [Decision of the Board dated November 24, 2006](#) certifying the *NRCC-SOCAN Interim Commercial Radio Tariff, 2003-2007*.

astute and prudent business persons. In situations such as this one, prudent business persons set reserve funds aside. In our view, radio stations are more than able to pay what they owe immediately. Nevertheless, given the collectives' consent to a staged payment of royalties owed for past periods, we will allow radio stations one year to repay those amounts.

A handwritten signature in black ink that reads "Claude Majeau". The script is cursive and fluid, with the first letter of each word being capitalized and prominent.

Claude Majeau  
Secretary General

## APPENDIX A

November 28, 2006

### ORDER OF THE BOARD

On October 19, 2006, the Federal Court of Appeal remitted the *SOCAN-NRCC Commercial Radio Tariff, 2003-2007* to the Board “to re-determine the issues in respect of which the reasons have been found to be inadequate. On these issues of quantification, the Board may permit the parties to supplement the existing record with new evidence and submissions.” The judgment of the Court also provides further instructions as to the composition of the panel that will rehear the matter.

In compliance with the Court’s directions, the matter will proceed as follows.

#### **Issues that will be the subject of the re-determination**

The only issues that will be the subject of the re-determination are:

(A) the amount by which the tariff rates should be increased to account for the important historical undervaluation of music; and

(B) the amount of the efficiencies achieved through the use of music, the share of these efficiencies that should go to those who hold rights in music and the amount by which the tariff rates should be increased as a result.

There will be no re-determination of any other issue addressed in the Board’s decision.

In addressing issue A, parties shall address the following questions:

(A.1) How should the Board determine the increase in the tariff rates on account of the historical undervaluation of music?

(A.2) What should that increase be, keeping in mind that the earlier panel stated that the historical undervaluation of music is “important”?

In addressing issue B, parties shall address the following questions:

(B.1) How should the Board measure the increased efficiency in the use of music?

(B.2) How should the Board determine the share of this increased efficiency that should go to SOCAN and NRCC?

(B.3) How should the Board determine the resulting increase in the tariff rates?

When suggesting the amount of an increase, parties may provide a specific figure or a range. When providing a specific figure, parties should specify the methodology or valuation model that the Board should use to link, for example, the increase efficiency to the specific figure provided.

When providing a range, parties should (i) specify how the Board should select a figure within the range (by identifying factors that should tend to select a higher or lower figure within the range or otherwise), and (ii) propose what the selected figure should be. In addition, parties should indicate which figure within a range the Board should select when there are no factors that would tend to favour selecting a higher or lower figure within the range.

### **Process**

There will be no interrogatories.

Parties may rely on the record that was before the Board when it issued the decision that was reviewed (the “earlier record”), on additional expert evidence and on written submissions.

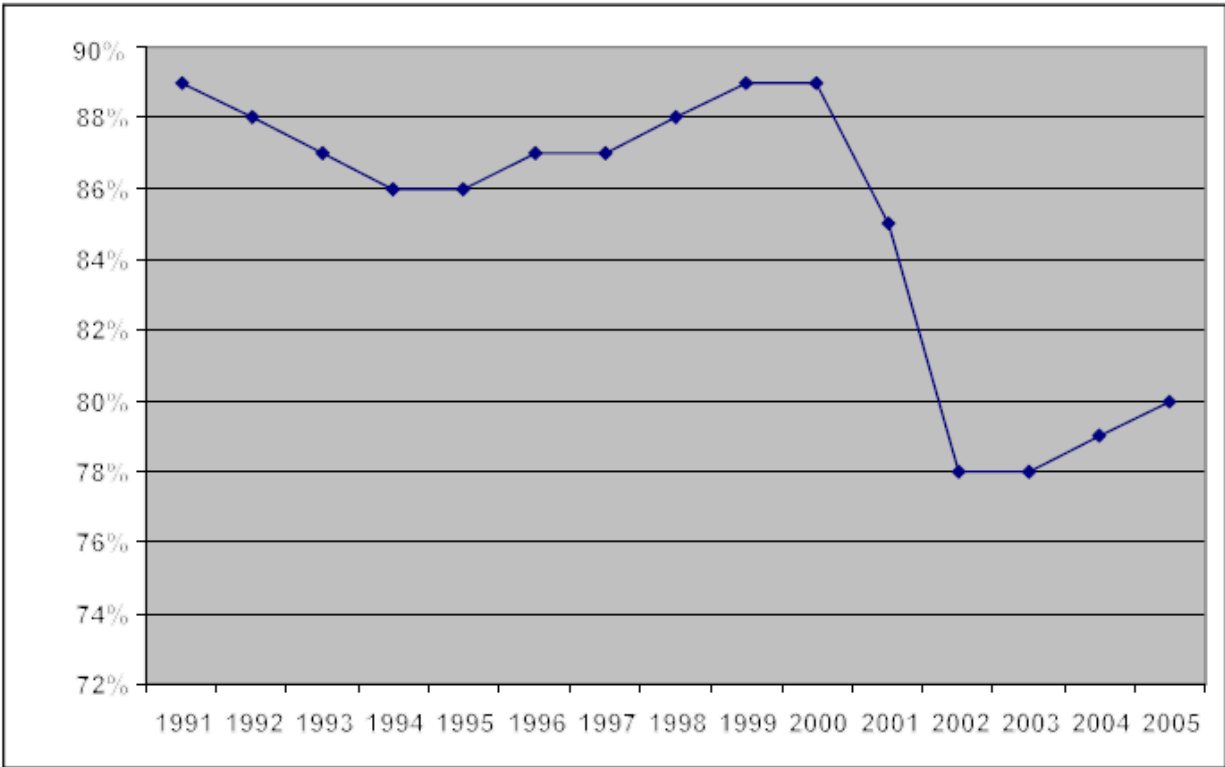
**No later than Monday, April 9, 2007**, parties shall file their expert evidence. Parties shall file at the same time a statement that sets out in detail how, why and at how much the Board should set the increases mentioned above, unless the expert evidence already does so. The statement will identify each part (i.e. specific exhibit numbers and pages (or paragraphs) within the exhibit) of the earlier record on which a party intends to rely; failing to do so may preclude a party from relying on any part of the earlier record.

**No later than Monday, June 4, 2007**, parties shall file their expert evidence and argument in response to the evidence and argument of other participants.

The hearing into this matter shall be held in June 2007, at a date to be determined later.

Claude Majeau  
Secretary General  
Copyright Board of Canada

**APPENDIX B / ANNEXE B**  
**SHARE OF TOTAL HOURS TUNED TO MUSIC FORMATS**  
**PART DU NOMBRE D’HEURES D’ÉCOUTE DE FORMULES MUSICALES**



**APPENDIX C / ANNEXE C**  
**SUMMARY OF CALCULATIONS OF TARIFF 1.A RATE INCREASE**  
**RÉSUMÉ DES CALCULS DE L'AUGMENTATION DU TAUX DU TARIF 1.A**

**Table 1: Results using the 1991-2000 period to calculate the trend for the *Share of total hours tuned to music formats***

**Tableau 1 : Calcul utilisant la période 1991-2000 pour la tendance de la *part du nombre d'heures de formules musicales***

Year/A année	Revenue s per Hour of Music Audience	Costs per Hour of Music Audience (Net of Royalties)	Net Revenues per Hour of Music Audience Recettes nettes par heure de musique	Net Revenues per Hour of Music Audience (Index, 1987=100) Recettes nettes par heure d'écoute de musique	Average Productivit y of Music (Index, 1987=100) Productivit é moyenne de la musique (indice, 1987=100)	Hours of Broadcast Music (Index, 1987=100) Nombre d'heures de diffusion de musique (indice, 1987=100)	Reservatio n Price of Music (Index, 1987=100) Prix de reserve de la musique (indice, 1987=100)	Tariff Rate (Index, 1987=100) Taux tarifaire (indice, 1987=100)
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	)							
	(indice, 1987=100)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1987	1.40	1.31	0.09	100	100	100	100	100
1988	1.53	1.43	0.10	110	97	103	110	95
1989	1.61	1.52	0.09	101	95	107	103	87
1990	1.62	1.62	0.01	9	95	107	9	58
1991	1.56	1.63	-0.07	-74	95	109	-76	34
1992	1.56	1.60	-0.04	-40	95	109	-41	44
1993	1.45	1.51	-0.06	-62	98	109	-66	38
1994	1.43	1.44	-0.01	-14	100	110	-15	52
1995	1.47	1.43	0.04	45	99	110	49	70
1996	1.58	1.52	0.06	64	99	108	68	72
1997	1.68	1.54	0.14	155	99	109	167	94
1998	1.70	1.51	0.20	213	105	111	247	106
1999	1.79	1.57	0.21	233	104	112	270	108
2000	1.92	1.65	0.27	295	99	114	334	117
2001	2.01	1.76	0.25	271	90	120	294	104
2002	2.04	1.67	0.37	402	82	124	405	124
2003	2.25	1.77	0.47	514	79	125	508	134
2004	2.28	1.80	0.47	515	78	130	524	133
2005	2.51	1.92	0.58	635	77	132	646	144
2003-2005 average e moyen ne							559	137

Table 2: Results using the 1991-2005 period to calculate the trend for the *Share of total hours tuned to music formats*

Tableau 2 : Calcul utilisant la période 1991-2005 pour la tendance de la *part du nombre d'heures d'écoute de formules musicales*

Year/ Année	Revenue s per Hour of Music Audience	Costs per Hour of Music Audience (Net of Royalties)	Net Revenues per Hour of Music Audience (Index, 1987=100)	Net Revenues per Hour of Music Audience (Index, 1987=100)	Average Productivity of Music (Index, 1987=100)	Hours of Broadcast Music (Index, 1987=100)	Reservatio n Price of Music (Index, 1987=100)	Tariff Rate (Index, 1987=100)
	Recettes par heure d'écoute de musique	Coûts par heure d'écoute de musique redevances	Recettes nettes par heure de musique	Recettes nettes par heure d'écoute de musique	Productivité moyenne de la musique (indice, 1987=100)	Nombre d'heures de diffusion de musique (indice, 1987=100)	Prix de réserve de la musique (indice, 1987=100)	Taux tarifaire (indice, 1987=100)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	(indice, 1987=100)							
<b>1987</b>	1.40	1.31	0.09	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>1988</b>	1.53	1.43	0.10	<b>110</b>	<b>97</b>	<b>103</b>	<b>110</b>	<b>94</b>
<b>1989</b>	1.61	1.52	0.09	<b>101</b>	<b>93</b>	<b>107</b>	<b>101</b>	<b>86</b>
<b>1990</b>	1.62	1.62	0.01	<b>9</b>	<b>93</b>	<b>107</b>	<b>9</b>	<b>58</b>
<b>1991</b>	1.56	1.63	-0.07	<b>-74</b>	<b>91</b>	<b>109</b>	<b>-73</b>	<b>35</b>
<b>1992</b>	1.56	1.60	-0.04	<b>-40</b>	<b>92</b>	<b>109</b>	<b>-40</b>	<b>45</b>
<b>1993</b>	1.45	1.51	-0.06	<b>-62</b>	<b>94</b>	<b>109</b>	<b>-64</b>	<b>39</b>
<b>1994</b>	1.43	1.44	-0.01	<b>-14</b>	<b>96</b>	<b>110</b>	<b>-15</b>	<b>52</b>
<b>1995</b>	1.47	1.43	0.04	<b>45</b>	<b>96</b>	<b>110</b>	<b>48</b>	<b>69</b>
<b>1996</b>	1.58	1.52	0.06	<b>64</b>	<b>96</b>	<b>108</b>	<b>66</b>	<b>72</b>
<b>1997</b>	1.68	1.54	0.14	<b>155</b>	<b>96</b>	<b>109</b>	<b>161</b>	<b>92</b>
<b>1998</b>	1.70	1.51	0.20	<b>213</b>	<b>101</b>	<b>111</b>	<b>239</b>	<b>104</b>
<b>1999</b>	1.79	1.57	0.21	<b>233</b>	<b>100</b>	<b>112</b>	<b>261</b>	<b>106</b>
<b>2000</b>	1.92	1.65	0.27	<b>295</b>	<b>96</b>	<b>114</b>	<b>323</b>	<b>115</b>
<b>2001</b>	2.01	1.76	0.25	<b>271</b>	<b>87</b>	<b>120</b>	<b>284</b>	<b>101</b>
<b>2002</b>	2.04	1.67	0.37	<b>402</b>	<b>79</b>	<b>124</b>	<b>391</b>	<b>121</b>
<b>2003</b>	2.25	1.77	0.47	<b>514</b>	<b>76</b>	<b>125</b>	<b>491</b>	<b>131</b>
<b>2004</b>	2.28	1.80	0.47	<b>515</b>	<b>75</b>	<b>130</b>	<b>506</b>	<b>130</b>
<b>2005</b>	2.51	1.92	0.58	<b>635</b>	<b>75</b>	<b>132</b>	<b>624</b>	<b>140</b>
<b>2003-2005 average</b>							<b>540</b>	<b>134</b>
<b>2003-2005 average</b>								

**Table 3: Results using the 1991-2005 period to calculate the trend for the *Share of total hours tuned to music formats*, and the CRTC's revisions for revenues and expenses**

**Tableau 3 : Calcul utilisant la période 1991-2005 pour la tendance de la *part du nombre d'heures d'écoute de formules musicales* et les données révisées du CRTC pour les recettes et les dépenses**

Year/ Année	Revenue s per Hour of Music Audienc e	Costs per Hour of Music Audience (Net of Royalties)	Net Revenues per Hour of Music Audience Recettes nettes par heure d'écoute de	Net Revenues per Hour of Music Audience (Index, 1987=100) Recettes nettes par heure	Average Productivit y of Music (Index, 1987=100) Productivité moyenne de la musique (indice, 1987=100)	Hours of Broadcast Music (Index, 1987=100) Nombre d'heures de diffusion de musique (indice, 1987=100)	Reservatio n Price of Music (Index, 1987=100) Prix de réserve de la musique (indice, 1987=100)	Tariff Rate (Index, 1987=100) Taux tarifaire (indice, 1987=100)
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	de (nets de musique redevances )		musique	d'écoute de musique (indice, 1987=100)	1987=100)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>1987</b>	1.40	1.31	0.09	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>1988</b>	1.53	1.43	0.10	<b>110</b>	<b>97</b>	<b>103</b>	<b>110</b>	<b>94</b>
<b>1989</b>	1.61	1.52	0.09	<b>101</b>	<b>93</b>	<b>107</b>	<b>101</b>	<b>86</b>
<b>1990</b>	1.62	1.62	0.01	<b>9</b>	<b>93</b>	<b>107</b>	<b>9</b>	<b>58</b>
<b>1991</b>	1.56	1.63	-0.06	<b>-70</b>	<b>91</b>	<b>109</b>	<b>-69</b>	<b>36</b>
<b>1992</b>	1.56	1.60	-0.03	<b>-35</b>	<b>92</b>	<b>109</b>	<b>-35</b>	<b>46</b>
<b>1993</b>	1.45	1.50	-0.05	<b>-57</b>	<b>94</b>	<b>109</b>	<b>-58</b>	<b>40</b>
<b>1994</b>	1.43	1.44	-0.01	<b>-10</b>	<b>96</b>	<b>110</b>	<b>-10</b>	<b>54</b>
<b>1995</b>	1.47	1.43	0.04	<b>48</b>	<b>96</b>	<b>110</b>	<b>51</b>	<b>70</b>
<b>1996</b>	1.58	1.51	0.06	<b>70</b>	<b>96</b>	<b>108</b>	<b>72</b>	<b>74</b>
<b>1997</b>	1.68	1.54	0.15	<b>159</b>	<b>96</b>	<b>109</b>	<b>165</b>	<b>93</b>
<b>1998</b>	1.70	1.51	0.19	<b>211</b>	<b>101</b>	<b>111</b>	<b>238</b>	<b>104</b>
<b>1999</b>	1.79	1.57	0.22	<b>237</b>	<b>100</b>	<b>112</b>	<b>266</b>	<b>107</b>
<b>2000</b>	1.93	1.66	0.27	<b>296</b>	<b>96</b>	<b>114</b>	<b>324</b>	<b>115</b>
<b>2001</b>	2.01	1.75	0.25	<b>276</b>	<b>87</b>	<b>120</b>	<b>289</b>	<b>103</b>
<b>2002</b>	2.04	1.67	0.37	<b>401</b>	<b>79</b>	<b>124</b>	<b>391</b>	<b>121</b>
<b>2003</b>	2.25	1.77	0.47	<b>513</b>	<b>76</b>	<b>125</b>	<b>490</b>	<b>131</b>
<b>2004</b>	2.28	1.82	0.46	<b>503</b>	<b>75</b>	<b>130</b>	<b>494</b>	<b>128</b>
<b>2005</b>	2.51	1.95	0.57	<b>617</b>	<b>75</b>	<b>132</b>	<b>606</b>	<b>136</b>
<b>2003-2005 average moyenne</b>							<b>530</b>	<b>132</b>