

# **Canadian Transportation Agency**

## **Industry Regulation and Determinations Branch**

Request for Proposals  
(Terms of Reference)

for

A consultant to review methodologies for determining the cost of capital rates for federally regulated railways in Canada, and to compare them to the Agency's current methodology.

Request for Proposals No. CTA0000XXX

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## 1. Context

The Canadian Transportation Agency (Agency) is an independent quasi-judicial tribunal that, amongst other matters, determines company specific cost of capital calculations to be used in various Canadian rail traffic regulatory programs, for the Canadian National Railway Company (CN), the Canadian Pacific Railway Company (CP) and other federally regulated railway companies.

The notion of “cost of capital” has many different interpretations, depending on the context in which this term might be used. It is important to clarify at the outset what this concept is for the purpose of this exercise. The Agency’s focus is on establishing cost of capital rates for regulatory purposes. Accordingly, the cost of capital is the total return on net investment that is required by shareholders and debt holders so that debt costs can be paid and equity investors can be provided with an adequate return on investment consistent with the risks assumed for the period under consideration. This return is to provide not only a return to its shareholders (through retained earnings, dividends, and capital appreciation of shares), but also to pay financing costs such as interest expense on the company’s debt instruments.

The Agency makes annual determinations of the cost of capital rates to be used in the economic regulation of CN and CP for a number of regulatory purposes. One of the major uses relates to the maximum revenue entitlement for the movement of western grain by rail that is set out in the CTA. This regime requires determinations regarding the appropriate cost of capital rates to be used in the composite price index calculation under subsection 151(1) of the CTA. The Agency also determines cost of capital rates to be used for the development of interswitching costs and rates as well as for other regulatory purposes. These include, amongst other things, domestic rail/shipper service complaints, the provision of technical costing assistance to an arbitrator involved in the final offer arbitration of rates between a shipper and a carrier, or the determination of rates to be paid by a rail passenger service to its host railway.

At present, the Agency determines cost of capital rates in accordance with the principles established in the Agency’s Decision No. 52-R-2004 issued on February 2, 2004 in the matter of issues related to the Agency’s determination of cost of common equity rates for regulated railway companies (2004 Decision), Decision No. 125-R-1997 in the matter of issues pertaining to the Agency’s cost of capital methodology, dated March 6, 1997 (1997 Decision) and the July 31, 1985 Decision on the Cost of Capital Methodology (1985 Decision). Each of these decisions was the result of a consultative process that followed a major change in the regulatory environment for Canadian railways, (for example: 1985 - the introduction of the *Western Grain Transportation Act*; 1997 - the repeal of the *Western Grain Transportation Act*; and, 2004 - the introduction of the Revenue Cap for Western Grain).

A brief overview of the current methodology resulting from the application of the principles laid out in the above decisions is provided in Appendix C of the current Terms of Reference.

While there have not been any major changes in the regulatory environment since the last consultation, it has now been more than five years since the current approach has been reviewed in-depth. Furthermore, changes in the world’s economic and financial environment have raised

questions about the continued reliability of existing financial models. In this context, the Agency finds it timely to undertake a review of its existing principles and models to ensure that they continue providing the most reasonable, reliable and pragmatic approach possible for determining the cost of capital for regulated railways. The Agency also notes that it is a good practice for regulatory bodies to periodically undertake such substantial review of how best to exercise its discretionary powers under the law. The Agency will continue to use its current methodology during the period of this review process and the consideration by the Agency of the findings of this review of alternative methodologies.

The Agency's determination of a cost of capital rate is segmented into four distinct steps: determination of net rail investment; determination of capital structure; determination of capital structure cost rates, which includes the cost of common equity rate; and, calculation of the weighted average cost of capital rate. While all these elements are to be included in this study, in Appendix C the Agency has noted some recent as well as recurring issues related to certain aspects of determining capital structure and capital structure cost rates that should be considered.

Many regulatory bodies must establish an appropriate cost of capital for regulated industries. While the context in which these bodies exercise this responsibility differs, they nevertheless must address similar methodological and pragmatic issues. The Agency believes that the experience and viewpoints of experts from other regulatory bodies would enrich this review.

As a regulatory body, the Agency affects the interests of a broad range of stakeholders. In undertaking this review, it is thus also mindful of the need to provide opportunities for affected stakeholders to express their concerns and viewpoints. To that end, the Agency has consulted with shippers, railways and other interested parties during the development of these Terms of Reference, and will consult with them again regarding the findings of the Final Report when it has been submitted by the consultant, prior to any decision being rendered by the Agency with respect to its cost of capital methodology.

The Final Report of the consultant, the comments from interested parties and regulatory experts, and the consultant's subsequent response to these comments will provide the Agency with a body of information from which it can make a determination of the most appropriate cost of capital methodology on a go-forward basis. This might result in the Agency re-confirming the current methodology, making adjustments to the current approach, or adopting a new approach. It is the intention of the Agency that this determination on the appropriate methodology for establishing the cost of capital not be reviewed for at least five years, unless extraordinary circumstances warrant further review.

## **2. Objective**

The Agency is seeking a consultant to identify and examine a variety of existing cost of capital methodologies, which could potentially be used by the Agency for determining cost of capital rates for its regulatory purposes. The examination should include a comparison of the methodologies and models, including an analysis of their strengths and weaknesses, as well as an assessment of the potential impact of such models if they were to be implemented by the Agency.

In undertaking the work, the methodologies and models are to be assessed on the basis of the following evaluation criteria:

Reasonable – A reasonable methodology should:

- Be consistent with the objective being pursued — namely, to provide regulated railways with a fair and reasonable return, thereby providing railways with continued incentives to invest and protecting shippers from abusive rates. A fair and reasonable return generates a return on investment that allows financing costs to be paid and equity investors to receive an adequate return on investment consistent with the risks assumed;
- Be transparent by relying as much as possible on a formula/structured methodology and by minimizing the use of judgmental factors.

Reliable – A reliable methodology should:

- Be based on auditable information;
- Produce consistent results for like conditions;
- Be robust, and reasonably sensitive, to a broad range of economic/financial conditions.

Pragmatic – A pragmatic methodology should:

- Be based on readily available information or information that can be obtained with minimal costs;
- Be simple to implement for both the regulator and regulated parties;
- Recognize the regulatory context and legislative requirements in which the Agency is exercising its responsibilities (timeframe for issuing decisions, nature of regulated parties, context in which the cost of capital is being applied).

It is understood that alternative methodologies and models may satisfy these criteria to varying degrees.

### **3. Scope of Work**

Without limiting the overall objective, the scope of work includes the following elements:

#### **Phase 1**

- A) A review of the existing Agency approach for determining the cost of capital for regulated railways, including the key decisions in this respect and the key contentious issues that have been raised in this context and the way they have been handled. For each of the identified key contentious issues, an examination of different approaches that could be taken for addressing the matter.
- B) An examination of the approaches adopted by up to five regulatory bodies for establishing cost of capital rates. Amongst the five, there should be at least two regulatory bodies responsible for regulating rail transportation on a national level, and at least two other Canadian regulators, either federal or provincial. This study should include an examination of the challenges/issues they have encountered pertaining to these

methodologies, as well as an explanation of the rationale for the adoption of their current methodology.

**Note:** Key to this examination will be consultation with experts from the selected regulatory authorities, who, during the course of the study, should be given the opportunity to provide input to the consultant in advance of the final report. Liaison with these parties will be ensured and coordinated by Agency staff. It will be up to the consultant to integrate these various perspectives, incorporate their comments into the final report, and provide a professional opinion that includes the rationale for accepting or rejecting (in whole or in part) their comments on the key issues. To allow these regulatory experts to express their views freely, independent of the organization to which they belong, their comments should not be attributable. These regulatory experts, as well as interested stakeholders, will be given the opportunity to comment on the final report. The selected consultant will be provided with these comments and will be given the opportunity to reply. The final report and all comments and replies will be presented to an Agency panel for deliberation.

- C) A review of the recent research undertaken by other regulatory bodies on this question and of the key conclusions they have reached.
- D) The identification of the different conceptual approaches for establishing regulatory cost of capital and a preliminary screening of these approaches leading to an in-depth assessment of five of them. Two of the retained options shall include the Agency's existing approach and a modified version of that approach.

## **Phase 2**

- E) An in-depth assessment of these five approaches, evaluated on the basis of the identified evaluation criteria and including an assessment of the impacts of implementing each approach. This should take into account the perspectives and experience gleaned from the experts from other regulatory authorities.

## Agency's Cost of Capital Methodology

### 1. Overview of the Agency's Cost of Capital Methodology

The Agency's determinations of cost of capital rate are based on confidential submissions made by the railways. The cost of capital rate determination for the transportation of western grain for the upcoming crop year establishes most of the variables, (other than the risk-free rate) that the Agency will use in the other cost of capital determinations it makes throughout the year for that railway. The railways' submissions for the western grain determination are based on their most recently completed fiscal year. The Agency's analysis of this data takes place before the end of the following financial quarter, with the decision issuing shortly thereafter. The determinations are segmented into four distinct steps:

- a) Determination of net rail investment;
- b) Determination of capital structure;
- c) Determination of capital structure cost rates, which includes the cost of common equity rate; and,
- d) Calculation of the cost of capital rate.

**Net Rail Investment:** The net rail investment is the gross book value of all railway assets less accumulated depreciation. This first component defines the portion of the regulated railway that is providing railway transportation services and is under Agency jurisdiction for this exercise. The net rail investment includes an amount for working capital. CN and CP make annual submissions regarding net rail investment, based on book values from their most recent financial statements, with certain approved adjustments. These submissions are audited and approved by the Agency.

**Capital Structure:** The capital structure refers to the combination of the various types of capital funds used to finance the net rail investment. In broad terms, funding can be achieved through borrowing or the issuance of debt, through deferred taxes, and through shareholders' equity. Each year, CN and CP submit their actual capital structures, based on book values from their most recent financial statements, with certain approved adjustments. These submissions are audited and approved by the Agency.

**Capital Structure Cost Rates:** The cost of debt is taken as the actual cost of the debt, i.e. the interest paid to financial institutions for loans made to the railways, as depicted in the most recent financial statements of the railways and submitted to the Agency. These submissions are audited and approved by the Agency.

Deferred taxes are allocated a zero percent cost rate according to the 1985 Decision. The rationale for this treatment of deferred taxes is that they represent a "free" or "no-cost" source of funds to the railways.

The railways also make submissions proposing a cost rate for common equity. The Agency assesses the submissions, makes any changes necessary to adhere to its approved methodology

and calculates the cost of shareholders' equity using three financial models (the Capital Asset Pricing Model (CAPM) and/or the Discounted Cash Flow (DCF) Model and/or the Equity Risk Premium model). The Agency then assesses which model or combination thereof better reflects the state of capital markets in that year. Since the 1985 Decision, the Agency has consistently favoured giving primary weight to the CAPM. The reason for the CAPM being chosen is that it is widely known and accepted in regulatory and financial practice and allows for a transparent quantifiable projection, incorporating reconcilable data from the market as a whole, as well as a company specific factor (beta), to arrive at a cost of common equity forecast that is not subject to the degree of conjecture required to estimate an expected growth rate or risk premium, as is the case with the DCF and EPR methods respectively.

An income tax allowance, based on the railway's submitted federal and provincial income tax rate, is added to the cost of equity to establish the before tax value of the shareholders' return. No income tax allowance is granted on interest as it is income tax deductible.

The appropriateness of whether any sort of risk adjustment associated with the transportation of grain should be included in the cost of equity is also assessed each year. Prior to the 1997 Decision, the Agency applied a grain risk adjustment of -1% to the cost of common equity. Subsequent to the 1997 Decision, no grain risk adjustment has been applied, however the applicability of such an adjustment continues to be monitored and determined annually.

**Weighted Average Cost of Capital Rate:** The proportion of each type of funding in the capital structure is used to weight each cost rate and the sum becomes the cost of capital rate expressed in percentage terms. When this rate is applied to the net book value of the assets being costed, it results in the cost of capital in dollar terms.

## **2. Current and Recurring Issues raised with regard to the Agency's Cost of Capital Methodology**

The following briefly outlines certain current and recurring issues raised by the railways pertaining to the Agency's cost of capital methodology, specifically with regard to the determination of capital structure and capital structure cost rates. The Agency's responses to these issues can be found in its annual determinations pertaining to the crop year cost of capital rate for the transportation of western grain.

**Capital Structure:** Agency uses an actual book-based capital structure for the railways, as opposed to a deemed capital structure

- Market value vs book value – Railways favour market value capital structure.
- Deferred taxes given weight in capital structure and assigned a zero cost rate – Railways favour excluding deferred taxes from capital structure.
- Non-rail debt – what is allowable non-rail debt?– One railway submits that certain types of debt should be classified as non-rail debt and included in equity.

### **Capital Structure Cost Rates:**

- Cost of debt - Based on historic cost of debt reflected in most recent fiscal year – One railway, in current climate of rising financing costs, favours some method of projecting future debt costs. This was not an issue when financing cost rates were declining year over year.
- Cost of equity – Calculated by three methods (CAPM, DCF & ERP), with Agency giving primary weight to CAPM – One railway favours use of the average of CAPM & DCF.
- Market risk premium component of CAPM – Agency uses 45 year time period and Canadian data. Railways object to the time period and data source, favouring a longer time period and the use of American data.
- Appropriateness of a grain risk adjustment assessed annually, with Agency consistently determining that none should apply. Railways favour including a grain risk premium.