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RAIL ACCESS PRICING GUIDELINE V.2.0

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PREFACE

Under the *Rail Corporations Act 1996* (**RCA**), the Commission has a number of regulatory functions in the Victorian Rail Access Regime (**VRAR**). These include:

- the obligation to establish and maintain Commission instruments, these consist of a detailed set of rules for the regulation of a number of processes and activities (account keeping, negotiation guidelines, ring-fencing, capacity use and network management)
- the function of approving access arrangements and making access arrangements if necessary (i.e if the Commission does not approve an access arrangement or an access provider fails to submit an access arrangement to the Commission for approval)
- the role of determining disputes in relation to access regimes, and
- the authority to enforce compliance with the VRAR and binding access arrangements.

Additionally, the *Rail Network Pricing Order 2005* (**Pricing Order**) authorises the Commission to determine a methodology for calculating rail access prices to be used when approving access arrangements or determining access disputes. This must be consistent with the pricing principles set out in the Pricing Order.

In accordance with this function of determining a pricing methodology, the Commission developed through public consultation and released its Rail Access Pricing Guideline Version 1.0 in January 2006.

Significant changes have since occurred in the rail industry since the publication of the Pricing Guideline Version 1.0, for example, the Victorian Government 'buy-back' of the Victorian country rail network from Pacific National (Victoria) Limited and the subsequent lease of the network to V/Line Passenger Pty Ltd. After considering these changes, the Commission determined that it would be appropriate to update the Pricing Guideline, and in April 2009 released the ‘Draft Rail Pricing Guideline V.2.0’ for comment. The Commission has sought to make only those changes that are necessary to ensure that the Guideline is compatible with present needs. The Commission received no submissions in response to the Draft Pricing Guideline V.2.0. The final Guideline is essentially unchanged from the draft version.

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1 INTRODUCTION

The *Rail Network Pricing Order 2005* (**Pricing Order**) authorises the Commission to determine a methodology for calculating rail access prices to be used when approving access arrangements or determining access disputes. This must be consistent with the pricing principles set out in the Pricing Order.

In accordance with this function of determining a pricing methodology, the Commission developed through public consultation and released its Rail Access Pricing Guideline Version 1.0 in January 2006. In April 2009, the Commission decided to update the Guideline, releasing the 'Draft Rail Access Pricing Guideline V.2.0' for public comment. The approach taken by the Commission was one of minimal change to V.1.0 of the Guideline. .The Commission received no submissions in response to the draft 'Version 2.0' of the Guideline. In light of this, the final version 2.0 of the Guideline is essentially unchanged from the draft version 2.0

1.1 Purpose

The Pricing Order establishes rail access pricing principles and a revenue cap framework and also authorises the Commission to determine a methodology for calculating rail access prices that is consistent with the Pricing Order.

The purpose of this Guideline is to facilitate the Commission's role of approving access arrangements and resolving access disputes, by providing guidance to access providers on how to implement the Pricing Order in access arrangements and access agreements.

1.2 Relationship of this Guideline to the Pricing Order

The Pricing Order states that its function is to:

- specify the principles for the calculation of prices that an access provider may charge in respect of declared rail transport services that it may provide, and
- authorise the Commission to determine the methodology, in accordance with the principles specified in this Order, for the calculation of prices (section 2 of the Pricing Order).

The principles for the calculation of prices specified in the Pricing Order include:

- general pricing principles that apply to all declared rail transport services, and specific pricing principles for freight services, passenger services and terminal services
- broad principles for allocating costs between freight and passenger services, and

- the requirement that access arrangements for rail network access must contain a revenue cap.

The ability to determine a methodology for rail access pricing enables the Commission to establish more specific requirements in relation to pricing to facilitate its roles of:

- approving access arrangements, and
- determining access disputes.

In each of these regulatory roles the Commission must consider the requirements of the *Rail Corporations Act 1996* (**RCA**) and the principles set out in the Pricing Order, among other things. The RCA and the Pricing Order set out a range of regulatory objectives the access provider and the Commission are required to have regard to.

When approving access arrangements the Commission will do so in accordance with these Guidelines, once finalised, as well as in accordance with other relevant considerations and requirements. When determining an access dispute the Commission must do so consistently with the Pricing Order and the binding access arrangement of the relevant access provider.

A key distinction arises with respect to reference services and non-reference services, since an access arrangement must contain specific reference prices for each of the reference services, but need only provide indicative prices or a framework for establishing prices for non-reference services. The Pricing Order also establishes different pricing principles for freight reference and non-reference services. Therefore, this Guideline also addresses the distinction between reference and non-reference services, thereby clarifying the requirements to be met in an access arrangement.

1.3 Structure of this Guideline

This Guideline is organised around the main elements of the Pricing Order as described above:

- Chapter 2 describes the general and task-specific pricing principles, and how they are applied through the methodology when approving access arrangements
- Chapter 3 deals with the calculation of the revenue cap that must be included in an access arrangement
- Chapter 4 addresses the principles for allocating costs between freight and passenger services, and the detailed principles for allocating costs that must be reflected in the cost allocation statements that must be contained in an access arrangement, and
- Chapter 5 discusses the distinction between reference and non-reference services and the requirements of an access arrangement in relation to each type of service.

2 PRICING PRINCIPLES

Section 4.1 of the Pricing Order contains general pricing principles that apply to all declared rail transport services. Similar principles are contained in s35C of the *Essential Services Commission Act 2001* (**ESC Act**).[1] Sections 4.3 to 4.5 contain specific pricing principles relevant to freight services, passenger services and terminal services respectively. These principles are described in section 2.1 below.

The pricing principles relate to the levels of access prices and the structuring of prices. The Commission can develop pricing methodologies designed to give greater guidance to access providers on how they may frame their access arrangements to give effect to these principles. The Commission's methodologies in relation to the levels of prices are set out in section 2.2. The methodology for determining the Revenue Cap in chapter 3 is also relevant to the levels of access prices. The methodologies in relation to the structuring of prices are then set out in chapter 6.

2.1 Pricing Principles in the Pricing Order

2.1.1 General Principles

The RCA and the Pricing Order establish general pricing principles that apply to all prices charged by the access provider. As mentioned, similar principles are also contained in Part 3A of the ESC Act. In summary, the general pricing principles are as follows:

- prices must be set with the objective of generating revenue across all declared rail transport services equal to a reasonable forecast of the efficient cost of providing those services having regard to the standard and quality of those services (section 4.1(a) of the Pricing Order)[2]
- prices of a declared rail transport service must not be higher than internal transfer terms charged by an access provider to itself or a related body corporate (sections 38ZB(4)(b), 38ZJ(4)(b), 38ZL(5)(b) and 38ZZD(2) of the RCA)
- multi-part pricing and price discrimination are allowed where it aids efficiency (section 4.1(b) of the Pricing Order)

[1] Because of the similarity between the pricing principles in the ESC Act and the general pricing principles in section 4.1 of the Pricing Order, it is not necessary to separately deal with the ESC Act pricing principles in this Guideline.

[2] With respect to the return on capital component of the cost of supply, only capital expenditure incurred since 30 April 1999 should be taken into account.

- an access provider must not calculate different access prices as between different access seekers or users or between an access seeker and itself or between an access seeker and a related body corporate of the access provider if the nature of the services are the same (s38ZZY of the RCA)
- the price setting framework should provide the access provider with incentives to incur an efficient level of costs (4.1(c) of the Pricing Order)
- the price setting framework should seek to avoid volatility in prices arising from volatility in freight traffic (4.1(d) of the Pricing Order), and
- contributions towards capital or maintenance expenditure by a user or the government should be reflected in the prices paid by the relevant user, or the users, on behalf of whom the contribution was made.

2.1.2 Freight Rail Services

The Pricing Order (section 4.3(b), Freight Specific Pricing Principles) requires that when setting its prices for freight services (including reference prices) an access provider must have regard to the following matters:

(i) *the desirability of prices being consistent for access seekers and users with common freight use requirements;*

(ii) *the desirability of prices being consistent for access seekers and users who are provided declared rail transport services provided by means of rail infrastructure in the same geographic zones;*

(iii) *the desirability of minimising administrative requirements and costs imposed on access seekers, access providers and the Commission;*

(iv) *the principles of efficient price discrimination for relevant freight and end market characteristics.*

The Pricing Order does not impose floor and/or ceiling pricing principles in relation to freight reference charges, but they do apply to non-reference freight services. They are the same as those discussed below in relation to terminal services.

2.1.3 Terminal Services

In regard to Terminal Services, section 4.5 of the Pricing Order requires that prices that an access provider may charge for each terminal service must be set with the objective of generating revenue that:

(a) at least covers the directly attributable or incremental costs of providing the service;

(b) does not recover more than the stand alone costs of providing that service.

As mentioned, these floor and ceiling pricing principles also apply to freight non-reference services.

2.1.4 Passenger Services

Section 4.4 of the Pricing Order (Passenger Services) provides that the prices that an access provider may charge in respect of declared rail transport services that are passenger services must be set having regard to the efficient costs of providing those services to meet any quality and service levels and standards specified by the Secretary or Director.

2.2 Efficient costs and service quality standards

Section 4.1(a) of the Pricing Order requires that prices charged by an access provider, including internal transfer prices, must be set such that across all declared rail transport services the expected revenue generated by the access provider is equal to a reasonable forecast of the access provider's efficient cost of providing those services, taking account of the amount of any contributions from third parties and having regard to the standard and quality of those services, including the reasonably estimated financing costs associated with efficient capital expenditure incurred by the access provider since 30 April 1999.

When considering the appropriate level of prices over all of the declared rail transport services provided by an access provider, the Commission is required to consider the efficient costs of providing the declared rail transport services for a particular service quality standard (**Cost of Supply**). Particular issues that the Commission needs to address when considering the Cost of Supply include:

- the methodology for determining the efficient Cost of Supply of the declared rail transport services
- the appropriate standard of service that should be used when determining the efficient Cost of Supply, and
- the approach that will be taken to ascertaining or making assumptions about the extent of government contributions to works or subsidies.

2.2.1 Methodology for determining efficient Cost of Supply

Forecast efficient operating and maintenance costs must be best estimates arrived at on a reasonable basis, and must not exceed those that would be incurred by a prudent access provider to achieve a “fit for purpose” service standard. They must also be consistent with good industry practice, and the achievement of the lowest sustainable cost of delivering the service to that standard.

The Commission uses the building block methodology for determining the Cost of Supply. The building block methodology is detailed in Appendix B.

In the past, the Commission has used consultant studies (such as the WorleyParsons railway track maintenance cost forecasts used in 2006) as an alternative to access providers’ forecasts for the assessment of the cost base. Where available, the Commission may also use benchmarks from other jurisdictions. In practice, the Commission carefully compares the cost forecasts from the consultant studies, available benchmarks and the access providers’ forecasts, together with audited cost information provided annually by the access providers pursuant to the Account Keeping Rules. The Commission then adopts the forecasts it considers most reasonable. This choice is inherently governed by assessments of a number of matters, including:

- the relative integrity of the information used for the cost forecasts
- a thorough analysis on the reasonableness of the assumptions used in each study, and
- any other matters the Commission considers are relevant to making its decision.

2.2.2 Service quality standards and fitness for purpose

Section 4.2(f) of the Pricing Order contemplates that the Commission may require an access provider to establish certain service and quality standards in its access arrangement. In its 2006 access arrangement approval process, the Commission required each rail network of an access provider to be subject to a “fit for purpose” standard.

The Commission will maintain this requirement. The “fit for purpose” standard should be formulated through a consultative process between access providers and access seekers or users and correspond to the economically efficient standard for that line or network (without “gold plating”). The service quality standard should:

- include the maximum speed and axle load constraints applying to each line, and
- indicate, where relevant, the availability of rail lines during the Access Period.

Where an access provider provides declared rail transport services that are passenger services, the service quality standards must meet the standards specified by the Director of Public Transport or the Secretary to the Department of Transport (section 4.4 of the Pricing Order).

2.2.3 Projecting government contributions

The pricing principles require that government contributions should be deducted from the cost of supply for the purpose of determining access prices. At the commencement of an Access Period the government contributions will need to be forecast. There may be a significant degree of uncertainty in relation to these contributions over the term of an Access Period.

In the case where relevant subsidisation policies have been announced, those estimates of government contributions should be adopted for the calculation of government contributions. Otherwise, the Commission may estimate government contributions by estimating the amount of subsidy required to ensure that an access provider will remain commercially viable in regard to providing railway track access for freight operations.

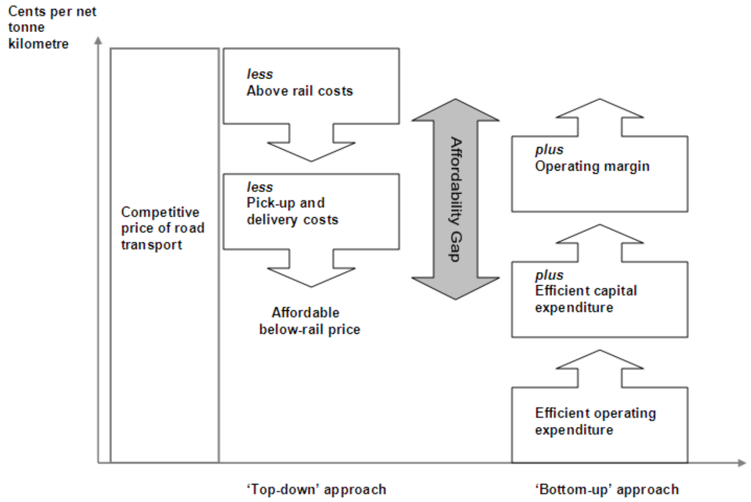
The subsidy requirement or “affordability gap” is calculated by comparing the revenue expected to be generated by affordable (or market bearable) access prices against the forecast Cost of Supply.

Affordable access prices for freight tasks were estimated by the Commission in its 2006 paper (Essential Services Commission, April 2006, ‘Proposed Rail Access Arrangements – Draft Decision’). Affordable access prices for freight tasks are estimated using a “top down” analysis which is not based on the calculation of an access provider's below-rail costs. Instead, affordable access prices for freight tasks are estimated by subtracting from the competitive price of road transport:

- the additional pick up and delivery costs for rail freight (this establishes a ceiling for competitive rail freight charges), and
- the efficient costs of above-rail operations (which includes the efficient operating and capital expenditure costs incurred by a rail network user for operating rolling stock on the access provider's rail network).

The difference is the maximum below-rail charge that can be imposed for the freight task. This approach is illustrated in Figure 2.1 below.

Figure 2.1 'Top-down' vs 'Bottom-up'



3 REVENUE CAP

Sections 4.2(a) and (b) of the Pricing Order establish that the prices that an access provider may charge, including internal transfer prices, reference and non-reference prices for freight and passenger services, but excluding Terminal Services, must be set so as to comply with a Revenue Cap included in an access arrangement and approved by the Commission.

The Commission may determine a methodology for setting the Revenue Cap, including:

- an under and over recovery adjustment mechanism
- an efficiency carryover mechanism
- a cost pass-through mechanism for the pass-through of identified categories of unforseen costs beyond the access provider's control, and
- a service and quality standard adjustment mechanism.

This section describes the methodology that access providers should use to determine the Revenue Cap for the purposes of a proposed access arrangement.

A Revenue Cap is not required for Terminal Services, and hence this section of this methodology does not apply to declared Terminal Services.

3.1 Calculation of the Revenue Cap

An access provider's Access Arrangement Information must include the Forecast Revenue, the forecast real Cost of Supply, and a calculation of the Revenue Cap for the relevant access period.

3.1.1 Forecast Revenue

The Forecast Revenue (**FR**) is the total discounted value of the reasonably forecast revenue in each year of an access period. The reasonably forecast revenue in each year of the Access Period should be derived from:

- reference prices established for the first year of the access period
- the methodologies for variation of reference prices over the remaining term of the access period
- forecast usage of each reference service (in the units against which prices are charged), and
- forecast revenue from the provision of non-reference services.

NRR_t

$\sum_{i=1}^{N} p_{it}q_{it}$

p_{it}

q_{it}

These amounts should be deflated for forecast CPI movements and discounted into present value terms in the base year using the real pre-tax WACC.

FR is defined as follows:

(Equation 4.4)

$$FR = \sum_{t=1}^{T}\left[\frac{\left(\sum_{i=1}^{N} p_{it}q_{it} + NRR_t\right)}{(1+WACC)^t}\right]$$

Where:

= the forecast of revenue from the provision of non-reference services in year t (in real terms)

= the forecast of revenue from the provision of reference services in year t (in real terms)

= the reference price for reference service i in year t (in real terms)

= the forecast quantity supplied of reference service i in year t

3.1.2 Forecast Cost of Supply or Revenue Requirement

Section 4.2(b) of the Pricing Order defines the Forecast Revenue Requirement (**FRR**) for a given access period in terms of the forecast efficient cost of supplying the declared rail transport services (excluding Terminal Services) over the term of the same access period and to the specified standard of service (**Cost of Service**). The FRR is expressed in present value terms.

(Equation 4.2)

$$FRR = \left(\sum_{t=1}^{T}\frac{COS_t}{(1+WACC)^t}\right)$$

Where:

t = years 1 to T of the access period, and T is the length (in years) of the access period

COS_t = the Cost of Service in year t (in real terms)

WACC = the real pre-tax weighted average cost of capital.

3.1.3 Revenue Cap

The Revenue Cap is equal to:

- The FRR, i.e. the discounted value of the forecast cost of providing declared rail transport services in each year of the access period,

plus

- adjustments made for certain outcomes of the preceding access period, including the Under and Over Recovery Adjustment Mechanism, the Efficiency Carryover Mechanism, and/or an adjustment made under the Service and Quality Standard Adjustment Mechanism.

The Revenue Cap (**RC**) for an access period is defined as:

(Equation 4.3) $RC = FRR + E + A - S$

Where:

FRR = the Forecast Revenue Requirement

E = the Efficiency Carryover

A = the Under and Over Recovery Adjustment, and

S = any "claw back" of revenue associated with underperformance on service quality in the previous regulatory period.

For the purpose of determining the Revenue Cap in the first access period, the Efficiency Carryover Amount (E), the net 'unders and overs' adjustment (A), and the "claw back" associated with underperformance on service quality (S) were each equal to zero. In subsequent access periods they are determined as outlined below.

3.2 Application of the Revenue Cap to setting price levels

An access provider's Forecast Revenue (**FR**) for an access period must not exceed the Revenue Cap for the same period. This constrains the overall level of reference prices for a given forecast of network demand and forecast non-reference service revenue (as discussed in section 3.1).

As described in section 3.1.3 above, at the commencement of an access period, the revenue cap is determined by adjusting the forecast cost of supply (or FRR) for the Efficiency Carryover Adjustment, the 'Unders and Overs' Adjustment and the Service Quality Adjustment. These are each described under section 3.3 below.

Within an access period the Revenue Cap may be varied if there is an adjustment in accordance with the Cost Pass-through Mechanism, or the Government Contribution Pass-through Mechanism. These are each described in section 3.4.

3.3 Adjustments to the Revenue Cap at the commencement of an access period

3.3.1 'Unders and Overs' Adjustment

Section 4.2(c) of the Pricing Order requires an Under and Over Recovery Adjustment Mechanism – which is the principal mechanism that gives effect to the Revenue Cap. If the access revenue obtained in an Access Period differs from the Forecast Revenue Requirement for that period, an adjustment may be made to the Forecast Revenue Requirement in the next access period.

The Revenue Shortfall (Surplus) for a completed access period:

$$= \left[RC - \left(\sum_{t=1}^{T} \frac{R_t}{(1+WACC)^t} \right) \right] (1+WACC)^T$$

Where: R_t = the actual revenue is year t.

Although this Revenue Shortfall (Surplus) forms the basis of the Under and Over-Recovery Adjustment, the Commission will also employ an incentive mechanism that allows the service provider to retain over recovery of revenue, after normalising for factors outside of its control (i.e. exceptional grain harvests). The principal aim of the incentive mechanism is to provide a financial incentive to the access provider to increase utilisation of the rail network (in accordance with the Commission's regulatory objectives in s38F of the RCA).

The basis of the Under and Over-Recovery Adjustment mechanism is that:

- An under-recovery of revenue in an Access Period (or Revenue Shortfall) will be added to the Forecast Revenue Requirement for the following access period (i.e. "A" in equation 4.3 is equal to the Revenue Shortfall).[3]

- The adjustment to be made following an over-recovery of revenue in an Access Period (a Revenue Surplus) stemming from enhanced volumes will depend on the source of the Revenue Surplus:

    - o where there is a revenue surplus with respect to grain freight reference services, a corresponding adjustment will be made to the Revenue Cap for the following access period, unless there is evidence that the modal share of rail has increased, in which case

[3] This ability to recover a revenue shortfall in the next access period will depend on whether demand is sufficient at the relevant access prices. If the access provider is systematically unable to recover the Revenue Requirement over successive access periods the 'unders' adjustment process will result in a progressive relaxation of the revenue cap over future access

the Commission may make allowance for usage greater than that forecast (that is, it may elect to make either a partial adjustment or non-adjustment to the Revenue Cap for the following access period)

- where there is a revenue surplus with respect to general and bulk freight reference services, a corresponding adjustment will not be made to the Revenue Cap for the following access period (that is, the “hybrid revenue cap” applies to this reference service), and

- where there is a revenue surplus with respect to non-reference services, a corresponding adjustment will be made to the Revenue Cap for the following access period (that is, a standard revenue cap will apply to non-reference services).

3.3.2 Efficiency Carryover

Section 4.2(d) of the Pricing Order requires that the revenue cap include an Efficiency Carryover Mechanism. “Efficiency carryover” refers to an adjustment to the revenue requirement which would otherwise be established in the next access period, to allow the access provider to retain some or all of the cost efficiencies achieved during the first access period.

At the end of each access period the Commission will determine the estimated efficiency gain (if any) achieved in each year of the completed period. These estimates would be based on a range of information, including:

- comparison of “bottom up” cost benchmarks established for the next period, against similar longer term benchmarks carried out prior to the completed period
- the difference between actual costs in the completed period and the benchmark forecast costs applicable to that period, and/or
- analysis of asset management activities (including maintenance and capital expenditure) carried out in each year of the completed period against the asset management plan established at the commencement of that period – with a consideration of whether there has been any deferral of asset management activities.

Once the efficiency gains for each year have been estimated, the Commission will determine the efficiency carry-over amount – consistent with the following principles:

- a five year retention period for gains will apply, and
- an efficiency carryover amount cannot be negative (i.e. cannot reduce the Forecast Revenue Requirement in the subsequent access period).

With respect to efficiencies in the first Access Period, efficiency gains in respect of capital expenditure will not be included in the Efficiency Carryover. Towards the end of the first Access Period, the Commission will give consideration to the inclusion of capital expenditure efficiency gains in the Efficiency Carryover for subsequent Access Periods. The Commission expects to undertake a general review of the VRAR in 2009 and will give consideration to this question within that broader review.

3.3.3 Service Quality Adjustment

Section 4.2(f) of the Pricing Order contemplates that the Commission may require an access provider to establish certain service and quality standards in its access arrangement (as discussed in section 2.2.2).

Given that the cost benchmarks and hence prices are based on assumed service standards, the Commission would retain the discretion to “clawback” revenue in the next Access Period (via an adjustment to the Revenue Cap and hence reference prices) if it is established that underperformance against service standards has been associated with a deferral of asset management activities, and where this outcome:

- has not been compelled by market conditions and revenue constraints, or
- is inconsistent with access agreements with users, or
- where users do not have avenues for compensation available through penalties under access agreements.

If there were any components of the network that were not ‘fit for purpose’ at the commencement of the first Access Period, the Commission will consider whether a grace period is warranted with respect to the remedying of those standards when considering any Service Quality Adjustment at the end of that period.

If the Commission were to decide to impose a “clawback”, it should be related to the incremental cost savings associated with reducing network quality standards.

3.4 Adjustments that may be made to the Revenue cap within an Access Period

3.4.1 Cost Pass-through Mechanism

Section 4.2(e) of the Pricing Order states that the revenue cap may include a cost pass-through mechanism. This is intended to allow the Commission to provide for ‘the pass-through of identified categories of unforseen costs beyond the access provider’s control’ (Section 5(b)(iv)(C)).

Certain Government-initiated events occurring within an access period would be pass-through events. For example, where the Director of Public Transport or the Secretary of the Department of Transport specifies a quality and/or service level standard, with respect to the passenger network, that differs from the standards specified or assumed when the Revenue Cap was established, the amount of the permitted pass-through would be the efficient incremental cost of meeting and maintaining the new standards. No associated adjustment could be made to freight services prices, as these additional costs are to be recovered through passenger services charges in this example.

The Commission will consider the pass through of costs in the form of an amended access arrangement and Revenue Cap where:

- the service provider has been materially adversely affected by an event beyond its control
- the event was not contemplated at the time the revenue cap decision was made, and is of a “force majeure” nature, and
- the benefits of amending the cap outweigh the detriments to the users from amending the cap, and the amendment is necessary to prevent a materially prejudicial detriment to the access provider.

The Commission will have final discretion over whether an access arrangement is to be amended for pass-through of costs.

3.4.2 Government Contribution Pass-through Mechanism

Where the Government makes a contribution towards capital or operations and maintenance expenditure on behalf of a user or group of users, and this contribution was not assumed when establishing the Revenue Cap, or differs in amount from that assumed when calculating the Revenue Cap, the amount of the unexpected Government contribution must be either:

- deducted from the Revenue Cap, and reference prices must be reset, or
- the value of the contribution must be fully offset (in present value terms) by rebates directed to the intended beneficiaries.

In these circumstances, the access provider may apply to the Commission for a variation of its Revenue Cap under section 38ZO of the RCA.

Alternatively, if its is not necessary to change prices within the access period (e.g. because they have already been reduced below the full cost recovery level), the adjustment of the Revenue Cap for government contributions can be made at the end of the access period.

4 COST ALLOCATION

4.1 Background

The Pricing Order requires the Commission to specify a methodology for the assessment and allocation of costs in respect of declared rail transport services that are freight services and passenger services, including those costs that are directly attributable, and those that are not directly attributable, to each of those services.

Specifically, this chapter deals with the allocation of the total cost of access activities between different declared rail transport services (i.e. passenger and freight services).

It should be noted that this is a methodological issue dealing with only one aspect of the cost allocation process which is required to be undertaken as part of the Account Keeping Rules, in which the access provider’s costs are allocated between access activities and other activities, and between terminals and railway track services, as well as between passenger and freight services, reference and non-reference services, and between geographical pricing zones (if any). This section of the Guideline only addresses the allocation of costs between passenger and freight services, and does not address these other aspects of cost allocation.

Since none of the existing access providers are both terminal services and rail track access providers, it is not necessary for this Guideline to address the allocation of costs between railway track services and terminal services. In addition, since all terminal services are reference services provided to freight, there is no allocation of costs between passenger and freight services for terminal services. This section only applies to declared railway track access services.

4.2 Pricing Order principle

Section 4.3 of the Pricing Order states that access prices for freight services must be set with the objective of recovering the reasonable forecast of a provider’s efficient cost for all declared rail transport services, excluding the following:

> *(i) those reasonably expected efficient costs directly attributable to the operation of passenger trains, including, without limitation:*
>
> *A. the estimated additional operations and maintenance expenditure that will be incurred in each Access Period in operating and maintaining the rail infrastructure to a higher*

standard than would be required if only non passenger trains operated on the rail infrastructure;

B. the estimated financing costs associated with the amount of existing capital expenditure incurred by that access provider since 30 April 1999 and new capital expenditure that is estimated to be incurred by that access provider in each Access Period which would not be required if only non-passenger trains operated on that rail infrastructure; and

(ii) a share of the reasonably expected costs of providing declared rail transport services to users of passenger services not directly attributable to passenger services or freight services, proportionate to the use of the rail infrastructure for passenger services and freight services.

4.3 Cost allocation between passenger and freight rail services

The Commission has interpreted this cost allocation principle as follows:

- Costs that are directly attributable to rail lines should firstly be allocated between: the Regional Fast Rail (**RFR**) lines, the other passenger lines, and the freight-only lines.
- For RFR and for other passenger lines, the access provider should in each case identify:
  - the costs that would be avoided if passenger services did not operate on those lines
  - the costs that would be avoided if freight services did not operate on those lines, and
  - the indirect costs (that is, the remainder of the costs that are directly attributable to rail lines).
- The access provider should allocate the costs directly attributable to rail lines as follows:
  - All of the costs associated with the freight-only lines are to be allocated to freight
  - For RFR and for other passenger lines:
    - the costs that would be avoided if freight services did not operate on those lines are to be allocated to freight
    - the costs that would be avoided if passenger services did not operate on those lines are to be allocated to passenger, and

  - the remaining costs of the RFR and the other passenger lines are, in each case, to be allocated to passenger and to freight in proportion to the respective usage by each traffic on the relevant rail line types, where the proportionate usage should be a weighted average of the GTK share (i.e. passenger or freight GTK divided by total GTK on that rail line type) and the TK share (similarly, passenger TK or freight TK divided by total TK on that rail line type), with the weights being 50 per cent GTK and 50 per cent TK.

- All other costs (that is, costs that are not directly attributable to rail lines) are to be allocated to passenger and to freight in proportion to the use of each type of traffic on the network as a whole, again based on a weighted average of the GTK share and the TK share, using the same weights.

5 REFERENCE SERVICES & PRICES

Generally, reference prices are set to address inequalities in bargaining power that exist between access seekers and providers, as well as to reduce uncertainty and untimely process for access seekers in relation to reference services.

This section describes in more detail some of the terms and concepts used in Part 2A of the RCA, in particular, what constitutes reference services, the nature of reference services and the treatment of revenues.

5.1 What Constitutes Reference Services?

Reference services are generally subject to ex ante regulation. Under the RCA reference services are defined as:

> *a declared rail transport service that—*
>
> *(a) is provided by an access provider to itself or a related body corporate; or*
>
> *(b) is likely to represent a significant proportion of demand by access seekers for declared rail transport services; or*
>
> *(c) is provided by means of a terminal.*

The RCA also provides that all services provided by declared rail freight terminals are reference services.

Under s38X(1)(a)(iv) of the RCA, access arrangements are required to specify either the prices, or a methodology for calculating prices, that an access provider will charge for each reference service.

Non-reference services, on the other hand, are usually subject *ex post* regulation. The RCA does not require an access provider to specify the prices, or a methodology for calculating prices, that an access provider will charge for each non-reference service (although information about "indicative terms and conditions" must be included). Under the RCA (Part 2A, Division 5) the Commission is empowered to determine access disputes, including situations where access seekers and providers are incapable of reaching mutual agreement on access terms and conditions.

The nature of the declared rail transport service will determine the approach that the Commission takes when considering a proposed access arrangement for approval. When considering a proposed access arrangement, the Commission will identify which freight services are defined as reference services (or non-reference) as well as whether passenger services provided by V/Line are considered reference services.

5.1.1 Freight Services

The Commission supports the use of a broad definition of freight reference services, such that all services to 'standard' types of freight trains are considered to be freight reference services, where the standard type of train is defined broadly so as to include all regularly operating trains at the commencement of the first Access Period, and all trains conforming to network standards[4]. The access arrangement should identify the 'standard' type of train.

The Commission's view is that access to main lines and to sidings for 'standard' types of trains are reference services.

5.1.2 Passenger Services

As set out in the V/Line Passenger (previously Pacific National) Access Arrangement, services to V/Line Passenger are not reference services.

5.2 Nature of Reference Prices

The Commission considers that in particular instances it may be preferable for an access arrangement to specify a reference price for a reference service and/or to adopt a pricing methodology for the calculation of prices for that service. This consideration is applied to freight and terminal services separately below.

5.2.1 Freight Reference Services

Standing offer prices should be established for all freight reference services. A methodology for varying freight reference prices over the access period should also be established.

A methodology for adjusting freight reference prices for non-standard services should also be established.

5.2.2 Terminal Reference Services

For Terminal Services, it is acceptable to have standing offer prices, or a methodology for determining prices, or a combination of both.

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[4] Following the Commission's approval of the access arrangements in 2006, VLP was substituted as the access provider for the Victorian regional rail network. VLP is not a vertically integrated service provider and does not provide freight train access services to itself or to a related body corporate. In these circumstances the Commission is prepared to consider a proposal by an access provider to adopt a narrower definition of 'standard train' than the definition in the current access arrangement.

5.3 Treatment of revenues under existing Access Agreements

Revenues under existing agreements will be included in the revenue cap as if they were for the provision of non-reference services.

If an existing access agreement is extended or renewed, or if its commercial terms are materially altered, it ceases to be treated as an “existing access agreement” from that date.

6 PRICE STRUCTURES

Chapter 2 outlined pricing principles that relate to the levels of access prices and the structuring of prices. Chapters 2, 3 and 4 have addressed matters relevant to the levels of prices. This chapter outlines methodologies relevant to the structuring of reference prices in proposed access arrangements.

6.1 Aspects of price structuring addressed

The Commission is authorised to determine pricing methodologies for, amongst other things:

- providing an access provider with incentives to incur an efficient level of costs of providing declared rail transport services
- avoiding volatility in prices arising by reason of volatility in freight traffic
- calculating prices for freight services that are consistent for access seekers and users with common freight use requirements, and for efficient price discrimination having regard to relevant freight and end market characteristics
- calculating prices for freight services that are consistent in the same geographic zones, and
- allowing for multi-part pricing and price discrimination when it aids efficiency (section 5(b) of the Pricing Order).

6.2 Price Smoothing

The method of pricing smoothing over time is relevant both to providing an access provider with incentives for cost efficiency, and to avoiding volatility in prices. When price paths are set at the outset of the access period, and are not dependent on cost movements within the period, the access provider will have strong incentives to minimise costs. These incentives are also supported by the efficiency carryover mechanism described in section 4.2(d) of the Pricing Order.

6.2.1 Volatility in freight traffic

The Commission would consider it reasonable for an access provider to propose an approach to smoothing prices that allows grain freight access prices to be adjusted annually using a mechanism or formula designed to minimize the volatility in prices both within and across access periods arising by reason of volatility in the grain transport task.

If a grain freight access price smoothing mechanism is proposed by an access provider, the methodology under which this is to be done is to be set out in the access arrangement, and should be transparent, based on objective data, and with all relevant information published so that users can verify the calculations. It should also seek to minimize volatility in grain freight access prices both within and across access periods.

The Commission expects that non-grain freight access prices would be varied between years within an access period using a much simpler escalation formula such as CPI or CPI-X.

6.2.2 Smoothing prices for expenditure profiles

It is desirable, when establishing reference prices and the methodologies for varying reference prices over the access period, that access providers do so in such a way that the forecast revenue in each year of the access period has a similar time profile to the forecast Cost of Supply over the same period, so as to avoid significant reference price adjustments at the end of an access period arising from a mismatch between the revenue trend and the Cost of Supply trend over the period.

6.3 Task differentiation of prices

Access providers may price differentiate between broad freight types where the Commission is satisfied that this would enhance economic efficiency, and would be fair and reasonable having regard to the significance of the expected improvement in network utilisation and the impact on users.

6.4 Differentiating prices between zones

Freight reference prices on the Connex metropolitan network may be established for a single metropolitan pricing zone, and freight reference prices for V/Line's regional rail network may be established for a small number of zones. At present V/Line has a single pricing zone[5].

6.5 Uniform and multi-part pricing

The Commission will allow multi-part pricing where it is satisfied that it would aid economic efficiency, and would be consistent with its objectives.

The Commission will have particular regard to ensure that fixed charges do not deter the efficient entry of potential access seekers and to this end it considers that any fixed component of the access price should represent only a small proportion of the total access charge. The Commission considers that where a multi-part tariff is applied, the fixed component should not exceed 30% of total charges.

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[5] Previously the Commission concluded that there should be two zones, namely, the Portland to Maroona line and the remainder of the regional rail network. In November 2008, the Australian Rail Track Corporation (ARTC) took over the management of the Portland to Maroona line. Hence, by implication, there is only one remaining geographic zone on the V/Line network.

- fixed charges should be based on the length (by kilometres) of the train path, and any take-or-pay provision should only apply to late cancelled services (as opposed to an operator's general use of the network).
- the variable component of the charge should be based on GTK.

6.6 Floor / Ceiling Pricing

Section 4.5 of the Pricing Order (which is discussed in section 2.1.3 above) contains floor and ceiling pricing principles that an access provider must comply with when setting the charges for access to terminal and to freight non-reference services. The Commission interprets these principles as follows:

- an access price that 'at least covers the incremental or directly attributable cost of providing the service' refers to an access price that covers the costs incurred by the access provider in relation to that service that would be avoided if that service were not provided; and
- an access price that 'does not [enable the access provider to] recover more than the stand alone costs of providing that service' refers to the cost to the access provider of providing that service when not also providing any other service.

These limits are in addition to the requirement that the reference prices overall must also comply with the overarching revenue adequacy pricing principles in section 4.1(a) of the Pricing Order (in particular, that prices charged by an access provider must be set such that across all declared rail transport services the expected revenue generated by the access provider is equal to a reasonable forecast of the access provider's efficient cost of providing those services).

APPENDIX A | PRICING ORDER

Rail Corporations Act 1996

RAIL NETWORK PRICING ORDER

ORDER IN COUNCIL

The Lieutenant-Governor as the Governor's deputy, with the advice of the Executive Council under section 38J(1) of the Rail Corporations Act 1996 on the recommendation of the Minister, hereby makes the following Order.

1. **Citation**

This Order may be cited as the Rail Network Pricing Order 2005.

2. **Preamble**

This Order:

(a) specifies the principles for the calculation of prices that an access provider may charge in respect of declared rail transport services that it may provide;

(b) authorises the Commission to determine the methodology, in accordance with the principles specified in this Order, for the calculation of prices that:

(i) an access provider may charge in respect of declared rail transport services that the access provider may provide;

(ii) the Commission may, in a relevant decision, decide an access provider may charge in respect of declared rail transport services provided by that access provider.

3. **Interpretation**

Where a term used in this Order is defined in the *Rail Corporations Act* 1996, it has the meaning given to it in the *Rail Corporations Act* 1996.

In the event of any inconsistency between this Order and a provision of the *Rail Corporations Ac*1996, the *Rail Corporations Act* 1996 will prevail.

The provisions of the *Interpretation of Legislation Act* 1984 apply to the interpretation of this Order as they apply to subordinate instruments.

Access Period means, in respect of declared rail transport services that may be provided by an access provider, the period of operation of an access arrangement approved or prepared by the Commission, as the case may be, in respect of those declared rail transport services. (see note 1.)

Terminal Services are declared rail transport services provided by means of terminal infrastructure that would not be rail infrastructure but for the operation of an order under section 38B of the *Rail Corporations Act* 1996.

4. **Pricing Principles**

The prices that an access provider may charge in respect of declared rail transport services that it may provide must be calculated in accordance with the principles set out in this Order and with any methodologies determined by the Commission.

4.1 General principles

(a) Prices charged by an access provider, including internal transfer prices, must be set with the objective of generating revenue such that across all declared rail transport services the expected revenue is equal to a reasonable forecast of the access provider's efficient cost of providing those services (taking account of the amount of any capital contributions from third parties), having regard to the standard and quality of those services, including the reasonably estimated financing costs associated with efficient capital expenditure incurred by that access provider since 30 April 1999. (see note 2.)

(b) The structure of prices may allow for multi-part pricing and price discrimination when it aids efficiency. (see note 3.)

(c) The framework for setting prices must seek to provide an access provider with incentives, including within an Access Period and between Access

Periods, to incur an efficient level of costs of providing declared rail transport services.

(d) The framework for setting prices must seek to avoid volatility in prices arising by reason of volatility in freight traffic.

(e) Where an access seeker or user, or a third party on behalf of an access seeker or user, makes any contribution towards capital or maintenance expenditure incurred in relation to the provision of declared rail transport services to that access seeker or user, the prices for the provision of those declared rail transport services must be reduced so that the revenue to be derived from the provision of those services is to be adjusted to take account of the contribution and any ongoing capital or maintenance savings.

Example: A Government makes a contribution to an access provider for expenditure on an upgrade of the rail network and states that the contribution is on behalf of all, or a particular category of, access seekers and users. The revenue to be recovered through charges for the provision of declared rail transport services to all, or the particular category of, access seekers and users is reduced to take account of the contribution.

4.2 Revenue cap

(a) Prices that an access provider may charge in respect of declared rail transport services, including internal transfer prices, must be set so as to comply with a revenue cap included in an access arrangement approved by the Commission under section 38ZF(1) or 38ZK of the *Rail Corporations Act* 1996 or made by the Commission under section 38ZJ(1) or 38ZL(1) of the *Rail Corporations Act* 1996.

(b) The revenue cap must provide for the recovery of a reasonable forecast of the efficient costs of providing access to all declared rail transport services provided by that access provider over an Access Period, but excluding Terminal Services, including the estimated financing costs associated with efficient capital expenditure incurred by that access provider since 30 April 1999, having regard to the standard and quality of those services and an efficiency carry over mechanism in accordance with paragraph (d) (**the Forecast Revenue Requirement**).

(c) (**Under and over recovery adjustment mechanism**)

(i) Subject to paragraph (ii), where the revenue derived over an Access Period is more or less than the Forecast Revenue Requirement for that Access Period, a corresponding adjustment must be made to the Forecast Revenue Requirement for the subsequent Access Period;

(ii) such adjustment may make allowance for usage above that reasonably forecast in the previous Access Period.

(d) (**Efficiency carry over mechanism**) The revenue cap must contain an efficiency carry over mechanism such that where an access provider's actual costs in an Access Period differ from the access provider's Forecast Revenue Requirement for that Access Period:

(i) no adjustment is to be made to the revenue cap for that Access Period, subject to the operation of any cost pass-through mechanism;

(ii) an allowance may be made in a subsequent Access Period for increases or decreases in efficiency such that the access provider may retain all or part of lower costs due to efficiency increases and may bear all or part of higher costs due to efficiency decreases.

(e) (**Cost pass-through mechanism**) The revenue cap may contain a cost pass-through mechanism.

(f) **Service and quality standard adjustment mechanism**) The revenue cap may contain a mechanism for the adjustment of the revenue cap having regard to whether the access provider meets the service and quality standards required to be met under an access arrangement approved by the Commission under section 38ZF(1) or 38ZK of the *Rail Corporations Act* 1996 or made by the Commission under section 38ZJ(1) or 38ZL(1) of the *Rail Corporations Act* 1996.

(g) The revenue cap must be consistent with the revenues that would be derived by the application of any internal transfer prices relating to an access provider's provision of the relevant declared rail transport services to its vertically integrated operations.

4.3 Freight specific pricing principles

(a) Prices that an access provider may charge in respect of declared rail transport services that are freight services must be set with the objective of recovering the reasonable forecast of the access provider's efficient costs of providing all declared rail transport services that are freight services and excluding:

(i) those reasonably expected efficient costs directly attributable to the operation of passenger trains, including, without limitation:

A. the estimated additional operations and maintenance expenditure that will be incurred in each Access Period in operating and maintaining the rail infrastructure to a higher standard than would be required if only non passenger trains operated on the rail infrastructure;

B. the estimated financing costs associated with the amount of existing capital expenditure incurred by that access provider since 30 April 1999 and new capital expenditure that is estimated to be incurred by that access provider in each Access Period which would not be required if only non-passenger trains operated on that rail infrastructure; and

(ii) a share of the reasonably expected costs of providing declared rail transport services to users of passenger services not directly attributable to passenger services or freight services, proportionate to the use of the rail infrastructure for passenger services and freight services.

(b) The prices that an access provider may charge in respect of declared rail transport services that are freight services are to be set having regard to:

(i) the desirability of prices being consistent for access seekers and users with common freight use requirements;

(ii) the desirability of prices being consistent for access seekers and users who are provided declared rail transport services provided by means of rail infrastructure in the same geographic zones;

(iii) the desirability of minimising administrative requirements and costs imposed on access seekers, access providers and the Commission;

(iv) the principles of efficient price discrimination for relevant freight and end market characteristics.

4.4 Passenger specific pricing principles

Prices that an access provider may charge in respect of declared rail transport services that are passenger services must be set having regard to the efficient costs of providing those services to meet any quality and service levels and standards specified by the Secretary or Director.

4.5 Terminal Services and non-reference services

Prices that an access provider may charge in respect of Terminal Services and declared rail transport services that are not reference services must be set with the objective of generating revenue that in respect of each of those declared rail transport services:

(a) at least covers the directly attributable or incremental costs of providing the service;

(b) does not recover more than the stand alone costs of providing that service.

5. Commission authorised to determine methodology for the calculation of prices

(a) The Commission is authorised to determine the methodology, in accordance with the pricing principles set out in this Order, for the calculation of prices that:

(i) an access provider may charge in respect of declared rail transport services that the access provider may provide;

(ii) the Commission may, in a relevant decision, decide an access provider may charge in respect of declared rail transport services provided by that access provider.

(b) The methodologies that the Commission is authorised to determine include a methodology:

(i) to provide an access provider with incentives, including within an Access Period and between Access Periods, to incur an efficient level of costs of providing declared rail transport services;

(ii) to avoid volatility in prices arising by reason of volatility in freight traffic;

(iii) for taking account of any contribution made by an access seeker or user, or a third party on behalf of an access seeker or user, towards capital or maintenance expenditure incurred in relation to the provision of declared rail transport services in the prices for the provision of those services;

(iv) for setting a revenue cap, including:

A. an under and over recovery adjustment mechanism;

B. an efficiency carry over mechanism;

C. a cost pass-through mechanism for the pass-through of identified categories of unforseen costs beyond the access provider's control;

D. a service and quality standard adjustment mechanism;

(v) for calculating prices for freight services that are consistent for access seekers and users with common freight use requirements;

(vi) for calculating prices for freight services that are consistent for access seekers and users who are provided declared rail transport services provided by means of rail infrastructure in the same geographic zones;

(vii) for calculating prices for freight services to minimise administrative requirements and costs imposed on access seekers, access providers and the Commission;

(viii) for efficient price discrimination having regard to relevant freight and end market characteristics;

(ix) for the assessment and allocation of costs in respect of declared rail transport services that are freight services and passenger services, including those that are directly attributable and those that are not attributable to those services;

(x) for calculating prices for passenger services having regard to the efficient costs of providing those services to meet any quality and service levels and standards specified by the Secretary or Director;

(xi) to allow for multi-part pricing and price discrimination when it aids efficiency;

(see note 4.)

(xii) for the calculation of prices that an access provider may charge in respect of Terminal Services that the access provider may provide.

6. Commencement

This Order comes into effect on the day section 5 of the *Transport Legislation (Further Amendment) Act* 2005 comes into operation.

Notes

1. The period of operation of an access arrangement is as set out in section 38ZM of the *Rail Corporations Act* 1996. It is anticipated that an access arrangement will be in operation for three to five years (see section 38X(1)(f)).

2. Under section 38R(2) of the *Rail Corporations Act* 1996, the Commission is required to make rules that require an access provider to prepare, maintain and keep records relating to internal transfer terms and to provide those records to the Commission.

   Sections 38ZB(4)(b), 38ZJ(4)(b), 38ZL(5)(b) and 38ZZD(2) prohibit the Commission from specifying a price for the provision of a declared rail transport service in an access arrangement or a dispute resolution decision that is higher than the price included in the access provider's internal transfer prices.

   Pursuant to section 38J(3) of the *Rail Corporations Act* 1996, the pricing principles specified in this Order must not require, entitle or allow a relevant access provider to recover from a relevant user any capital expenses incurred by that relevant access provider in respect of relevant rail infrastructure other than expenses that have been or are incurred on or after 30 April 1999 for the purpose of extending or replacing that infrastructure.

3. Provisions in sections 38ZB(4)(b), 38ZJ(4)(b), 38ZL(5)(b), 38ZZD(2) and 38ZZY of the *Rail Corporations Act* 1996 will apply.

4. Provisions in sections 38ZB(4)(b), 38ZJ(4)(b), 38ZL(5)(b), 38ZZD(2) and 38ZZY of the *Rail Corporations Act* 1996 will apply.

NB: The notes referred to above do not form part of the Order.

Dated:

Responsible Minister:

PETER BATCHELOR

MINISTER FOR TRANSPORT

Clerk of the Executive Council

APPENDIX B BUILDING BLOCK APPROACH

The forecast Cost of Supply in each year of an access period can be determined in accordance with the building block approach. The key components of the Cost of Supply under this approach are:

- Capital Costs, which includes the Return on Capital (**ROC**) (which includes Tax), and depreciation of assets (i.e. the "Return of Capital").

plus

- Non-capital costs, including operating and maintenance expenditure, and other non-capital costs.

The Commission assesses all of these components in real terms

Capital Costs

(Equation B.1)

$$ROC_t = WACC\left(\frac{RAB_t + RAB_{t-1}}{2}\right)$$

Where:

t is a given year, and t-1 is the year prior to year t

RAB_t = the Regulatory Asset Base at the end of year t

WACC = the weighted average cost of capital applying to the access period

The actual RAB is be rolled forward to successive access periods by adjusting for actual inflation, adding actual capital expenditure, and subtracting actual capital contributions, asset disposals and depreciation.

Regulatory Asset Base

The value of the RAB at the beginning of each access period should be based on the RAB determined at the commencement of the previous access period (if relevant) plus the accumulated New Capital Expenditure valued at the construction or original cost plus an adjustment for inflation, less the accumulated depreciation and disposals, and less any relevant capital contributions.

The formula for calculating the extrapolating the RAB historically, to establish the RAB at the commencement of a new access period, is:

The RAB at end of year t =

+ the RAB at the end of year t-1

+ the percentage increase in CPI multiplied by the RAB at the end of year t-1

+ New Capital Expenditure in year t

– User or Government contributions to the capex in year t

− Asset disposals in year t

− Depreciation in year t

Forecasts of the RAB are made in real terms (at prices in the base period), by adjusting the starting RAB in each year of the access period, for forecast New Capital Expenditure (in real terms), minus any forecast capital contributions and/or asset disposals, and minus depreciation (all in real terms).

The formula for extrapolating the forecast RAB is:

Forecast real RAB at end of forecast year t =

+ the (actual or forecast) real RAB at the end of year t-1

+ forecast real New Capital Expenditure in year t

– forecast real user or government contributions to the capex in year t

− forecast real asset disposals in year t

− forecast real Depreciation in year t

WACC

A real WACC should be applied consistent with the real revenue model, with all modelling to be done in real terms.[6] It is preferred that a real pre-tax WACC be used incorporating the statutory tax rate adjusting for the value of franking credits.

When calculating the real pre-tax WACC, the benchmark cost of equity and debt should each be calculated using the real risk free rate of return. In other respects the calculation of the real pre-tax WACC will be the same as the calculation of the nominal pre-tax WACC.

6 In the second regulatory period, the Commission expects that all benchmarks will be expressed in terms of 1 January 2009 prices.

Pre-Tax WACC: $(1-g)\left(\dfrac{R_e}{1-t(1-\gamma)}\right)+g.R_d$

R_e is the cost of equity for a firm;

R_d is the cost of debt;

g is the ratio of the debt (*D*), to the value of the company (*V*), where *V* is equal to the total value of debt plus equity (*E*);

The effective corporate tax rate is *t*;

and γ ("gamma") represents the proportion of tax collected from the company that will ultimately be rebated against personal income tax.

Depreciation

The Commission has previously adopted straight-line depreciation on an *inflation-indexed asset base* in regulated charges and believes it is a reasonable and appropriate approach. As such, the Commission considers that when calculating total annual depreciation this approach should be employed.

Capital expenditure

Assessment of prudent capital expenditure

Forecast real capital expenditure over the access period will be used to forecast the RAB, as described above. The Commission's preference is for capital expenditure forecasts to be made over a horizon covering the two access periods (to ensure sustainability of the asset management plan), and should be supported with reference to the access provider's asset management planning and processes.

The forecast capital expenditures are to be consistent with what would be incurred by a prudent access provider to achieve a "fit for purpose" service standard, and consistent with the capitalisation policy, and hence consistent with the forecast operating expenditures (discussed below).

User capital contributions for capacity expansions

When calculating the regulatory asset base it is appropriate to net-off the value of customer contributions of a capital nature, reflecting the fact that this component of the capital expenditure is not financed by the access provider, or not recuperated through access revenues. The net cost funded by the access provider is "rolled in" to the asset base and reflected in future tariffs. This treatment of capital contributions would apply equivalently for government sponsored payments of a capital nature to meet community service obligations (CSO's) or capital additions.

Non-Capital Costs

Operating and maintenance expenditure

Forecast efficient operating and maintenance costs must be best estimates arrived at on a reasonable basis, and must not exceed those that would be incurred by a prudent access provider to achieve a “fit for purpose” service standard. They must also be consistent with good industry practice, and the achievement of the lowest sustainable cost of delivering the service to that standard.

When deciding on the appropriate estimation of these costs the Commission will adopt estimates it decides are appropriate taking into account the provider’s information, relevant consultant studies and other relevant information (as discussed in 3.3.2).

Additionally, the major contributing costs related to total operating and maintenance expenditure would usually include;

- tie cycle maintenance;
- surfacing maintenance;
- district gang maintenance;
- recurring (or seasonal) maintenance; and
- signals and communications.

However, the also various costs associated with other relevant operational commitments (e.g. road crossings, bridges/tunnels, inspections, turnouts, piping, drains and culverts etc) should also be included as estimates as part of total operating and maintenance expenditure.

Other non-capital costs

The Commission will permit an allowable margin to provide incentives associated with operating and managing the pre-30 April 1999 assets where it incurs specific costs and risks not otherwise factored into the cost benchmarks.

The access provider will need to set out how precisely how it has determined the proposed allowable margin, and to justify the parameter values applied in terms of benchmarking to margins for operating and managing similar infrastructure assets, and having regard to the specific costs and risks incurred by the access provider which this margin covers, taking account of the mitigation of risk arising from the efficiency carryover and ‘unders and overs’ adjustment mechanisms, and other relevant features of the pricing framework.