IPART
New South Wales

Independent Pricing and Regulatory Tribunal

Review of CityRail fares, 2009-2012

Transport— Draft Report and Draft Determinations
October 2008

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ISBN 978-1-921328-60-2 Draft Determinations No-4 and 5, 2008

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Invitation for submissions

IPART invites written comment on this document and encourages all interested parties to provide submissions addressing the matters discussed.

Submissions are due by 5 November 2008.

We would prefer to receive them by email <ipart@ipart.nsw.gov.au>.

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1 Introduction and executive summary

IPART is currently undertaking a review of the fares that CityRail can charge from 2009 and has completed its draft report and determination. In conjunction with the fare review, IPART is reviewing the economic regulatory framework for CityRail at the request of the NSW Government. The primary objective of this second review is to recommend a regulatory framework that enables the Government and IPART to create effective incentives for CityRail to reduce its total costs by improving its efficiency, while maintaining its service levels.

As part of the review of the economic regulatory framework, IPART has examined the approach to fare setting it uses in making its fare determinations. It has made substantive changes to this approach, and used the revised approach in making its draft 2009 fare determination.

The purpose of this draft report is to explain IPART's draft fare determination, and the draft decisions that underpin it. IPART is seeking stakeholder comments on the report and determination, which it will consider before making its final determination in December 2008. The draft determination is attached to this report. Box 1.1 outlines the process IPART followed in undertaking both its reviews. Appendix D provides the terms of reference for the review of the economic regulatory framework.

1.1 Overview of fare outcomes

IPART's fare determinations apply to all railway passenger services[1] supplied by RailCorp under the name "CityRail"[2]. Thus, the 2009 determination will affect the price of single, return and TravelPass tickets, FlexiPass tickets, CityHopper tickets, DayTripper tickets, and link and intermodal destination tickets such as Olympic Park tickets.

Under the draft determination, the prices of CityRail fares would increase by an average of 12 per cent in real terms (before the effects of inflation) over the four year period to 31 December 2012. However, it should be noted that the price changes for a large number of individual tickets will depart from this average because of the fare restructuring undertaken by IPART. In particular, the draft decisions to implement a

1 By section 18(2) of the *Independent Pricing and Regulatory Tribunal Act 1992* (IPART Act), RailCorp may not fix a price below that determined by IPART without the approval of the Treasurer.

2 Except for the services that are supplied in accordance with the ticket known as the "SydneyPass".

consistent distance based fare structure, transition weekly fares towards a constant 20 per cent discount and the increase in the off-peak discount drive significant variations in fare outcomes over the determination period. However, no individual fare would increase by more than 30 per cent in real terms over the four year period to 31 December 2012. More specifically:

- For distances up to 15 km, single tickets would increase by 40 cents on 1 January 2009, and by between 2 cents and 7 cents a year plus inflation over the subsequent three years. Weekly tickets would increase between $2.00 to $3.00 per week on 1 January 2009, and by between 15 cents and 60 cents per week a year plus inflation over the subsequent three years.
- For distances from 15 km up to 35 km, single tickets would increase by between 40 cents and $1.00 on 1 January 2009, and by between 5 cents and 20 cents a year plus inflation over the subsequent three years. Weekly tickets would increase by $3.00 to $8.00 per week on 1 January 2009, and by between 65 cents and $1.35 per week a year plus inflation over the three subsequent years.
- For distances from 35 km up to 175 km, single tickets would increase by up to $1.00 on 1 January 2009, and by between 20 cents and 90 cents a year plus inflation over the subsequent three years. Weekly tickets would increase by $7.00 to $9.00 per week on 1 January 2009, and by between $1.50 and $6.50 per week a year plus inflation over the three subsequent years.
- For distances 175 km and above, single tickets would decrease by up to $8.00 on 1 January 2009. For the subsequent three years fares will vary: some will reduce by up to 80 cents, while some will increase by up to $1.00 a year plus inflation over the subsequent three years. Changes in weekly tickets in this group vary from a decrease of $18.00 per week on 1 January 2009 to an increase of $9.00 per week on 1 January 2009. Weekly tickets in this group increase by between $2.95 and $5.15 per week plus inflation over the subsequent three years.
- TravelPasses will increase by $3.00 to $5.00 on 1 January 2009, and by between $1.80 and $3.65 per week a year plus inflation over the subsequent three years. The Red TravelPass - will increase by $3 on 1 January 2009 and by approximately $2.00 per week a year plus inflation over the subsequent three years.

Table 14.1 provides a summary of the corresponding real percentage increases over the regulatory period compared to present fares.

Table 1.1 Average real cumulative percentage change in fares from 2008 to 2012

Distance	Single	Weekly	Off peak return
Up to 15 km	13%	10%	-18%
From 15 km up to 35 km	18%	18%	-15%
From 35 km up to 175 km	14%	25%	-17%
175 km and above	-16%	5%	-39%
TravelPass	-	20%	

On 1 January in 2010 to 2012, the price of each ticket would also be adjusted to account for inflation, as set out in the draft determination (see attached). The adjusted prices would be rounded according to RailCorp's rounding conventions. IPART will publish the new adjusted fares for the coming year in a prices and services report on CityRail in December each year.

1.2 The draft decision

In its June 2008 discussion papers, IPART set out its new approach to fare setting. This new approach focussed on a rigorous assessment of the efficient costs of providing CityRail's services, the external benefits of CityRail, and how taxpayers and passengers should fund CityRail's costs over the next four years. IPART's draft decision reaffirms this approach which IPART considers is more rigorous and robust.

IPART took account of a wide range of matters in making its draft determination – including (but not limited to):

- the impact on the affordability of fares and the patronage of CityRail services
- the urgent need to create effective incentives for CityRail to reduce its costs by increasing its economic efficiency, and
- the need for passengers and taxpayers to each fund an appropriate proportion of the costs of providing CityRail services that reflects the level of benefits individual users and the wider community derive from these services.

In its discussion papers IPART's preliminary view was that real fare increases of between 20 and 30 per cent were required over the next four years. IPART's draft fare determination is that the cumulative increase in CityRail's fares over the next four years will be an average of 12 per cent in real terms. These smaller fare increases results from IPART's further analysis taking into account:

- Submissions from stakeholders and comments made at the July public hearing about affordability. At the public hearing in response to both comments made and written submissions, IPART's Chairman indicated that IPART would further consider its preliminary views regarding the value of the external benefits, how both new and existing assets should be valued and how the fare structure can be improved in terms of equity.
- The impact higher fares will have on affordability and patronage. IPART also considered the Government's policy intention to enable some restructuring of CityRail fares. There is a balance to be struck between achieving fare restructuring, the impact on passengers and an overall revenue outcome that achieves an appropriate balance between passengers and taxpayer's funding rail services.

- IPART has further considered the advice provided by its expert consultant CRAI on CityRail's externalities and the optimal government subsidy. In its report, CRAI developed an approach to determining the average fare level and maximising the economic benefits that the community obtains from CityRail's services. The measure of economic benefit took account of the benefits passengers receive through lower fares, the marginal cost of providing the services, the subsidy that the Government provides and the cost to the community of providing the subsidy through reduced income as a consequence of taxation. CRAI noted that the optimal fare under this depends on the values of certain variables such as (marginal cost and marginal benefit) that are known only uncertainly at this stage. Nevertheless, CRAI developed a central or most likely case for consideration. It found that, in this central case, the optimum fare is 21 per cent higher than the average fare in 2005/06.

  IPART was concerned that CRAI's central case might result in an excessively high optimal fare because it had underestimated the costs to the community resulting from taxation. IPART therefore asked CRAI to develop another scenario in which taxation was assumed to have no effect on individual's purchasing and investment decisions and investment choices. Under this scenario, the optimal fare is 7 per cent higher than the average fare in 2005/06, although this estimate is subject to further refinement. CRAI also noted that the welfare function has broad and flat peaks. This means that the loss of economic welfare from not having precisely the optimal fare is not very great. This point was also made by the Ministry of Transport (MoT) in its submission on IPART's discussion paper.

  At noted elsewhere in this draft report, there are a number of differences between CRAI's analysis of externalities and that undertaken by IPART. Nevertheless, IPART consider that CRAI have provided a thoughtful analysis of the issues relating to fare setting for CityRail. The results of CRAI's study, in IPART's view, support the case for a moderate increase in fares over the next four years.

- Updated data from RailCorp that reflects actual outcomes for 2007/08 and IPART has also reconsidered some of its modelling assumptions:
  - Actual passenger journeys for the 2007/08 are now available and have been incorporated into IPART's analysis. CityRail's actual patronage in 2007/08 was considerably higher than the forecast used for the discussion paper. This has substantially increased the fare revenue base for the draft fare determination.
  - The value of the Initial Capital Base (ICB) has increased from the $1.4 billion used in the discussion papers to $3.9 billion for the draft fare determination. While IPART has used the same discounted cash flow approach for calculating the value of the ICB, it has revised several inputs to this calculation based on stakeholder comments; in particular, the forecast levels of government subsidy takes into account the future estimated value of the external benefits. IPART's draft decision to increase the estimated value of the external benefits from that used in the discussion papers has contributed to the increase in the ICB used in this draft fare determination.

- In calculating the return on assets for the discussion paper IPART incorrectly used a nominal rate of return of 12 per cent, rather than a real rate of return of 8 per cent, thereby overstating this building block. IPART has now used the correct real rate of return and has also revised down this rate from 8 per cent to 7.7 per cent pre-tax real to reflect current market conditions.
- The Epping to Chatswood Rail Link (ECRL) has been depreciated at a 1 per cent a year based on its longer average asset life.

Having considered these issues IPART has concluded that the cumulative real fare increase of 12 per cent on average provided by its draft fare determination is preferable to the higher fare increases implied in its discussion papers. In particular, the lower overall increase used in the draft fare determination has enabled IPART to propose additional fare restructuring which provides for a more cost reflective and equitable fare structure. At this same time, the overall fare revenue outcome strikes the right balance between the interests of taxpayers and users. IPART has also carefully considered the impact that higher fares will have on affordability and patronage, and it considers that the lower overall increase will address such concerns.

1.3 Approach to fare setting

IPART's draft decisions on the approach to fare setting represent major revisions to the approach used in the past. The revised approach is more rigorous and robust, and provides significantly more scope to create effective incentives for CityRail to improve its economic efficiency. However, the effectiveness of any incentives IPART aims to create through this approach will be enhanced if the Government makes changes to the institutional and governance arrangements for CityRail, so all elements of the economic regulatory framework are consistent and aligned. (IPART's recommended changes to these arrangements are discussed in a separate report.[3] Box 1.2 summarises the key changes IPART has recommended to complement and support the approach to fare setting.)

IPART's draft decisions on the approach to fare setting include:

- Introducing a multi-year determination period. For this determination, IPART will set CityRail's fares for a period of four years, from 1 January 2009 to 31 December 2012.
- Using the building block approach to determine CityRail's annual revenue requirement over the determination period; that is, IPART has assessed the efficient operating and capital costs of CityRail and included efficiency savings in delivering CityRail's required revenue.

3 IPART, *Improving CityRail's accountability and incentives by strengthening its governance arrangements*, October 2008.

- Establishing the share of the revenue requirement to be recovered from CityRail passengers and from taxpayers by estimating the value of the external benefits generated by CityRail services, and considering potential impacts on fare affordability and patronage levels.
- Converting the share of CityRail's revenue requirement to be recovered from passengers into fares by setting the maximum fare for each CityRail ticket type.

IPART considers its revised approach has clear advantages over alternative options. In particular, it takes account of the full economic costs of providing CityRail services and the external benefits of these services in a rigorous and transparent way.

1.4 CityRail's annual revenue requirement

Table 1.2 provides an overview of IPART's draft decision on CityRail's annual revenue requirement, and on each of the cost 'building blocks' that underpin this decision.

Table 1.2 Draft decision on CityRail's annual revenue requirement ($millions, real $2008/09)

	2007/08	2008/09	2009/10	2010/11	2011/12
	IPART determination – operating costs and depreciation only				
CityRail forecast operating expenditure		2,248	2,396	2,424	2,494
LEK recommended efficiency savings		- 60	- 185	- 299	- 458
IPART adjustments (MPM and borrowing costs)		-142	-154	-159	-142
Forecast efficient operating expenditure	**2080**	**2,047**	**2,056**	**1,966**	**1,893**
Allowance for a return on capital	414	509	585	660	717
Allowance for a return of capital (depreciation)	-	193	258	326	384
Allowance for return on working capital	-	- 19	- 21	- 18	- 14
Total revenue requirement	**2,494**	**2,729**	**2,877**	**2,934**	**2,980**
Non-fare revenue	308	287	285	275	270
Net revenue requirement	**2186**	**2,443**	**2,592**	**2,659**	**2,709**

Note: Totals may not add due to rounding.

Efficient operating and maintenance expenditure

In making its draft decision on efficient operating and maintenance expenditure, IPART accepted LEK's recommendation that it is both reasonable and achievable for RailCorp to reduce CityRail's operating costs by 18 per cent per annum by 2011/12 by making efficiency savings. This decision implies that RailCorp can make total efficiency savings of around $1 billion in real terms over the four years to 2011/12, while maintaining or improving its quantity and quality of service. This will bring CityRail's costs more into line with the costs of urban rail systems in Melbourne and Brisbane.

Allowance for a return on capital

The draft decision on the allowance for a return on capital reflects IPART's view that:

- the value of CityRail's regulatory asset base (RAB) as at 1 July 2008 (or its initial capital base) is $3.9 billion and capital expenditure will be rolled into the RAB during the determination period
- CityRail's forecast efficient capital expenditure over the period to in 2011/12 is $7.0 billion (including $2.3 billion for the assets associated with the Epping to Chatswood Rail Link (EPCL))
- an appropriate rate of return for CityRail over the determination period is 7.7 per cent per annum.

In setting the value of ICB, IPART 'drew a line in the sand' at 1 July 2008, to differentiate capital expenditures incurred in the past (which should be considered in setting the ICB) and future capital expenditures (which should be considered when rolling the RAB forward). It then calculated the value of the ICB using the deprival value approach.

IPART's draft decision on the value of the ICB is considerably higher than its preliminary view (set out in the discussion paper). After considering stakeholder comments and more recent data that became available since the discussion paper was published, IPART has revised several inputs to its discounted cash flow calculation for its draft fare determination. In particular, IPART has revised its forecast levels of government subsidies and farebox revenues to reflect higher passenger numbers in 2007/08, which in turn increased the estimates of future external benefits. IPART considers that the draft decision on the value of the ICB reflects a more appropriate set of cash flow forecasts. The net effect of these revisions was to increase IPART's estimate of CityRail's ICB from $1.4 billion to $3.9 billion.

IPART's draft decision is that a real pre-tax WACC of 7.7 per cent reflects IPART's view that the industry weighted average cost of capital is in the range of 6.8 to 8.8 per cent, and that a WACC equivalent to the mid-point of this range is appropriate for CityRail.

Allowances for depreciation and a return on working capital

IPART established an appropriate depreciation rate for CityRail's three asset groups, adopting a straight line approach and then multiplied the annual value of each group by the appropriate rate:

- the ICB was depreciated at the average depreciation rate implicit in RailCorp's statutory accounts (3.7 per cent)
- CityRail's forecast efficient capital expenditure over the determination period not associated with major projects was depreciated at the weighted average depreciation rate of future capital expenditure (5.5 per cent)
- forecast capital expenditure associated with major projects – ie, the EPCL – was depreciated at the rate of 1 per cent (based on an average asset life of 100 years).

1.5 Forecast patronage growth

IPART's decision on CityRail's forecast patronage growth over the determination period has a major impact on the level of fares. This is because IPART has decided to determine the share of CityRail's revenue requirement to be recovered from passengers by considering the value of the external benefits of CityRail, and this value is influenced by the forecast number of passenger journeys. In addition, IPART sets fare levels in order to generate this share of the revenue requirement based on the forecast number of passenger journeys for each fare type. In both cases, higher forecast patronage growth will generally lead to lower fare levels.

IPART's draft decision on CityRail's forecast patronage growth is shown on Table 1.3 below. This decision recognises the recent strong growth in CityRail passengers, but reflects IPART's view that this growth will moderate over the determination period due to uncertainties surrounding growth in CBD employment and CityRail's future capacity constraints.

Table 1.3 Draft decision on forecast patronage growth (%)

	2007/08	2008/09	2009/10	2010/11	2011/12
Patronage change	5.2	5.0	2.5	2.5	2.5

1.6 Value of the external benefits of CityRail

As well as providing direct benefits to their users, passenger rail services generate substantial indirect benefits that accrue to the wider community – such as reduced road congestion, traffic accidents and greenhouse gas emissions. There is general agreement in Australia and other jurisdictions that these external benefits justify government subsidisation of passenger rail fares. For this reason, the value of these external benefits of CityRail was one of the key factors IPART considered in determining the appropriate shares of CityRail's revenue requirement to be funded by taxpayers (through government subsidies) and by passengers (through fares).

IPART's draft decision is that the value of these external benefits in 2007/08 was $1.7 billion, and this value will increase to $1.9 billion in 2011/12, as shown in Table 1.4.

Table 1.4 Draft decision on the value of the external benefits of CityRail ($billion, real $2008/09)

	2007/08	2008/09	2009/10	2010/11	2011/12
External benefits value	1.7	1.8	1.8	1.9	1.9

Source: IPART calculation based on information provided by CRAI.

The draft decision is higher than IPART's preliminary view on the value of the external benefits (set out in the discussion paper)[4] because patronage growth in 2007/08 was higher than the forecast used in calculating its preliminary view. IPART has not changed its approach to this calculation, or included additional external benefits in the calculation.

1.7 Share of the revenue requirement to be funded by passengers through fares

CityRail's revenue from fares and other sources is substantially less than its costs, so the resulting revenue shortfall is made up by taxpayers through government funding. For example, in 2007/08, CityRail received $1.9 billion in government funding. This funding was equivalent to a subsidy of $15 per week from each household in NSW.[5]

After considering the implications of a 70:30 funding share for the affordability of fares and for patronage levels, IPART made a draft decision that 70 per cent of CityRail's annual revenue requirement should be funded by taxpayers through government subsidies, and 30 per cent should be funded by passengers through fares (Table 1.5).

Table 1.5 Passenger funding shares over the regulatory period ($billion, real $2008/09)

	2008/09	2009/10	2010/11	2011/12	Average
External benefits ($m)	1,754	1,807	1,861	1,917	
Revenue requirements ($m)	2,443	2,592	2,659	2,709	
Government funding share	72%	70%	70%	71%	
Passenger funding share	28%	30%	30%	29%	30%

Note: Numbers are presented in real $2008/09. In obtaining the average passenger funding share of 30 per cent over the period IPART has averaged the passenger funding shares in each year and rounded to 30 per cent.

Source: IPART calculation based on information provided by CRAI.

4 Note: the external benefits are presented in $ real 2008/09 consistent with the rest of this report. The discussion papers presented figures in nominal terms. The discussion paper external benefits in $ real 2008/09 were from $1.7 to $1.8 billion for the 2008/09 – 2011/12 period.

5 RailCorp and ABS (Cat No. 2068.0).

IPART considers that there is a reasonable expectation that this 30 per cent share should be maintained , so as a 'rule of thumb' an appropriate passenger share for funding new major capital projects would also be 30 per cent. This implies that if Government invests an additional $1 billion in the CityRail network (for example on a South West Rail Link) an additional $300 million (in net present value terms) would need to be recovered from passengers over the life of the asset. A passenger share that differs from this 'rule of thumb' may be appropriate depending on the individual project in question and the evidence provided regarding the particular external benefits it generates.

1.8 Fare structure

As part of its review, IPART examined the current structure of CityRail fares to see if it could be improved, for the benefit of passengers, the Government, and ultimately the taxpayers who fund a significant proportion of CityRail's costs. It considered two key aspects of the fare structure:

- the spatial aspect, which links the fare charged to the location in which travel is undertaken or the distance travelled by passengers
- the temporal aspect, which links the fare to the time of day or day of week is which travel is undertaken.

IPART has made its draft decision to change both aspects of the current fare structure, so that fares better reflect the different cost of providing services to passengers over different distances, and at different times of the day and week. IPART's revised fare structure, which is consistent with Governments policy on electronic ticketing, will promote more efficient use of the CityRail network and encourage efficient investment in the network. It will also promote more equitable outcomes between passengers travelling different distances and at different times of the day or week, and between passengers and taxpayers. In addition, it will begin to transition CityRail's fare structure towards one that will facilitate electronic integrated ticketing.

Under this new fare structure, the price of a single ticket fare includes a fixed flag-fall charge of $2.50 in 2008/09, plus a variable distance-based charge of 9 cents per kilometre in 2008/09.

IPART's draft decision for off-peak return tickets is that these tickets will be discounted at 50 per cent of the equivalent peak period ticket (compared to the current discount of 30 per cent). This reflects the lower costs of providing CityRail services outside peak periods, and the excess capacity on trains operating at those times. However the periods in which off-peak tickets may be used would be limited to trains that are scheduled to:

- arrive at Central before 7 or after 9:30 in the morning
- depart Central before 4 or after 6:30 in the afternoon/evening
- operate on the weekend or public holidays.

This more accurately reflects the periods of lower demand for CityRail services travelling to and from the CBD in the morning and afternoons, and the lower costs of providing these services.

The price of weekly tickets would be based on the price of 10 single tickets, minus a specified discount. While IPART maintains its preliminary view that the discount applied to weekly tickets should be constant, regardless of the distance travelled, such an outcome is likely to take more than this regulatory period to implement because some of the discounts currently provided to longer-distance commuters are substantial. IPART's draft decision is to implement a consistent discount as a target, but transition individual fares towards that target over time. This decision takes into account affordability concerns and that many existing commuters have made decisions on where to work and live based on existing fare levels.

Box 1.1 IPART's review process

IPART is undertaking extensive public consultation for both the fare review and the review of the economic regulatory framework. As part of this process, it has:

- released an issues paper in October 2007 and received submissions on that paper from the Government and other stakeholders
- released two discussion papers in June 2008 – one on determining CityRail's revenue requirement and how it should be funded, the other on deciding on the structure and level of CityRail's fares – and received submissions on both papers from stakeholders
- held a public roundtable discussion in July, to provide stakeholders with a further opportunity to provide their views on the Government's submission to the fare review, and the issues raised in the two discussion papers
- provided its draft report and recommendations to the Government on improving CityRail's accountability and incentives by strengthening its governance arrangement in October 2008.

IPART is now seeking comments on this draft report and fare determination. The closing date for submissions is 5 November 2008. Details on how to make a submission can be found on page iii (before the Table of Contents).

IPART will release its final report and fare determination in December 2008.

Box 1.2 Summary of IPART's key recommendations on strengthening CityRail's governance arrangements

In its draft report to the Government, *Improving CityRail's accountability and incentives through stronger governance arrangement*, IPART proposed changes to the institutional and governance arrangements for CityRail. IPART noted that the incentives for CityRail to improve its efficiency would be strengthened if these changes are made in addition to the revised approach to determining fares that is set out in this draft fare report and determination.

In particular, IPART recommended the adoption of a 'purchaser provider' model for passenger rail services in the greater Sydney area. Under such model, the Government would clearly specify in service and funding contracts with RailCorp the quantity and quality of passenger rail services it will 'purchase', and the specific funding it will provide for the provision of these services. It would also specify key financial performance outcomes it expects CityRail to deliver.

IPART's recommendations include making CityRail's funding agreement a multi-year document that aligns with the period of IPART's fare determination, and clearly sets out how much funding the Government will provide towards the costs of providing the quantity and quality of services specified in the service contract. In particular, the funding agreement should clearly specify where and when the Government or RailCorp bear the cost or benefit of unexpected changes in CityRail costs or fare revenue in a way that is consistent with the incentives IPART is aiming to create through its fare determination. As part of this, the level of government funding for CityRail should be 'capped' and should reflect IPART's recommendations on CityRail's revenue requirement and forecast farebox revenue.

IPART considers that a purchaser-provider model would better enable the Government to set the strategic direction on key public transport issues. It would also ensure that RailCorp understands exactly what financial and service performance targets the Government expects CityRail to meet, and can be held accountable if performance falls short of these targets. This greater accountability would provide RailCorp and CityRail with stronger incentives to meet the Government's expectations.

1.9 Structure of this report

The following chapters set out and explain IPART's draft decisions and determination in detail:

- Chapter 2 discusses the services, service standards, policies and other obligations that IPART has taken into account in setting fares
- Chapter 3 discusses IPART's draft decisions on how service standards should be incorporated into CityRail's economic regulatory framework
- Chapter 4 sets out IPART's draft decisions on the approach to fare setting, including the decision to use the building block approach to determine CityRail's annual revenue requirement
- Chapter 5 provides an overview of IPART's draft decision on CityRail's annual revenue requirement

- Chapters 6 to 9 explain the draft decisions on the key components of the revenue requirement – including forecast efficient operating and maintenance expenditure, and the allowances for a return on capital, depreciation and working capital
- Chapter 10 explains IPART's draft decision on the forecast growth in CityRail's patronage over the determination period
- Chapter 11 outlines IPART's draft decision on the estimated value of the external benefits generated by CityRail's services
- Chapter 12 discusses IPART's draft decision on the appropriate share of the revenue requirement to be recovered from passengers through fares, and from the taxpayers through government subsidies
- Chapter 13 outlines IPART's draft decision on the appropriate fare structure
- Chapter 14 explains IPART's draft fare determination, including the price for individual tickets over the 1 January 2009 to 31 December 2012 determination period
- Chapter 15 explains the likely impact of price changes on the affordability of fares.

2 CityRail's regulatory and policy context

CityRail provides passenger rail services within the greater Sydney region. It provides rail services on the Sydney suburban network and intercity services to Newcastle and Dungog in the north, Lithgow and Bathurst and Goulburn in the west and south west, and Bomaderry (Nowra) in the south.

Because CityRail is a state-owned, monopoly provider of passenger rail services, IPART regulates the maximum fares it can charge for its services. In addition, the MoT, the Independent Transport Safety and Reliability Regulator (ITSRR) and several other government agencies influence CityRail's operations through regulation or the implementation of government policy.

The sections below describe the broad regulatory and policy context in which CityRail operates, including its legislative framework, its relationship to other government agencies (including IPART), and relevant NSW Government policy.

2.1 CityRail's legislative framework

CityRail is a division of RailCorp, which was established by the NSW Government as a Statutory State Owned Corporation (SSOC). RailCorp's legislated objectives indicate that it should provide safe and reliable services 'in an efficient, effective and financially responsible manner' and 'at least as efficiently as any comparable business' (see Box 2.1). The SSOC framework provides RailCorp with a corporate structure that is designed to allow it to manage its day-to-day operations independently of the Government and make strategic decisions in consultation with the Government.

Box 2.1 Legislative background

RailCorp was formed on 1 January 2004 under the *Transport Administration Act 1988* (TAA). It is defined as a SSOC under Schedule 5 of the *State Owned Corporations Act 1989* (SOCA). RailCorp's principle objectives under section 5 of the TAA are:

- to deliver safe and reliable railway passenger services in NSW in an efficient, effective and financially responsible manner, and
- to ensure that the part of the NSW rail network vested in or owned by RailCorp enables safe and reliable railway passenger and freight services to be provided in an efficient, effective and financially responsible manner.

The TAA also identifies other objectives for RailCorp, including:

- to maintain reasonable priority and certainty of access for railway passenger services
- to promote and facilitate access to the part of the NSW rail network vested in or owned by RailCorp
- to be a successful business and, to this end:
  - to operate at least as efficiently as any comparable business, and
  - to maximise the net worth of the State's investment in the State owned corporation
- to exhibit a sense of social responsibility by having regard to the interests of the community in which it operates
- where its activities affect the environment, to conduct its operations in compliance with principles of ecologically sustainable development contained in section 6(2) of the *Protection of the Environment Administration Act 1991*, and
- to exhibit a sense of responsibility towards regional development and decentralisation in the way it which it operates.

The principle objectives are given more importance than RailCorp's other objectives. Section 20E of the SOCA, which outlines the principle objectives of SSOCs, does not apply to RailCorp.

RailCorp's performance benchmarks and targets are set out each year in its Statement of Corporate Intent (SCI)[6] and the Rail Performance Agreement (RPA). The SCI is an agreement between RailCorp and its voting shareholders. It is intended to be 'the primary instrument guiding the financial and management accountabilities of RailCorp'.[7] It must include:

- performance benchmarks for RailCorp's rail services and rail infrastructure agreed to by the board and the portfolio Minister (also known as the RPA)
- financial and other performance benchmarks agreed to by the board and the voting shareholders, in consultation with the portfolio Minister.

6 The Statement of Corporate Intent for the year ending June 2007 is an attachment to IPART's October 2007 Issues Paper.

7 Second reading of the *Transport Administration Amendment (Rail Agencies) Bill* by The Hon. Michael Costa on 12 November 2003.

IPART's draft report to the Government, *Improving CityRail's accountability and incentives through stronger governance arrangements*, explains these agreements in more detail and makes recommendations for improvements to the agreements so that they:

- provide the Minister for Transport an enhanced role in clearly establishing the Government's strategic objectives for CityRail and monitoring CityRail's performance against other objectives
- clearly explain the Government's objectives and priorities for CityRail, and specify the financial performance targets it expects CityRail to achieve
- clearly specify the quantity and quality of service CityRail is expected to provide for an agreed level of funding
- enable the Government to hold CityRail accountable for its financial and service performance.

2.2 CityRail's relationship to other government agencies

A relatively large number of government agencies affect CityRail's operating environment (see Figure 2.1). The Government has declared CityRail's regular passenger services to be a government monopoly service.[8] As such, IPART currently reviews CityRail's fares annually, using its powers under Section 11(1) of the *Independent Pricing and Regulatory Tribunal Act 1992* (IPART Act). IPART's role is to determine maximum fares for CityRail's services. In fulfilling this role, IPART is required to consider the matters outlined in Section 15 of the IPART Act (see Box 2.2).

Box 2.2 Matters considered by IPART in determining CityRail's fares

Section 15 of the IPART Act indicates the matters that IPART must consider in making its determination.[9] These matters relate to:

- **Consumer protection** — protecting consumers from abuses of monopoly power; standards of quality, reliability and safety of the services concerned; effect on inflation.
- **Equity** — equity between users and non-users; social impact of decisions.
- **Economic efficiency** — encouraging greater efficiency in the supply of services; the need to promote competition; effect of functions being carried out by another body.
- **Financial viability** — cost of providing the services; ensuring an appropriate rate of return on public sector assets, including dividend requirements.
- **Environmental protection** — promoting ecologically sustainable development via appropriate pricing policies; considering demand management and least-cost planning.

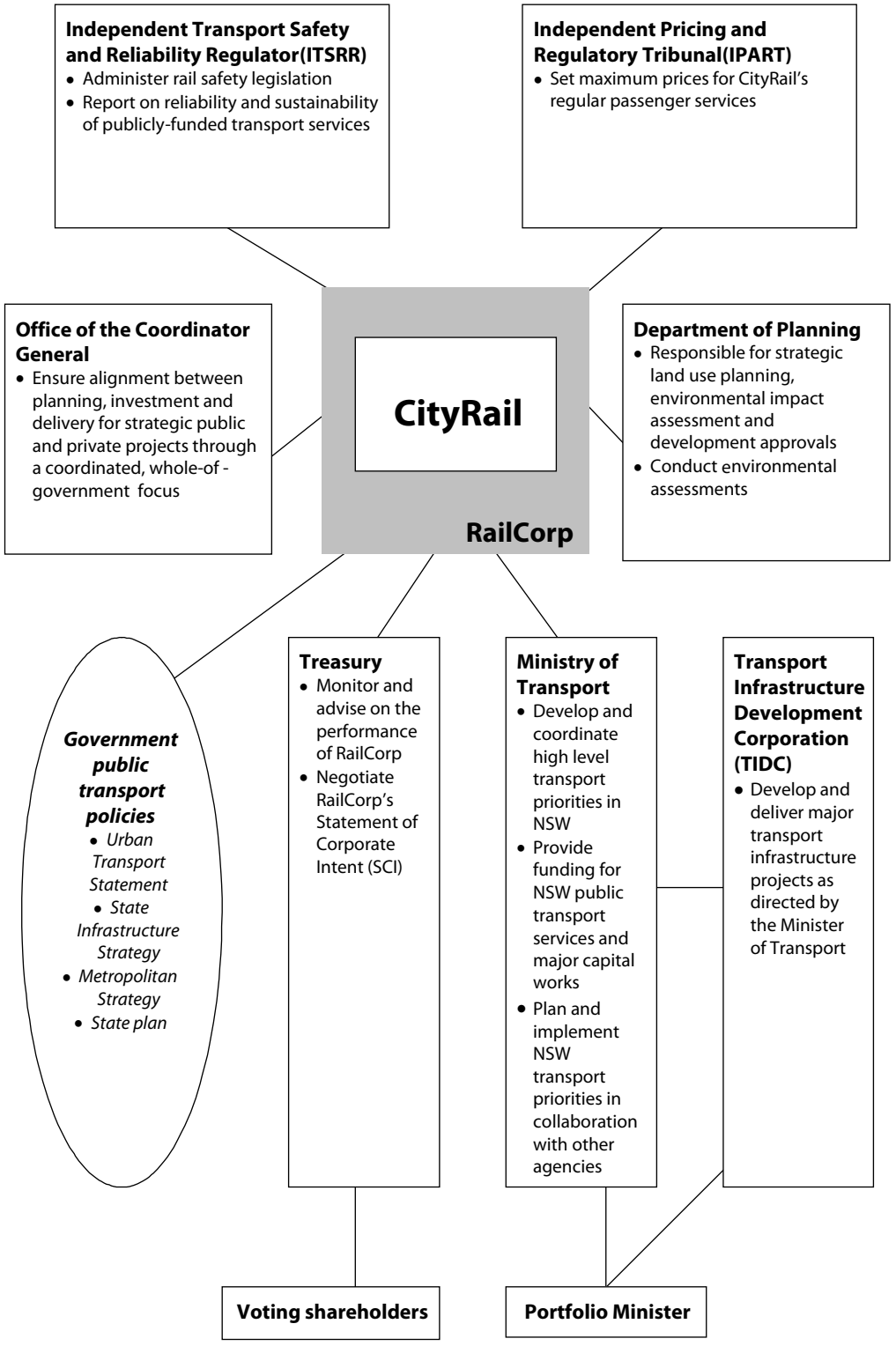
8 CityRail is declared as government monopoly services by *Independent Pricing and Regulatory Tribunal (Passenger Transport Services) Order 1998* (Gazette No. 38, 27 February 1998, p 1015).

9 Appendix C sets out these Section 15 requirements of the IPART Act have been addressed by this draft determination.

Under the current institutional and governance arrangements, MoT provides policy advice and manages the funds allocated for CityRail services in the State budget. The Minister for Transport in consultation with RailCorp determines the performance benchmarks, targets and reporting requirements for CityRail (in the RPA). On the financial side, the Director-General of MoT and RailCorp enter into a funding agreement which sets out the level funding to RailCorp, payment arrangements and reporting requirements. IPART's recommendations on strengthening the institutional and governance arrangements for CityRail suggest that the Minister of Transport and MoT should play an enhanced role in clearly establishing the Government's strategic objectives for CityRail and monitoring CityRail's performance against those objectives.

ITSRR administers the *Rail Safety Act 2002* and ensures that RailCorp has safety management systems that comply with this Act and conducts rail safety audits, inspections and investigations. ITSRR also provides advice to the Government, publishes reports on CityRail's reliability, and conducts an annual survey of CityRail passengers.

Figure 2.1 Government agencies and policies that impact on CityRail's operations



Source: IPART.

2.3 NSW Government policy that relates to CityRail

The NSW Government's public transport policy features prominently in several recent strategic plans and statements, including:

- the Premier's Urban Transport Statement
- the State Plan
- the Transport Strategy for Sydney (part of the Metropolitan Strategy)
- the State Infrastructure Strategy.

Together, these policies outline the NSW Government's priorities, strategic imperatives and objectives. For instance, the Transport Strategy for Sydney indicates that one of the Government's transport objectives is to 'influence travel choices to encourage more sustainable travel'.[10] The Urban Transport Statement adds that 'increasing the number of daily trips on public transport is a priority'[11] while recognising that 'maintaining public transport systems at high levels of reliability'[12] is a precondition for greater patronage. The State Plan sets the following definitive public transport targets:

- to increase the share of trips made by public transport to and from the Sydney CBD during peak hours to 75 per cent (72 per cent in 2006) by 2016
- to increase the proportion of total journeys to work by public transport in the Sydney metropolitan region to 25 per cent by 2016 (20-22 per cent in 2006)
- to consistently meet public transport reliability targets.[13]

Other Government objectives include improving transport between Sydney's centres, improving the existing transport system and improving transport decision-making (including planning, evaluation and funding).

CityRail is integral to the Government's public transport policy. Several strategies focus on investment that will directly impact CityRail's network, including:

- implementing the Metropolitan Rail Expansion Program (MREP), now modified with the South West Rail Link
- completing the EPCL
- completing and extending the Rail Clearways Program to include duplication of the Richmond line[14]
- the acquisition of $2.5 billion of new rolling stock by 2013.[15]

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10 NSW Department of Planning, *City of cities: A plan for Sydney's future*, December 2005, p 160.
11 Iemma, M, *Urban transport statement: Responding to the challenges of travel and transport within and across Sydney*, November 2006, p 2.
12 Ibid.
13 NSW Government 2006, *State Plan*, November, p 58.
14 MoT submission on Issues paper, May 2008, p 6.
15 Iemma, M, *Urban transport statement: Responding to the challenges of travel and transport within and across Sydney*, November 2006, p 19.

The State Infrastructure Strategy foreshadows Government capital expenditure of $5.4 billion on rail-related infrastructure between 2006/07 and 2009/10.[16]

IPART has considered the Government's policies on passenger rail services and public transport as part of this review of CityRail's economic regulatory framework.

16 NSW Treasury, *State infrastructure strategy: New South Wales 2006-07 to 2015-16*, 2006, p 36.

3 Service standards

As Chapter 2 noted, IPART is required under the IPART Act to consider service standards in making its determination on CityRail fares. In addition, under the terms of reference for the review of CityRail's regulatory framework, IPART is required to consider and recommend how service standards can be incorporated into the regulatory approach.

IPART notes that service standards – that is, the quantity and quality of service CityRail is required to provide – are fundamental to determining the efficient costs of providing CityRail services over the determination period. In general, these costs will be higher if CityRail provided more frequent, more extensive or higher quality services, and lower if it provided less frequent, less extensive or lower quality service.

IPART has reviewed CityRail's efficient costs (discussed in Chapters 6 and 7) and concluded that CityRail is able to provide the same quantity and quality of service for a lower level of costs by improving its level of cost efficiency. Therefore, in making its draft determination, it has assumed that CityRail will provide the same quantity and quality of service as is currently provided but that both quantity and quality of service will improve over the next four years as planned expenditures such as clearways, ECRL and new rolling stock come into operation.

Based on its review of the broad economic regulatory framework for CityRail, IPART concluded that the current framework does not clearly specify the quantity and quality of service CityRail is expected to provide, or ensure that CityRail's performance against those expectations is adequately monitored. This means it is not possible for the Government to hold RailCorp accountable for CityRail's service performance. It also makes it difficult for IPART to accurately estimate the efficient costs of providing CityRail services.

IPART considers it important to better incorporate service standards into the economic regulatory framework, and that the most effective way to do this is by strengthening the current governance arrangements. In particular, IPART considers the Government should improve the current RPA so that it becomes an effective service contract. This would require the RPA to include specific, measurable targets for both the quantity and quality of service CityRail is to provide.

The section below provides an overview of IPART's draft decision on incorporating service standards into the regulatory framework. The subsequent sections discuss IPART's considerations in reaching this draft decision.

3.1 Overview of draft decision on incorporating service standards into the regulatory framework

IPART has made a draft decision to recommend that services standards be incorporated into the regulatory framework by improving the RPA between RailCorp and the Minister for Transport, so it becomes an effective service agreement.

IPART's draft report to the Government, *Improving CityRail's accountability and incentives through stronger governance arrangements*, discusses the necessary improvements to the RPA in detail, and sets out IPART's specific recommendations. These recommendations include (among other things) that:

- the RPA clearly specify performance targets for both the quantity and quality of service CityRail is required to provide
- the Government monitor and evaluate CityRail's performance in meeting these targets.

IPART considers that this approach is the most effective way to incorporate service standards into the regulatory approach. These improvements will ensure that RailCorp can be held accountable for CityRail's service performance, and does not respond to incentives for improved efficiency by allowing service standards to deteriorate. They will also enable IPART to more accurately estimate CityRail's efficient costs for future fare determinations.

IPART has recommended that to specify the quantity and quality of service, the Government should set specific, measurable targets for the following indicators:

- minimum frequency of services:
  - by line
  - in various time bands (am/pm peak, between peaks, evening)
  - by direction (to/from CBD)
  - on weekdays and weekends/public holidays, and
  - by the time of the first and last services
- peak and off-peak train service kilometres and carriage service kilometres
- peak and off-peak patronage (passenger journeys)
- on-time running, skipped stops, and cancelled services:
  - in peak and off-peak periods
  - for each line of the CityRail network
- total delay minutes in peak and off-peak periods
- average timetabled train speed, as a proxy for journey time

- peak period crowding for each line of the CityRail network
- offences against the person[17], derived from the Bureau of Crime Statistics and Research data
- indices of customer perceptions of safety, information provision and train cleanliness based on the results of ITSRR's annual passenger surveys
- percentage of fleet less than 10 years old, as a proxy for passenger comfort.

Rail safety is a vital, non-negotiable aspect of service. IPART has not reviewed rail safety regulation which is the responsibility of ITSRR. RailCorp is legally obliged to meet safety requirements under the *Rail Safety Act 2002.* However, in this draft fare determination, IPART has determined CityRail's revenue requirements for the next four years based on CityRail operating its rail network safely and at the levels determined by the safety regulations.

In developing its recommendations, IPART included only indicators for which a time series of data is available, to ensure that the Government has the necessary data to set reasonably ambitious but achievable targets for CityRail's performance. It also included indicators that reflect the aspects of service quality that are most important to passengers, based on the results of passenger surveys by the ITSSR and RailCorp.

In relation to monitoring and evaluation, IPART has recommended that:

- CityRail continue to report its performance on its website, against the enhanced range of targets and indicators in the improved RPA
- annual CityRail passenger surveys continue to be undertaken and the results publicly reported
- ITSRR or MoT continue to produce an annual public report against benchmarks and indicators in the RPA.

In addition, IPART proposes to publish an annual fares and services report which will publicly report on the fares CityRail will charge for the forthcoming year and the service levels it delivered over the previous 12 months.

In IPART's view, improved monitoring and evaluation is a necessary part of the new economic regulatory framework, to ensure CityRail can be held accountable for its service performance. Public reporting and scrutiny of this performance will also act as a substitute for competitive pressure, counterbalancing any tendency for CityRail to let its quantity or quality of service decline in pursuit of cost savings, and creating effective incentives for it to maintain or improve its service performance.

[17] 'Offences against the person' includes assault, robbery, sexual offences and stealing from a person which occurs on or next to railway property. Statistics reflect incidents reported and recorded by NSW Police.

3.2 Stakeholder views

A range of stakeholders expressed views on CityRail's service performance in submissions. IPART also held a service standards workshop with key organisations to discuss the aspects of service which might be included in a performance agreement. Several individuals submitted that significant CityRail fare increases were not justified because in their view, CityRail's recent performance has been poor.[18] For example, they criticised:

- the slow speed of CityRail services, and the slowing of services (to improve on time running)[19] relative to other operators[20]
- train crowding[21]
- late and cancelled trains, and how CityRail defines 'on-time' running[22]
- the cleanliness of trains[23]
- the low frequency of services/reductions in late night services.[24]

Other submissions and stakeholders at the service standards workshop expressed support for clearer specification of the service standards CityRail is expected to meet. For example, the Western Sydney Regional Organisation of Councils (WSROC) supported the specification of service quality measures, such as quantity of service, punctuality in delivering planned upgrades, and performance indicators covering customer satisfaction.[25] The Blue Mountains Commuter and Transport Users Association (BMC&TUA) and APT both argued that an indicator for on-time running outside peak periods should be considered,[26] as in their view it is inappropriate to focus solely on peak period performance.

18 M Wellings submission, July 2008; P Laird submission, July 2008 – with particular reference to the South coast, p 3; E Camillieri submission, June 2008, and R Stedman submission, June 2008.
19 BMC&TUA submission on Discussion papers, July 2008.
20 P Mills submission, July 2008.
21 R Stoddart submission, July 2008.
22 Submissions from BMC&TUA, Federation of Parents and Citizens' Associations of NSW, and Frances Hession.
23 E Camilleri submission, July 2008.
24 Federation of Parents and Citizens' Associations of NSW submission, July 2008.
25 WSROC submission on Issues paper, March 2008, p 5.
26 BMC&TUA submission on Issues paper, March 2008 pp 4-5, and APT submission on Issues Paper, March 2008, p 2.

3.3 IPART's considerations in making its draft decision

IPART considered stakeholders' views on CityRail's recent service performance, and examined objective evidence on this performance. It found that overall, the quality of service recently provided by CityRail is largely consistent with the service targets currently included in the RPA, except in relation to crowding on trains. (See Box 3.1 for more detail.) However, IPART understands that CityRail's service performance varies across the network, and its performance on some lines is worse than on others. Therefore, some stakeholders' experience may be inconsistent with IPART's findings. In addition, IPART notes that indicators and targets for some of the aspects of service criticised by stakeholders are not currently included in the RPA.

IPART also notes that the Government has engaged the Boston Consulting Group to develop a Customer Service Improvement Program (CSIP) for CityRail, which is intended to deliver improvements in service quality and customer satisfaction. IPART understands that some CSIP initiatives could potentially be implemented within CityRail's current budget through making efficiency savings. IPART is awaiting further advice on the detail and early results of the program.

In making its draft decision, IPART considered whether there should be some form of recompense for passengers if CityRail's service levels fall well below expected levels - for example, by delaying a fare increase or offering a fare rebate or free travel to passengers when and where service falls below a certain level.

However, IPART has decided not to pursue this option at present. IPART considers that more clearly specifying the quantity and quality of service CityRail is expected to provide, and monitoring and public reporting on its performance, should provide a strong incentive for CityRail to maintain or improve its service levels. IPART also considers that the options for providing compensation for lower than expected service levels are not appropriate or practical at this time.

For example, delaying a fare increase would effectively shift costs from passengers to taxpayers, and is likely to lead to larger fare increases in the future to 'catch up' with costs. IPART has made a draft decision on the appropriate share of CityRail's costs to be paid by passengers and by taxpayers, based on its estimate of the value of the external benefits created by CityRail services (see Chapter 12). Delaying a fare increase would also distort this funding share and, crucially, effectively reduce CityRail's farebox revenue and the funds the Government has available to allocate to other important areas (such as investment in transport, health and education). Further, a poor service performance by CityRail might indicate a need for additional investment in its network, and if this were undertaken in the context of delayed fare rises, the funding share of passengers and taxpayers would move further away from that determined as appropriate by IPART.

In addition, with CityRail's current ticketing system, offering a fare rebate or free travel to passengers would be administratively complex and therefore impractical. However, further consideration could be given to this approach when electronic ticketing is introduced. IPART notes that in Melbourne, passengers with monthly or longer periodical rail tickets are entitled to one or two free daily tickets if the network-wide performance falls below specified levels. However, it considers that a fare rebate system would have some practical advantages over free travel. For instance, it would allow the rebates to be offered only to passengers affected by the poor service (for example, those travelling at particular times or on affected lines). In addition, it could potentially be introduced through a customer charter. Nevertheless, widespread fare rebates for poor service performance would reduce CityRail's revenue and thus might have implications for the availability of funds to improve services.

Box 3.1 IPART's assessment of CityRail's recent service performance

Currently, RailCorp's RPA includes a small number of service performance targets for CityRail. These targets relate to:

- the reliability of CityRail services, measured by
  - the percentage of suburban train services and intercity train services that run in the am and pm peak periods and pass through Central station which arrive at their final destination within five minutes or six minutes of the timetabled time respectively (target: 92 per cent, based on combined result for suburban and intercity services). In the am peak, services are measured when they arrive in the city either at Central or Wynyard. In the pm peak they are measured at their destination.
  - the percentage of timetabled station stops that are skipped on suburban train services that operate during the morning and afternoon peak periods (target: 1 per cent).
  - the percentage of timetabled train services that are cancelled on suburban train services that operate during the morning and afternoon peak periods (target: 1 per cent).
- the extent of overcrowding on trains, measured by the percentage of suburban trains that operate during the morning and afternoon peak periods that have a load factor of more than 135 per cent (target: 5 per cent by 2008).

Based on its examination of data on CityRail's performance in recent years, IPART found that CityRail has consistently met its network-wide reliability targets. However, IPART recognises that the level of reliability varies across the network.

IPART also found that CityRail has not met the target for crowding on trains, and the incidence of crowded trains has risen. Again, there is variation across the network. There has been a large increase in CityRail patronage which, combined with limited availability of rolling stock, has led to higher incidences of crowding.

Passenger perceptions about CityRail's level of service (measured through annual surveys undertaken by ITSRR indicate improved or sustained levels of satisfaction with many of the aspects of CityRail service rated by respondents as important. For example, in 2006 and 2007 there were sustained significant increases in proportions of people with expectations met for journey time (80 per cent in 2007), frequency of trains (69 per cent) and punctuality (68 per cent). In 2008 there continued to be a significant increase in satisfaction with punctuality (73%). Levels of satisfaction with journey time (81%) and train frequency (69%) were maintained. There was however a significant decrease in the proportion of people with expectations met for crowding in peak trains (35-36 per cent in 2007 and 2008 compared with 41 per cent in 2006).

IPART's draft fare determination includes funding allowances for operating and capital expenditure aimed at maintaining or improving the reliability and capacity of CityRail services over the determination period – for example, by completing the key 'clearways' projects and the EPCL. In addition, more than 600 new carriages are scheduled to come into service between 2010 and 2013. Together, these investments should help CityRail maintain or improve its service performance, particularly on the target for crowding on trains. However, even with these new investments it may be difficult for CityRail to achieve its targets for crowding on trains on particular lines if the recent high rate of growth in peak period patronage continues.

Appendix A provides a more detailed assessment of CityRail's recent performance against the targets outlined above, the indicators proposed by IPART for inclusion in future RPAs and ITSRR surveys.

4 Approach to fare setting

As part of its investigation of the economic regulatory framework for CityRail, IPART reviewed the approach it uses to set CityRail fares. This approach can be defined as the rules and methodologies a regulator uses to determine, monitor and change fares for regulated services over a determination period. Different approaches to fare setting can create different incentives for the regulated service provider. IPART considered a range of approaches, and compared them to its assessment criteria for this review (see Appendix F). These criteria reflect the terms of reference for the review, and include creating effective incentives for CityRail to improve its economic efficiency, and be more disciplined in its spending.

IPART considered and made draft decisions on each of the key components of the approach to fare setting, including:

- the length of the determination period and the date on which regulated fares will change
- the approach for determining CityRail's annual revenue requirement
- the approach for determining what share of the annual revenue requirement should be recovered from passengers through fares
- the approach for converting this share of the revenue requirement into fares
- whether there is a need for regulatory mechanisms to allow for additional fare changes during the determination period, such as a cost pass-through mechanism
- the approach for monitoring CityRail's compliance with the fare determination over the determination period.

The section below provides an overview of IPART's draft decisions on each of these components. The subsequent sections discuss each decision and IPART's considerations in relation to it in more detail.

4.1 Overview of draft decisions on approach to fare setting

IPART's draft decisions on the approach to fare setting for CityRail represent major revisions to the approach used in previous determinations. IPART is confident that the revised approach is more rigorous and robust, and will provide IPART with more scope to create effective incentives for CityRail to improve its economic efficiency and be more disciplined in its spending. However, as discussed in Chapter

1 it is important to note that the effectiveness of the incentives IPART aims to create through its approach to fare setting will be enhanced if the Government makes changes to the institutional and governance arrangements for CityRail, so all elements of the economic regulatory framework are aligned. IPART's recommended changes to these arrangements are discussed in its draft report to the Government, *Improving CityRail's accountability and incentives through stronger governance arrangement.*

IPART has made a draft decision to introduce a multi-year determination period. For this determination, it will set CityRail's fares for four years, from 1 January 2009 to 31 December 2012. During this period, fares will be adjusted annually, at the start of each calendar year (ie, on 1 January, or the nearest practicable date). IPART considers that a multi-year determination period will result in benefits for RailCorp management, the Government and CityRail passengers.

In relation to the approach for determining CityRail's annual revenue requirement, IPART has made a draft decision to use the building block approach. It will then determine the appropriate share of this revenue to be recovered from CityRail passengers through fares by estimating the value of the external benefits of CityRail services, and considering patronage and affordability issues. IPART considers this approach has clear advantages over alternative options. For example, it takes account of the full economic costs of providing CityRail services and the external benefits of these services in a rigorous and transparent way. IPART's draft decision on the approach for determining the share of revenue to be funded from passengers through fares and taxpayers through Government subsidies is set out Chapter 12.

In relation to the approach for converting the share of CityRail's revenue requirement to be recovered from passengers into fares, IPART has made a draft decision to set maximum fares for each CityRail ticket, as it has done in previous determinations. In contrast to its recent decisions in the energy sector, IPART will not to introduce a weighted average price cap or revenue cap. As a result, CityRail will not have the pricing flexibility to alter the relative prices of CityRail tickets. IPART considers setting maximum fares for each CityRail ticket is the most appropriate approach at this time, as it will ensure that its preferred fare structure is implemented. This approach will mean that the fixed and variable components of CityRail tickets will reflect the cost of providing the services concerned. It will also assist CityRail in transitioning to electronic ticketing.

In relation to whether there is a need for regulatory mechanisms to allow for additional fare changes during the determination period, IPART has made a draft decision not to introduce any such mechanisms. In particular, it decided not to introduce cost pass-through mechanism (or cost risk sharing mechanism) that would have allowed CityRail to pass-through to its passengers cost increases that are outside its control. IPART considers that this decision will clearly allocate the cost risk between CityRail and its passengers, and will encourage CityRail to 'live within its budget'.

In relation to the approach for monitoring CityRail's compliance with the fare determination, IPART has made a draft decision to require RailCorp to provide an undertaking that CityRail fares will comply with the determination from 1 January 2009 and a copy of its proposed fares by 15 November each year, as well as information on actual services levels by 30 October each year of the determination period. The new adjusted fares for the coming year and information on CityRail's service levels for the prior year will be provided in IPART's prices and services report to be released in December each year.

4.2 Length of determination period

IPART's draft decision is to adopt a multi-year determination period of four years, from 1 January 2009 to 31 December 2012.

During this period, fares will be adjusted at the start of each calendar year (ie, on 1 January or the nearest practicable date).

4.2.1 IPART's preliminary views

In its discussion paper, IPART expressed preliminary views that multi-year determinations are preferable to annual determinations and fares should be adjusted at the start of each calendar year within the determination period.

4.2.2 Stakeholder responses

Most stakeholder submissions supported moving from annual to multi-year determinations, to provide greater funding certainty for RailCorp management, encourage better planning, and provide a more strategic approach to managing performance.[27] Several participants at IPART's roundtable, including RailCorp and Council of Social Service of New South Wales (NCOSS) also expressed support for a multi-year determination.[28]

In relation to the date for fare changes, most stakeholders noted that fare changes at the start of the calendar basis were preferable to the financial year, to align CityRail fare changes to those of other transport modes such as buses and ferries.[29] Several participants at IPART's round table also indicated a preference for calendar year fare changes, including RailCorp and NCOSS.[30]

27 MoT submission, July 2008, p 3, APT submission, July 2008, p 4, and WSROC submission, July 2008, p 2.
28 IPART roundtable, 31 July 2008, transcript, p 9 and 17.
29 MoT submission, July 2008, p 3, APT submission, July 2008, p 4, and WSROC submission, July 2008, p 2.
30 IPART roundtable, 31 July 2008, transcript, p 9 and 17.

4.2.3 IPART's considerations in making its draft decisions

IPART's draft decisions are that a multi-year determination period of four years from 1 January 2009 to 31 December 2012 is appropriate, and that fares should be adjusted at the start of each calendar year within the determination period (ie, on 1 January or nearest practicable date).

In making its decision on the length of the determination period, IPART took account of stakeholders' broad support of multi-year determinations. IPART recognises that factors such as CBD employment growth and petrol price volatility affect the patronage of CityRail services and ultimately the value of the external benefits these services provide, and that this potentially increases the risk that CityRail's actual patronage, farebox revenue and external benefits will differ from the forecasts IPART used in setting fares. However, it notes that CityRail's patronage depends on a range of factors, not just petrol prices.[31]

In addition, IPART recognises the other risks associated with longer term determinations such as the risk that unforeseen events may mean that actual levels of operating and capital expenditure may differ from those forecast and adopted as part of the determination. However, IPART considers that these risks are outweighed by the benefits of longer term determinations when compared to annual determinations.[32] These benefits include:

- Facilitating long-term planning and providing greater budget certainty, which enables better integration of operating and capital expenditure. LEK indicated that short determination periods (and therefore short-term funding cycles) were not conducive to efficient capital planning, and thus can result in a focus on short-term fixes rather than long-term strategic decisions with delayed but sustainable returns.[33] This is unlikely to result in an optimal mix of operating and capital expenditure and does not encourage the supply of services at least cost.[34]
- Providing greater scope for creating incentives for CityRail to pursue efficiency improvements. A longer determination period allows CityRail time to establish management programs that can deliver on any efficiency targets built into the fare determination. It also provides a realistic timeframe over which CityRail's performance in meeting these targets can be measured.
- Providing government and taxpayers with greater certainty about the extent to which the provision of CityRail services will require government funding over time.

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31 For example, these factors include employment (particularly CBD employment); the availability, desirability and cost of alternate transport options (including cost of parking and petrol, levels of congestion); the cost of CityRail services; and the quality of these services.

32 IPART notes that uncertainty surrounding demand for water as a result of the drought during its 2005 review of metropolitan water tariffs did not necessarily mean that a longer determination was inappropriate. Simply, the risks associated with a longer term determination need to be compared to the benefits.

33 LEK, *Cost Review of CityRail's Regular Passenger Services*, report to IPART, June 2008, p 10.

34 However, IPART recognises that a determination period of 4 – 5 years is still not long, when compared to the life of CityRail's assets.

- Providing passengers with a better indication of how their funding contributions to the provision of CityRail services (through fares) are likely to change over time. This may assist passengers in making future housing and employment decisions.
- Reducing the direct costs of regulation in terms of IPART, RailCorp and stakeholder resources.

IPART notes that these arguments are consistent with the Government's and other stakeholders' views, as well as the recommendations of the Parry Inquiry into public transport.

IPART considers that a determination period of four years is sufficiently long to provide better long-term strategic decision-making and planning, and for management to initiate programs to deliver on targeted efficiency savings. It is also a reasonable timeframe over which performance can be measured.[35]

4.3 Approach for determining CityRail's annual revenue requirement

IPART's draft decision is to use the building block approach to determine CityRail's annual revenue requirement. That is, IPART has determined that CityRail's annual revenue requirement should include efficient operating costs, a return of capital or depreciation, a return on capital and a return on working capital.

4.3.1 IPART's preliminary views

IPART's preliminary view was that the building block approach is the most appropriate methodology for determining CityRail's revenue requirement given the objectives for this review.

[35] This determination will run from 1 January 2009 to 30 December 2012. While it cannot bind future Tribunal decisions, IPART considers that the next determination would commence on 1 January 2013. However, the current draft decision does not provide cost and revenue information for the period 1 July to 30 December 2012. Therefore, the next fare determination will need to consider how any under recovery of revenue during this six month period is recovered through fare revenue in the next fare determination.

4.3.2 Stakeholder responses

Stakeholders expressed a range of views about the most appropriate methodology for determining CityRail's annual revenue requirements. For example in its submission, Action for Public Transport (APT) supported IPART's view that the building block approach is most appropriate because it is the only option that considers both operating and capital costs and thus the full costs of providing CityRail services.[36] The BMC&TUA recognised that there could be value in the building block approach.[37]. Several participants at IPART's roundtable, including RailCorp and the MoT,[38] also expressed support for the building block approach.

However, some stakeholders had reservations about IPART's preferred approach. The Rail Tram and Bus Union (RTBU) agreed it was important to consider both the operating and capital costs of providing CityRail services, but put the view that only operating costs should be recovered from passengers.[39] It argued that capital investment costs should be borne by taxpayers alone.[40] WSROC noted that while it is not necessarily opposed to the building block approach, this approach is more complex than the operating and maintenance approach.[41] The RTBU and WSROC also noted that it is important to establish who is accountable for major capital decisions, and that it may be more appropriate to focus on the costs over which CityRail has day-to-day control.[42] In addition, several stakeholders at the roundtable noted that the operating and maintenance approach may provide for lower fares for passengers.[43]

MoT observed that in discussing its preliminary views, IPART placed most weight on the first three assessment criteria (encourages CityRail to be more disciplined in its spending, and to reduce the costs of providing its services, and promotes economic efficiency). It requested that IPART indicate how the various options perform against the other seven criteria.[44]

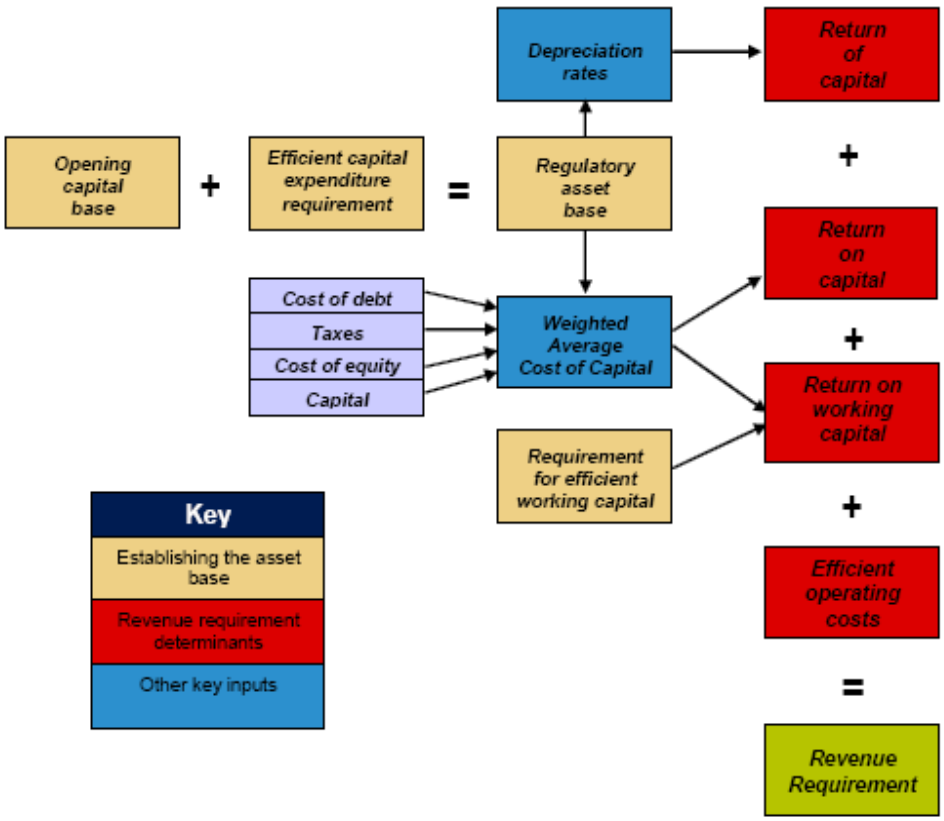
4.3.3 IPART's considerations in making its draft decision

IPART's draft decision is to use the building block approach to determine CityRail's annual revenue requirement. (See Box 4.1 for an overview of this approach.) It considers that the building block approach is the most appropriate option for CityRail at this time, as it is more consistent with IPART's assessment criteria for this review than the alternative options (See Appendix F for an assessment of the three methodologies outlined in the issues paper against each of the review's assessment

36 APT submission, 9 July 2008, p 4.
37 BMC&TUA submission to CityRail Regulatory Framework Review, February 2008, p 8.
38 IPART roundtable, 31 July 2008, transcript, pp 9 and 17.
39 IPART roundtable, 31 July 2008, transcript, p 16.
40 RTBU submission, July 208 p 3, plus IPART roundtable, 31 July 2008, transcript, p 14.
41 WSROC submission to IPART, p 2.
42 NSW MoT submission on Issues Paper, May 2008, p 11.
43 IPART roundtable, 31 July 2008, transcript, p 16.
44 MoT submission, July 2008, pp 3-4.

criteria). For example, it is the most suitable for creating incentives for improving the economic efficiency of CityRail so as to reduce the costs of providing its services without reducing the quality, reliability and safety of these services. It is also the most consistent with government policy objectives, and better promotes greater transparency of and accountability for all the costs of providing CityRail services. It should also be noted that in capital intensive industries such as rail it is a distortion to ignore the cost of capital.

Box 4.1 Building block approach to determining revenue requirement



While supporting its use, IPART recognises that the building block has its disadvantages. It is most commonly criticised as being an intrusive form of regulation. By focusing on the particular costs of the regulated business it may also fail to adequately take into account industry or economy wide improvements in efficiency and productivity reducing its incentive properties.

The building block approach ensures that all of the costs associated with providing CityRail services – both operating and capital expenditure (including capital items within and beyond CityRail's control) – are measured and monitored in a way that is rigorous and transparent. In addition, it ensures that these costs (and the impact of changes in them on fares) are transparently disclosed. These characteristics mean that the building block approach can be used effectively to encourage greater discipline in CityRail's spending and promote economic efficiency. For example, the building block approach can be used to encourage greater discipline in spending by:

- Improving transparency and public scrutiny of CityRail's costs and ability to 'live within its budget'. This should encourage CityRail to better forecast its operating and capital costs and manage its expenditure in line with these forecast costs, and increase its accountability for decisions that affect its costs.
- Providing transparent productivity improvement targets by cost category will set clear performance management targets for RailCorp management. If CityRail is able to better these targets and retain the benefits over the period of the determination the incentive properties of the building block approach will be strengthened.
- Creating a transparent link between the size of CityRail's revenue requirement and the level of fares. For example, once IPART decides what share of the revenue requirement is to be funded through fares (discussed in section 4.4 below), any increase in this revenue requirement due to an increase in operating or capital expenditure by CityRail will lead to an increase in fares.[45] This link should signal to stakeholders that service improvements involving significant capital investment (such as extending the network or upgrading rolling-stock) are likely to entail significant fare increases. These increases can then be taken into account in assessing any proposed service improvement projects.

In addition, IPART considers that the building block approach offers a number of other benefits over the alternative approaches, including that it:

- facilitates consistency between IPART's fare determination and other elements of the broad economic regulatory framework for CityRail – such as the financial performance targets set by the Government in RailCorp's SCI, and the funding agreement between RailCorp and MoT
- is consistent with the approach IPART uses in regulating other network industries
- enables CityRail's financial ratios to be compared on a like-for-like basis over time and against those other regulated utilities, so providing a better indication of its financial sustainability.

Further, because it incorporates a return on capital, the building block approach is the only option that recognises the opportunity cost of capital, and that Government funding for CityRail has alternative uses, such as health and education.

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45 For example, if IPART determines that it is appropriate that passengers contribute to around one-third of CityRail's revenue requirement then if government invests $1bn on the South West Link, an additional $300m would need to be recovered from users over the life of asset in NPV terms.

In contrast, IPART considers that there are too many practical difficulties associated with the long-run marginal cost approach for it to be a realistic option at this time. And while the operating and maintenance approach, which is used in Singapore and Melbourne, is simpler than the building block approach, IPART considers it is less suitable for promoting economic efficiency and accountability in CityRail. This is because it does not allow for the full economic costs of providing CityRail services, including capital costs, to be measured, scrutinised and taken into account in setting fares.

In addition, one of the main reasons the operating and maintenance approach is simpler than the building block approach is that it is less rigorous and less transparent. For example, in Singapore fares are set to recover the entire operating costs of providing rail services, while in Melbourne they are set to recover only a portion of these operating costs. In both cases, governments cover the remaining costs. But there is no attempt to systematically equate the size of this government subsidy with the value of the external benefits associated with the rail services.

IPART acknowledges that the building block approach is more intrusive and time-consuming both for it and for RailCorp. However, it notes that this disadvantage will be mitigated by its draft decision to adopt a multi-year determination period, as this will mean that there are less frequent fare reviews.

In relation to stakeholder concerns about the building block approach including the capital costs of projects for which CityRail is not responsible, IPART considers it important to note that RailCorp management is responsible for delivering a significant proportion of capital expenditure related to passenger rail services in Sydney. For example, it is responsible for station upgrades (including the Easy Access program), safety programs, and renewal capital expenditure on track, rolling-stock, signalling etc.

However, RailCorp is not responsible for **all** capital projects related to passenger rail services, as large capital programs involve whole-of-government decision-making, and the implementation of these programs is often undertaken by other government agencies such as the Transport Infrastructure Development Corporation (TIDC). But this does not necessarily make the building block approach less appropriate. By initially including all capital expenditure required to provide CityRail services, the building block approach increases the transparency of and accountability for the cost impacts of capital programs largely outside CityRail's control (such as the EPCL) but within the control of Government as the owner of CityRail. This should lead to better investment decision-making, which will benefit both CityRail passengers and taxpayers who fund a significant proportion of major capital items. Further, it is important to recognise that CityRail is responsible for maintaining the assets built through these large capital programs once they are completed.

In relation to the view that the operating and maintenance approach may result in lower fares,[46] IPART considers that this is not necessarily the case. For example, if CityRail fares were set recover the full operating and maintenance costs (as they are in Singapore), they would increase significantly. IPART does not consider such an outcome to be realistic, or consistent with assessment criteria for this review.

Alternatively, if fares were set to recover only some of the operating costs (as they are in Melbourne), IPART would need to consider on what basis it would determine the share of these costs to be recovered through fares and through government funding. Given that it is the assets and capital investment that provide for a significant amount of the external benefits of rail, it would not be internally consistent to subtract the total value of the external benefits associated with CityRail services from the total operating and maintenance costs. IPART would then need to use a different approach to determine the share of operating costs to be recovered from users. This may not provide for lower fares, and would reduce the simplicity of the approach without providing any of the advantages of the building block approach.

While it has not directly incorporated CRAI's optimisation approach in making its draft decision on the approach to determining CityRail's revenue requirement, IPART drew on CRAI's analysis in making an assessment on the appropriate funding shares (see Chapter 12). In particular, IPART revisited CRAI's analysis after completing its discussion papers and the expert advice provided by CRAI is this one of the factors IPART relied upon in determining the fare outcomes set out in the draft determination.

4.4 Approach for converting passengers' share of the revenue requirement into fares

IPART's draft decision is that it will set maximum fares for each CityRail ticket over the period of the determination.

4.4.1 IPART's preliminary view

IPART's discussion paper did not set out a preliminary view of this component of the approach to fare setting. However, its issues paper noted that there were a number of approaches IPART could use to convert the share of CityRail's revenue requirement to be recovered from passengers into fares including:

- Setting the **maximum fare** for each CityRail ticket, giving CityRail no flexibility to alter the relative price of tickets.

[46] IPART roundtable transcript, 31 July 2008, p 16.

- Setting a **weighted average price cap** based on the (percentage) increase in the annual revenue requirement.[47] This would give CityRail the flexibility to set fares provided that the weighted average fare increase is below the price cap determined by IPART.
- Setting a **revenue cap** based on the annual revenue requirement. This would give CityRail the flexibility to set fares so that its farebox revenue is below the revenue cap determined by IPART (based on forecast patronage for each ticket type). The key difference between a revenue cap and the other two approaches is that under a revenue cap, the risk that actual farebox revenue will differ from forecast revenue is allocated to the customer. Revenue caps include a correction factor which means that if the actual demand differs from the forecast demand, this will be corrected for in the following year to ensure that only the allowed revenue is collected.[48]

All of these approaches are frequently used within an incentive regulatory framework. In the past, IPART has set maximum fares for each individual CityRail ticket. However, in other industries such as energy, it has set a weighted average price cap.[49]

4.4.2 IPART's considerations in making its draft decision

The most appropriate approach for converting the revenue requirement into fares at this time depends on several factors – such as the objectives for this review, the incentive properties IPART wants to create, the nature of CityRail's demand, and the party best able to bear the risks of fluctuating demand. IPART considers that setting maximum fares is the most appropriate approach for the following reasons:

- A revenue cap would allocate the risk that patronage (or demand) is lower than forecast to passengers, and therefore may not encourage CityRail to increase patronage, consistent with Government policy set out in the State Plan.

47 Each ticket type requires a weighting, with the weights typically based on patronage (or revenue) forecasts.

48 That is, prices move inversely to demand (if demand decreases, prices must increase to provide the same level of revenue). Under a revenue cap there is no demand or revenue risk for the regulated business.

49 In adopting a weighted average price cap, IPART's 2007 energy retail determination recognised that there was a degree of competition in the NSW metropolitan market.

- This revenue risk is better allocated to CityRail and the Government, which arguably have more control over the factors that influence demand than passenger, and therefore are better placed to manage the risk.[50] IPART has recommended that the funding agreement between MoT and RailCorp include a revenue risk sharing arrangement that provides RailCorp with incentives to improve CityRail patronage, but also provides for the Government to increase its funding for CityRail in the event that patronage is substantially lower than forecast.
- A revenue cap may disadvantage existing customers during the determination period if forecast increases in patronage as a result of new investments (such as the ECRL) prove to be over-optimistic or unsustainable.[51]
- In contrast to a revenue cap or weighted average price cap, setting maximum fares is likely to provide for a stable price path over the determination period. IPART considers that a stable price path with known outcomes for passengers has benefits for customers – for example, it will help them in making future housing and employment decisions.
- Setting maximum fares will ensure that IPART's preferred fare structure is implemented. IPART considers that this fare structure will contribute to greater efficiency in the use of the CityRail network, investment in this network, and equity between different customers, and will facilitate the transition to electronic ticketing.

IPART recognises that setting maximum fares for each individual ticket may reduce CityRail's incentives to respond to signals from its customers. Both of the other options would encourage CityRail to better understand its customers' responsiveness to changes in fares, and may provide it with an incentive to develop a more commercial, customer-orientated focus and, in particular, to develop an understanding of the drivers affecting its customers' demand.

However, taking into account the objectives for this review, the incentive properties IPART wants to create, the nature of CityRail's demand, and the party best able to bear the risks of fluctuating demand, IPART considers that on balance, the most appropriate approach for converting the revenue requirement into fares is for it to set maximum fares for each ticket product over the determination period.

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50 A number of variables are likely to influence demand for CityRail services, including employment growth (particularly in the CBD); passenger's alternate transport options (including impacts of road congestion) and the relative price of these options; and the quality (reliability, frequency, cleanliness etc) and price of CityRail services.

51 Under a revenue cap, CityRail would be guaranteed to recover all of its investment costs, regardless of whether customers reduce their demand for rail services (or abandon the network altogether). Therefore, the customers who continue to use the network will have to pay more—in effect, those customers who remain pay for (at least part of) the abandonment options of those who stop using the service.

4.5 Need for additional regulatory mechanisms

IPART's draft decision is not to introduce regulatory mechanisms that provide for additional fare increases during the determination period, such as a cost pass-through mechanism.

4.5.1 IPART's preliminary view

IPART's discussion paper did not set out a preliminary view on this component of the approach to fare setting.

4.5.2 IPART's considerations in making this decision

The allocation of cost and revenue risk between passengers, RailCorp and the Government is fundamentally important to the incentives that are created for CityRail. Therefore it is important that these risks are allocated in a way that creates incentives that are consistent with the objectives for this review – such as encouraging CityRail to increase patronage and reduce its costs by increasing its economic efficiency to a level that is comparable with other similar operators.

As discussed above, IPART's draft decision to set maximum fares for each CityRail ticket over the determination period allocates the revenue risk to RailCorp rather than passengers, which creates incentives for CityRail to increase patronage. This draft decision also allocates the cost risk to RailCorp. That is, setting maximum fares allocates the risk that CityRail's actual costs during the determination period may differ from the forecast costs used in determining prices to RailCorp, because it doesn't allow for fares to change in the event of higher (or lower) than expected costs. IPART considers that this is appropriate, since the service provider is typically best placed to manage the cost risk, and it creates incentives for RailCorp to keep CityRail's costs at or below the forecast level.

However, IPART recognises that not all CityRail's costs are within its control. Therefore, it considered whether it is appropriate to establish a regulatory mechanism to allow RailCorp to pass-through changes in uncontrollable costs to passengers during the determination period. IPART has taken this approach in other industries it regulates. For example, as part of its 2007 electricity retail determination, it established a pass-through mechanism for costs associated with defined regulatory and taxation change events.[52]

[52] The intention was to ensure that electricity tariffs were cost reflective such that tariffs included changes in costs beyond the retailers control but to discourage retailers from passing through any change in costs by introducing a materiality threshold and strictly defining the eligible events that would trigger the pass through mechanism.

IPART notes that most of CityRail's costs are likely to be within its control. These include the costs of operating train services, maintaining rolling-stock and track infrastructure and purchasing additional rolling-stock, and its corporate overheads. IPART also considers it questionable whether passengers are in a better position than RailCorp (and its shareholder) to bear the risk of cost changes in uncontrollable items.[53] For these reasons, it has decided not to introduce a cost pass-through mechanism.

It is important to note that because a significant proportion of CityRail's revenue requirement is funded by the Government, it is also critical that the cost risk be allocated between RailCorp and the Government in a way that is consistent with the objectives for this review. In particular, IPART consider it critical that the Government 'cap' the amount of funding it will provide for CityRail services over the determination period in line with IPART's fare determination. This will allocate the cost risk to RailCorp, because the Government will not provide additional funding if RailCorp management is not able to control the growth in CityRail's costs and move these costs towards efficient levels. If management fails to control costs and Government is forced to provide additional funding, then Government should change management, but equally management should be given a free hand to control those costs for which it is responsible.

If unforeseen and unusual circumstances or events impose additional costs on RailCorp, it may be appropriate for the Government to provide additional funding to RailCorp. However, it is important that additional funding is only provided for events that are outside RailCorp management's control, and these events are transparent and clearly defined. The matter of allocating the cost risk between RailCorp and the Government is discussed in IPARTs other draft report *Improving CityRail's accountability and incentives through stronger governance arrangements.*

While IPART has made a draft decision not to allow a cost pass through mechanism, there are unlikely circumstances where IPART would need to consider whether its determination should be reopened to consider specific events. IPART's view is that circumstances under which it would consider a reopening of its fare determination would be very narrow, and it would need to be clearly demonstrated that the impact of the events were both financially substantial and unforseen at the time of the determination. An event which could trigger such an outcome would be the introduction of the Carbon Pollution Reduction Scheme if it caused a substantial increase in CityRail's energy costs.

53 Incentive regulation assumes that in general shareholders are in a better position than customers to diversify their risk by creating diversified investment portfolios.

4.6 The approach for monitoring compliance with the fare determination

IPART's draft decision is:

To require RailCorp to provide by October 30 each year of the determination period:

- information on CityRail's service performance over the previous financial year.

To require RailCorp to provide by November 15 each year of the determination period:

- an undertaking that CityRail fares for the upcoming calendar year will comply with the fare determination and a list of the proposed fares.

4.6.1 IPART's preliminary view

IPART's discussion paper did not set out a preliminary view on this component of the approach to fare setting.

4.6.2 IPART's considerations in making this decision

IPART intends to use the information it requires from RailCorp to prepare a prices and services report that will assess whether CityRail's proposed fares for the forthcoming year comply with the fare determination, and the extent to which CityRail met the service performance targets included in the RPA over the most recent financial year. (These performance targets are discussed in IPART's other draft report *Improving CityRail's accountability and incentives through stronger governance arrangements.)* IPART will make this report publicly available in December each year.

IPART considers that this is necessary during the transition to the new approach to fare setting, particularly to ensure that the fares CityRail charges are consistent with IPART's preferred fare structure, and that the quality of service CityRail delivers is not deteriorating as it pursues operating cost savings. It will also help to improve transparency of CityRail's performance and RailCorp management's accountability for this performance.

5 CityRail's annual revenue requirement

As Chapter 4 discussed, IPART has made a draft decision to use the building block approach to determine CityRail's annual revenue requirement over the determination period. To apply the building block approach, IPART has made draft decisions on the value of four cost blocks that represent:

- CityRail's forecast efficient operating and maintenance costs over the determination period
- an allowance for a return on the capital invested in the CityRail business
- an allowance for a return of capital (or for depreciation of CityRail's assets over the determination period)
- an allowance for a return on the working capital required to operate the CityRail business.

The sum of these values represents CityRail's total annual revenue requirement over the determination period.

IPART then estimated the annual non-fare revenue CityRail will earn over the determination period (including concession payments[54] and commercial revenue), and subtracted this from the total annual revenue requirement. The resulting amount represents CityRail's net annual revenue requirement – or the amount that will need to be generated through fares and government subsidies over the determination period.

The section below provides an overview of IPART's draft decision on CityRail's annual revenue requirement. The following sections provide a more detailed overview of each aspect of this decision.

5.1 Overview of draft decision on net annual revenue requirement

IPART's draft decision on CityRail's annual revenue requirement over the determination period as shown on Table 5.1. Please note that government concession payments and CityRail's other revenue have been subtracted from sum of the cost blocks, to give the net revenue requirement.

[54] That is, the government funding provided to compensate CityRail for providing concession and half fares to certain users in line with Government policy.

Table 5.1 Draft decision on net annual revenue requirement ($million, real $2008/09)

	2007/08 IPART determination – operating costs and depreciation only	2008/09	2009/10	2010/11	2011/12
CityRail forecast operating expenditure		2,248	2,396	2,424	2,494
LEK recommended efficiency savings		- 60	- 185	- 299	- 458
IPART adjustments (MPM and borrowing costs)		-142	-154	-159	-142
Forecast efficient operating expenditure	**2,080**	**2,047**	**2,056**	**1,966**	**1,893**
Allowance for a return on capital	414	509	585	660	717
Allowance for a return of capital (depreciation)	-	193	258	326	384
Allowance for return on working capital	-	- 19	- 21	- 18	- 14
Total revenue requirement	**2,494**	**2,729**	**2,877**	**2,934**	**2,980**
Non-fare revenue	308	287	285	275	270
Net revenue requirement	**2186**	**2,443**	**2,592**	**2,659**	**2,709**

Note: Totals may not add due to rounding.

5.2 Forecast efficient operating and maintenance costs

IPART's draft decision on forecast operating and maintenance costs represents approximately 68 per cent of the total revenue requirement over the determination period. In making this draft decision, IPART has:

- recognised RailCorp's forecast growth in operating costs under a 'business as usual' scenario
- accepted LEK's recommendations on the efficient level of operating expenditure over the period, including the achievable operating efficiency savings
- adjusted LEK's recommendations on the efficient level of operating expenditure by removing a portion of major periodic maintenance expenditure and treating this as renewal capital expenditure
- adjusted LEK's recommendations on the efficient level of operating expenditure by removing the borrowing costs associated with major periodic maintenance.

Chapter 6 describes IPART's draft decision on the forecast efficient operating and maintenance expenditure in detail.

5.3 Allowance for a return on capital

IPART's draft decision on the allowance for a return on the capital invested in CityRail represents approximately 22 per cent of the total revenue requirement over the determination period. This allowance represents compensation for CityRail's shareholder (the NSW Government) for committing capital to the business and bearing the risks associated with the business. IPART notes that under the *Transport Administration Act 1988*, RailCorp is not required to pay a dividend to its shareholder - the NSW Government. However IPART considers it appropriate to include this allowance to recognise the opportunity cost of capital invested in the business.[55]

IPART determined this allowance by:

1. calculating a value for CityRail's regulatory asset base (RAB) in each year of the determination period. This involved:
   - establishing the value of the RAB at the start of the determination period (known as the Initial Capital Base)
   - establishing the methodology it will use for rolling forward the RAB to the end of the determination period, to reflect changes in its value over this period
   - determining the level of capital expenditure to be incorporated each year when rolling forward the RAB
2. deciding on an appropriate rate of return for CityRail
3. multiplying the annual value of the RAB by the appropriate rate of return.

Chapter 7 describes the draft decisions related to the first of these steps in detail; Chapter 8 discusses steps 2 and 3.

5.4 Allowance for a return of capital (depreciation)

IPART's draft decision on the allowance for return of capital represents approximately 10 per cent of the total revenue requirement over the determination period.

To calculate this allowance, IPART assumed straight line depreciation. It established an appropriate depreciation rate for CityRail's three asset groups, and then multiplied the annual value of each group by the appropriate rate:

- the ICB was depreciated at the average depreciation rate implicit in RailCorp's statutory accounts (3.7 per cent)
- CityRail's forecast efficient capital expenditure over the determination period not associated with major projects was depreciated at the weighted average depreciation rate of future capital expenditure (5.5 per cent)

[55] As both the shareholder and primary source of revenue (through the government subsidy), Government should have regard to CityRail's total revenue requirement, which incorporates an allowance for a return on capital, in determining CityRail's funding requirements each year.

- forecast capital expenditure associated with major projects – ie, the EPCL – was depreciated at the rate of 1 per cent (based on an average asset life of 100 years).

Chapter 9 describes IPART's draft decision on the allowance for a return of capital in detail.

5.5 Allowance for a return on working capital

IPART's draft decision on the allowance for a return on working capital reduces CityRail's revenue requirement by approximately 1 per cent over the determination period. It reflects that fact that CityRail forecasts a negative net working capital position for each year of the determination period. Chapter 9 discusses IPART's draft decision on the allowance for a return on working capital in more detail.

5.6 CityRail's other revenue

CityRail currently earns non-fare revenue from two sources:

- Concession payments from the Government, which compensate CityRail for providing half-fares and concession fares to certain groups of people, in line with government policy.
- Commercial revenues generated using assets that CityRail owns but which are not directly involved in providing its services. These assets include the commercial properties adjacent to train stations, car parking, airspace above stations, and advertising signage areas near railway corridors or stations. In 2006/07, RailCorp earned over $150 million of revenue on these assets.

IPART considers it appropriate that the revenue from these sources offset the revenue that is required to be generated from fares and from government subsidies over the determination period. Therefore, it forecast the amounts it expects CityRail to generate from these sources over the determination period, as shown in Table 5.2, and then subtracted these amounts from the total revenue requirement to give the net revenue requirement.

Table 5.2 Draft decision on non-fare revenue ($million, real $2008/09)

	2008/09	2009/10	2010/11	2011/12
Government concession payments	175	176	178	180
Other revenue	112	109	96	90
Non-fare revenue	**287**	**285**	**275**	**270**

Note: Rows may not add due to rounding.

IPART considers that because concession funding is provided by the Government to make up for farebox revenue CityRail foregoes in order to comply with government policy, it is appropriate that the revenue required to be recovered from the farebox and government funding be reduced by this amount. IPART also considers that commercial revenues forecast to be earned from activities outside the provision of regular passenger services (such as commercial rentals and advertising) be accounted for as a reduction of the amount of revenue required from the farebox, as this will give CityRail an incentive to grow these revenues above the forecast levels.

6 Efficient operating and maintenance expenditure

As part of the building block approach, IPART has made a draft decision on the efficient level of operating and maintenance expenditure required to provide CityRail services over the determination period, taking into account the service standards CityRail is required to meet, and the potential for CityRail to make efficiency improvements.

To assist it in making this decision, IPART engaged L.E.K. Consulting (LEK) to estimate and recommend the efficient operating costs of providing CityRail's regular passenger services, taking into account the potential for CityRail to make efficiency improvements, for the years 2008/09 to 2011/12. IPART considered LEK's recommendations. It also considered stakeholders' views, and its own assessment criteria for this review, which were derived from the terms of reference.

The section below sets out IPART's draft decision on efficient operating and maintenance expenditure. The subsequent sections discuss this decision and IPART's considerations in making it in more detail.

6.1 Overview of the draft decision on efficient operating and maintenance expenditure

IPART's draft decision is that the efficient operating and maintenance expenditure required to provide CityRail services over the period 2008/09 to 2011/12 is as shown in Table 6.1.

Table 6.1 Forecast efficient operating and maintenance expenditure used in making the draft decision on CityRail's annual revenue requirement ($million, real $2008/09)

	2008/09	2009/10	2010/11	2011/12
Operating expenditure	2,047	2,056	1,966	1,893

This draft decision is in line with the preliminary view IPART set out in its discussion paper.

6.2 IPART's preliminary view

IPART's discussion paper noted the cost of providing CityRail services was expected to increase significantly over the next four years. RailCorp forecast that under a 'business as usual' scenario, CityRail's annual operating and maintenance costs would increase by approximately $600 million in real terms by the end of the determination period, from around $1.9 billion in 2006/07 to around $2.5 billion in 2011/12. This represents a real increase of around 5 per cent per annum.[56] The discussion paper also analysed the drivers of this cost increase.

In line with the terms of reference for this review, LEK considered whether CityRail's costs could grow at a lower rate over the next four years if it could make efficiency improvements to achieve levels of efficiency similar to comparable rail passenger service providers in Australia and overseas. (Full details of the scope of LEK's review, and its methodology and analysis can be found in its public report, which is available on the IPART website.)[57]

LEK found that there was considerable scope for efficiency improvements and recommended that CityRail's efficient operating and maintenance costs should be around $2.1 billion in 2008/09, and should decrease to around $2.0 billion in 2011/12 in real terms. These recommended efficient costs include targets for efficiency improvements in each area of CityRail's operations, which LEK considered were both reasonable and achievable over the determination period.

IPART's preliminary view was that it was inclined to adopt LEK's recommendation on efficient operating costs, subject to stakeholder comment.

6.3 Stakeholder responses

While many stakeholder submissions commented on LEK's recommendations on the efficient costs of providing CityRail services, most did not comment on the recommended level of those costs, or RailCorp's ability to achieve the efficiency savings included in them. However, several expressed doubts that CityRail would be vigorous in pursuing efficiency savings in the current policy environment.[58]

A range of stakeholders commented on the source of cost inefficiencies in RailCorp. For example, some argued that these inefficiencies occur in the overheads and management areas, not in the operational areas.[59] Some argued that LEK's efficiency savings unfairly targeted 'frontline' staff. The RTBU noted that driving efficiency savings in management would have a lesser impact on overall service levels and quality than removing more frontline staff.

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56 Railcorp has incorporated a forecast of inflation of 2.5 per cent per annum over the period.

57 LEK, *Cost Review of CityRail's Regular Passenger Services*, Report to IPART, June 2008, available at www.ipart.nsw.gov.au.

58 APT submission, 9 July 2008, p 2, D Trinh submission, 30 June 2008, p 2.

59 BMC&TUA submission, 21 March 2008, p 3.

Others argued that the cost inefficiencies within RailCorp are driven by government decisions.[60] For example, one individual argued that a number of government decisions have created inefficiencies within RailCorp, including the decision to revert to in-house train maintenance, and noted that it is not clear where the boundary lies between inefficient costs and government policy.[61]

Many stakeholders commented on the appropriateness of making efficiency savings in some of the areas recommended by LEK. For example, APT questioned whether cost savings in the areas of infrastructure maintenance and rolling-stock maintenance are appropriate, given that this could contribute to maintenance problems, and associated service quality impacts.[62]

However, most stakeholders focused on two specific recommendations – removing guards on trains and staff at stations with low patronage levels. Many put the view that guards play an important role in assisting disabled passengers board/alight trains, ensuring people safely board the train before the doors are closed, and providing a level of safety or 'perceived safety'. Some also noted that station staff perform a range of functions that benefit passengers, including:

- assisting disabled people boarding and alighting trains
- selling tickets, particularly when ticketing machines are not in operation
- performing customer service roles including responding to customer inquiries
- providing a level of safety or 'perceived safety'.
- cleaning stations.

Very few submissions stated that passengers are willing to contribute to the costs of providing train guards and station staff at low patronage stations. However, some supported passengers contributing to these costs if the duties of these staff were expanded – for example, by guards walking the trains and responding to customer inquiries, and station staff having a more active role in fare compliance, customer service and cleaning.[63] MoT noted that there may be scope to improve the level of customer service provided by guards and station staff.[64]

On the other hand, several submissions agreed with LEK's recommendations, arguing that the roles of station staff, guards on trains, and transit officers are of limited value to passengers and passengers should not contribute to these costs.[65]

60 Confidential submission.
61 D Trinh submission, 30 June 2008, p 2.
62 APT submission, 9 July 2008, p 2.
63 Dr Philip Laird submission, July 2008, p 2.
64 MoT submission, July 2008, p 4.
65 D Trinh submission, 30 June 2008, p 2.

6.4 IPART's considerations in making its draft decision

In previous fare reviews, IPART has noted that CityRail's level of economic efficiency, both in terms of costs and labour productivity measures, is well below international benchmarks.[66] It has also noted that in recent years, CityRail's costs have increased by significantly more than the rate of inflation, and taxpayers have contributed proportionately more to fund these rising costs than CityRail passengers. For example, since 2001/02, CityRail's costs have increased by 22 per cent in real terms.

RailCorp's forecasts indicate that CityRail's costs will continue to increase over the coming determination period. Operating and maintenance costs are forecast to increase by approximately $600 million in real terms, from around $1.9 billion in 2006/07 to around $2.5 billion in 2011/12. This represents a real increase of around 5 per cent per annum over the period.

One of IPART's primary objectives in making this fare determination is to encourage CityRail to contain these cost increases by improving its economic efficiency. There are several reasons for this. First, IPART does not consider the current trend of increasing costs is sustainable. Second, it is conscious that increases in government funding to cover increases in CityRail's costs mean that this funding cannot be directed to other areas, such as health and education, which may be equally or more important. Finally, it is explicitly required both under the IPART Act and by the terms of reference for this review to take account of the need for greater efficiency in the supply of CityRail services, and to identify the scope for efficiency improvements.

LEK recommended that it was both reasonable and achievable for RailCorp to reduce CityRail's operating costs by 18 per cent per annum by 2011/12, by making efficiency savings of around $458 million in real terms, while maintaining or improving its service standards. LEK also identified the potential to make efficiency improvements in each area of CityRail's operations, as outlined in Table 6.2.

66 IPART, *CityRail Fares from 11 November 2007 - Final Report and Determination*, October 2007, p 12.

Table 6.2 LEK's recommendations on the scope for efficiency improvements in CityRail's operating areas in 2011/12 ($million real $2008/09)

Operating area	RailCorp's forecast cost	LEK's recommended efficient cost	Size of efficiency improvement	% saving
Infrastructure maintenance	884	823	61	6.9
Rolling stock maintenance	357	304	53	14.7
Train operations and crewing	464	308	156	33.6
Customer interface (including station staffing)	451	370	81	17.9
Revenue collection	60	33	27	45.3
Overhead and marketing	277	196	81	29.2
Total	2,494	2,036	458	18.4

Note: Totals may not add due to rounding.

Source: RailCorp forecasts provided to LEK.

After considering LEK's recommendations, and all stakeholder comments in submissions and at the roundtable, IPART has made a draft decision that reaffirms its preliminary view on the efficient operating and maintenance expenditure required to provide CityRail services over the determination period, as set out in the discussion paper and above.

In making this draft decision, IPART has:

- Recognised that the significant growth in operating costs RailCorp forecast under a 'business as usual' scenario is partly driven by the fact that CityRail will take on several additional responsibilities over the determination period, such as operating the Epping to Chatswood Rail Link and maintaining additional rolling stock.
- Accepted LEK's recommendations on CityRail's efficient operating and maintenance costs over the determination period, including the recommendations on the scope for efficiency improvements. This recognises that under an incentive approach to regulation, passengers should only contribute to the efficient costs of providing the services from which they benefit.
- Adjusted LEK's recommendations on CityRail's efficient operating and maintenance costs by removing a portion of major periodic maintenance expenditure and treating this as renewal capital expenditure, consistent with the treatment of renewal capital expenditure in other industries IPART regulates.
- Adjusted LEK's recommendations on CityRail's efficient operating and maintenance costs by removing the borrowing costs associated with major periodic maintenance.

IPART considered stakeholders' views about LEK's recommendations on the scope for efficiency improvements, including concerns that LEK had unfairly targeted 'frontline' staff, and concerns related to the maintenance of infrastructure and rolling stock, staffing of stations and the presence of guards on trains. It also considered

whether it is appropriate for passengers to contribute to the costs of staffing low patronage stations and having guards on trains.

6.4.1 Concerns that LEK unfairly targeted frontline staff

In IPART's view, LEK's recommendations indicate there is scope for efficiency savings across **all** CityRail's operating areas, not just those that involve frontline staff (see Table 6.2 above). Indeed, one of the largest efficiency savings LEK identified, both in percentage and dollar terms, was a reduction in the number of head office staff. This was based on its finding that other comparable passenger rail service providers' overhead costs are around 50 per cent lower than CityRail's.[67]

In addition, LEK's recommendations in relation to train crews and station staff are based an objective analysis of the operational efficiency of CityRail and comparable passenger rail service providers, and so cannot be considered 'unfair'. For example, LEK found that CityRail's train drivers spend far less time driving than those employed by other Australian service providers — they spend less than 40 per cent of their shift driving trains, while Melbourne and Queensland drivers spend some 60 to 75 per cent of their shift driving.[68] LEK also found that CityRail's station staffing levels are considerably higher than those in Melbourne, and there is no evidence that this results in higher service levels.

6.4.2 Concerns related to the maintenance of infrastructure and rolling stock

In relation to concerns about the recommended efficiency savings in the areas of rolling stock and infrastructure maintenance, IPART notes that LEK recommended that CityRail could make several changes that would reduce the costs of maintaining infrastructure and rolling stock to levels similar to those of other comparable operators **while maintaining service quality**. For example, LEK recommended refurbishing the Tangara fleet, which should extend the life of these assets and reduce on-going maintenance costs. It also noted that the introduction of new rolling stock over the determination period should reduce the average costs of maintaining rolling stock.

6.4.3 Concerns related to staffing of stations

LEK recommended that CityRail could reduce the costs of operating stations by making changes to bring it into line with other comparable operators. These changes included rationalising the functions undertaken by staff at stations, including greater outsourcing of cleaning functions, moving towards a management structure with a higher number of staff to management, and increasing the number of unstaffed stations.

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67 LEK report, May 2008, p 35.
68 LEK report, May 2008, p 25.

The change that attracted most stakeholder comment was increasing the number of unstaffed stations. Currently, stations with a level of patronage below a certain threshold are not staffed. LEK recommended increasing this threshold so it is in line with the threshold used in Melbourne, which would increase the number of CityRail stations that are unstaffed. However, IPART notes that it is other changes – greater outsourcing of cleaning functions and increasing the ratio of staff to management at stations – that will generate the most significant efficiency savings in the station staffing area.

IPART recognises that staffing of low patronage stations provides passengers with a sense of security. However, LEK's report highlighted that CityRail could provide a greater level of customer service and security if its existing resources were better deployed. If existing station staff, particularly at major stations, performed revenue protection duties such as checking tickets at gates, a considerable number of transit officers would be freed up to provide greater levels of security across the network, particularly at unstaffed stations. Transit officers are likely to be more effective in providing security than CityRail station staff.

IPART notes that the results of ITSRR's 2007 survey of CityRail customers suggests that the current approach to staffing stations (and employing guards on trains) may not be providing customers with the appropriate sense of security. This survey indicates that at least two-thirds of passengers consider that their expectations for personal security on stations and in train carriages at night are not being met.[69] Given that these two issues are consistently ranked as being of high importance to passengers, the Government and RailCorp need to consider how security is currently being provided.

6.4.4 Concerns related to guards on trains

Many stakeholders expressed concern that LEK's recommendations in relation to train crewing, particularly removing guards on trains, would have adverse impacts on the level of service CityRail provides, especially for passengers with a disability. However, IPART considers CityRail is able to operate at efficient levels consistent with other comparable operators without reducing the quality of service it provides. Furthermore, at the public hearings, there was no evidence that the public so values the guards' services that they would be prepared to pay the higher fares consistent with keeping the guards.

LEK's recommendations were based on a thorough analysis of passenger rail service providers in other jurisdictions that deliver a level of service similar to or higher than CityRail at considerably lower cost. This includes providing access for passengers with a disability while operating without guards on trains (or staff at low patronage stations). IPART is not aware of any evidence that suggests that service levels provided in Melbourne, including for passengers with a disability, is inferior to that provided by CityRail.

69 ITSRR Survey of CityRail customers 2007, September 2007, p 43.

IPART notes stakeholder views that station upgrades are required before passengers with a disability can use CityRail services independently. At present, around one-third of CityRail stations can be accessed by disabled passengers without assistance. CityRail's capital program for the next four years includes considerable capital expenditure as part of the Easy Access program for improving access to and around stations. This will increase the number of stations that are accessible for passengers with a disability, and so assist them in using CityRail services.

In IPART's view, the fact that so few stations are currently accessible for passengers with a disability is likely to be a far greater limitation on their use of CityRail services than whether a train guard is available to help them board or alight the train. In addition, IPART understands that while some disabled passengers need assistance to board and alight trains, most do not. IPART also understands that currently, most of those who do need assistance receive this help from station staff, not guards. Further, in other jurisdictions, such as in Melbourne, a ramp to assist passengers with a disability board/alight the train is deployed by the train driver at stations that are unstaffed.

IPART notes comments by some stakeholders that train guards are necessary on the CityRail network due to the curved nature of some stations and the need for guards to 'perform right of way duties' (ensuring passengers are clear from the doors before they are closed). However, IPART understands that in other jurisdictions these functions are undertaken by station staff at larger stations (as they are at CityRail staffed stations), or through the use of CCTV cameras and screens at smaller and unstaffed stations. IPART has included the cost of installing CCTV cameras and screens in its capital expenditure forecasts. IPART also notes that CityRail is currently rolling out 'traction inter-locking' on all CityRail trains which will ensure that the train does not leave the station if the doors are not closed properly.

IPART emphasises that deciding whether or not to employ train guards and staff low patronage stations is a matter for RailCorp and Government. IPART's role is confined to determining the maximum fares CityRail can charge for its services and, as part of this process, determining the efficient costs of providing those services, including the optimal mix of operating and capital expenditure. This includes considering the extent to which existing assets can be deployed in a more effective manner, and the extent to which additional capital expenditure (eg, installing CCTV cameras and upgraded ticket machines) can achieve operating cost savings. Consistent with an incentive approach to regulation, IPART's aim is to ensure that it sets fares at a level that ensures passengers only contribute to the **efficient** costs of supplying CityRail services.

At present, IPART's view is that the costs associated with employing train guards and staffing low patronage stations are not efficient, and so should not be funded by passengers. Therefore, it has excluded these costs from its draft decision on the level of efficient operating and maintenance costs. IPART considers that this decision is consistent with the terms of reference and its assessment criteria for this review – that is, the decision:

- promotes economic efficiency of rail services, including the supply of services at least cost
- provides incentives for CityRail to increase its cost efficiency
- reduces the costs without reducing the quality of passenger rail services for the benefit of consumers and taxpayers.

A number of stakeholder submissions supported passengers contributing to the costs of guards and staff at low patronage stations if their duties were expanded in the future. If this occurs, and as a result CityRail is able to offer a higher level of customer service, then IPART will consider the efficient costs of providing these services. In this context, it may be appropriate for passengers to contribute to these costs.

In the meantime, if the Government decides to retain its policies on providing train guards and staffing low patronage stations, the costs associated with those policies should be funded by the Government. In addition, as discussed in IPART's report, *Improving CityRail's accountability and incentives through stronger governance arrangements*, the funding associated with government policy should be made transparent in the funding agreement between MoT and RailCorp.

6.4.5 Adjusting for major periodic maintenance and borrowing costs

IPART considers that two adjustments need to be made to LEK's recommendation on efficient operating costs. These adjustments are necessary to ensure that the regulatory treatment of expenditure on major periodic maintenance, and of the borrowing costs associated with this expenditure, is consistent with the treatment in other industries IPART regulates using a building block approach.

Adjustment to major periodic maintenance expenditure

LEK included both 'routine maintenance' and 'major periodic maintenance' within the infrastructure cost category of operating expenditure. Major periodic maintenance includes expenditure on the replacement, enhancement and refurbishment of existing assets. However, it also includes expenditure on extending the overall life of these assets (such as laying new concrete sleepers under tracks, and refurbishing ageing rolling stock). Typically, regulators (including IPART) treat this latter expenditure as renewal capital expenditure.

Therefore, to ensure regulatory consistency, IPART's draft decision is that the portion of major periodic maintenance expenditure related to extending the life of existing assets should be treated as renewal capital expenditure rather than operating expenditure. This involves removing this expenditure as well as the efficiency saving from the efficient operating cost estimate and adding it to the efficient capital expenditure estimate. As a result, the costs associated with this expenditure will be recovered over the life of the assets rather than in the year the costs were incurred.

The MPM expenditure totals between $110 and 127 million in real terms in each year.[70] This is shown in Table 6.3 below.

Adjustment to borrowing costs

LEK's recommended efficient operating costs also included the borrowing costs associated with expenditure on extending the life of existing assets. Typically, IPART does not include borrowing costs associated with capital expenditure in the efficient capital expenditure estimate. This is because the building block methodology provides for a return on invested capital over the life of the asset that takes into account the cost of debt. Therefore, IPART's draft decision is that these borrowing costs should also be removed from the efficient operating cost estimate.

Table 6.3 shows LEK's recommended efficient operating costs after both these adjustments have been made relative to CityRail's business as usual forecast costs. The adjustments mean that CityRail's efficient operating costs reduce by approximately 3 per cent per annum in real terms over the 2008/09 – 2011/12 period.

Table 6.3 IPART-adjusted LEK recommendations on CityRail's efficient operating costs 2008/09 – 2011/12 ($million, real $2008/09)

	2008/09	2009/10	2010/11	2011/12
CityRail business as usual forecast	2,248	2,396	2,424	2,494
LEK recommended operating expenditure savings	- 60	- 185	- 299	- 458
Adjustment to major periodic maintenance expenditure	- 127	- 124	- 121	- 110
Adjustment to remove borrowing costs	- 14	- 30	- 38	- 32
Total	2,047	2,056	1,966	1,893

[70] In 2011/12, only $110 million in real terms has been subtracted from LEK's operating cost forecasts. This represents the removal of $118 million in real terms for the MPM but excludes around $8 million in real terms of efficiency savings on this MPM that had been included in LEK's forecasts.

7 Value of the RAB over the determination period

As Chapter 5 discussed, to determine a value for the allowance for a return on capital, IPART calculated the value for CityRail's regulatory asset base (RAB) in each year of the determination period. This involved:

1. establishing the value of the RAB at the start of the determination period (known as the initial capital base, or ICB)
2. establishing the methodology for rolling forward the RAB to the end of the determination period, to reflect changes in its value over this period
3. determining CityRail's the level of capital expenditure to be incorporated in each year when rolling forward the RAB.

The section below provides an overview of IPART's draft decision on the value of the RAB. The subsequent sections discuss IPART's draft decisions and considerations in relation each of the above steps.

7.1 Overview of the draft decision on the value of the RAB in each year of the determination period

IPART's draft decision is that the value of the RAB over the determination period is as shown in Table 7.1.

Table 7.1 Draft decision on the closing value of the RAB used in calculating CityRail's net revenue requirement ($million, nominal)

	2008/09	2009/10	2010/11	2011/12
Closing RAB	7,324	8,734	10,030	11,066

7.2 Value of the initial capital base

The first step in determining a value for the RAB over the determination period – establishing the opening value of the RAB, or the ICB – involves valuing the existing assets required to provide CityRail's services at a certain point in time. This step involved IPART:

- 'drawing a line in the sand', to differentiate between the capital expenditures that were incurred in the past (and so should be considered in setting the ICB) and those that will be incurred in the future (and so should be considered when rolling forward the RAB)
- deciding on the approach to use in calculating the value of the ICB.

A range of approaches could be used to calculate the value of the ICB for an existing business, including estimating:

- the opportunity cost (or scrap value) of the assets
- the historical or actual cost of the assets
- the book value of the assets
- the deprival value of the assets, which is the lower of the optimised depreciated replacement cost (ODRC) or economic value.

Typically, the estimated value of the ICB will vary widely, depending on which of these approaches is used. The lower band of the potential range for this value is zero. This would occur if all past capital expenditure was considered to be neither efficient nor prudent, and the existing assets were considered to be 'sunk assets' that have no scrap value or opportunity cost. The upper bound of the potential range is likely to be equal to the ODRC element of the deprival value of the assets.

7.2.1 Draft decision on the value of the ICB

IPART's draft decision is to value CityRail's initial capital base at $3.9 billion.

In making this decision, IPART:

- 'drew a line in the sand' at 30 June 2008, so that only capital expenditures incurred prior to this date were considered in valuing the ICB
- used the deprival value approach.

While this approach is the same as the one IPART used in forming its preliminary view, IPART revised several inputs to its calculation of the deprival value of the assets – particularly the forecast levels of government subsidies and farebox revenues – which resulted in a significant increase in the value of the ICB compared to the preliminary view.

7.2.2 IPART's preliminary view

IPART's preliminary view was that CityRail's ICB should be established by drawing a line in the sand at 30 June 2008, and using a deprival value approach. IPART estimated this value at $1.4 billion by determining the lower of:

- the ODRC of CityRail's assets, and
- the economic value of these assets (being the discounted value of the cash flows generated by the assets).

The ODRC represents the optimised value of the replacement cost of the assets, based on the cost of modern equivalent assets. The 'optimised value' means that the replacement cost of the assets is adjusted to remove the value associated with any excess capacity, over-engineering, poor design or poor location in the existing assets. In the case of CityRail, the optimised value of the replacement cost of the assets is likely to be significantly lower than the actual replacement cost. However, because replacing all the assets used to provide CityRail's services - including the entire network of tracks, bridges and stations - would be extremely costly, the ODRC is still likely to be considerably higher than the current economic value or even the book value of the assets. Therefore, IPART estimated the economic value of the assets.

The economic value of CityRail's assets represents the present value of the expected future net benefits flowing from the assets. IPART estimated this value using a discounted cash flow (DCF) analysis. This involved:

- estimating the free cash flow generated by RailCorp as the sum of free cash flows for two periods:
  - 2008/09 to 2011/12 using RailCorp's financial statements from the period 2004/05 to 2006/07 to estimate its free cash flow to 2011/12, by forecasting earnings before interest, tax, depreciation and amortisation (EBITDA) and normalising for capital contributions
  - beyond 2011/12 estimating a terminal value of RailCorp's business in 2011/12 to capture the value of free cash flows generated beyond 2011/12
- calculating the value of RailCorp as the NPV of these future estimates of free cash flow
- estimating CityRail's ICB as 90 per cent of this value, based on the proportion of RailCorp's revenue and expenses that are attributable to CityRail.

In undertaking this analysis, IPART made several assumptions, including the following:

- the approach assumed a 'contracting out' model, where the operator earns revenue from passengers and the government for service delivery and concessions
- all forward capital contributions were not included in the free cash flow calculation, as the level of these contributions depends on government decisions, and not business decisions
- expenses were assumed to increase or decrease based on historical rates and information obtained by LEK and RailCorp on a business as usual basis
- revenue was assumed to increase in line with IPART's preliminary view on forecast patronage growth over the determination period (ie, by 5 per cent in 2008/09 and by 2.5 per cent per year for the remainder of the period)
- the terminal value was calculated using the 2011/12 free cash flow forecast and a growth rate of 2 per cent
- the weighted average cost of capital was assumed to be 8.0 per cent in real pre-tax terms (or 11.7 per cent in nominal pre-tax terms).

IPART considered that this approach was the most reasonable option for estimating the economic value of CityRail's assets for several reasons. First, the approach is commonly used for valuing private and public companies. Second, it is transparent, because it uses publicly available data and growth forecasts for revenue and expenses. Third, it provides a value greater than zero, which implies that the opportunity cost of CityRail's assets is positive, but is lower than the written-down book value of the assets. This result is primarily due to the fact that CityRail's prices and revenues are significantly lower then could be supported by the written-down book value of its assets. This appears reasonable, given the commonly held view that only some of CityRail's past capital expenditure was prudent and efficient. Finally, the approach provides a value that is not large enough to compromise future cost recovery levels, or to lead to pricing outcomes that are likely to reduce patronage levels.

IPART also noted that using the economic value as part of a deprival approach to setting the ICB has some disadvantages – particularly, the 'circularity' in that the economic value used to set the ICB reflects current revenue, and then the value of ICB is used as a basis for determining future revenue and prices. In this sense, the deprival value approach does not necessarily provide a basis for setting the 'right' price level, independently of current revenue levels.

However, IPART considered that this disadvantage was less important, because its main aim in drawing a 'line in the sand' and calculating the value of CityRail's ICB is to provide the right incentives for future investment, and therefore provide users

with the 'right' economic signals regarding the costs of future investment.[71] This aim is consistent with the assessment criteria for the review.

7.2.3 Stakeholder responses

In general, stakeholder responses to the discussion papers did not focus on IPART's preliminary view on the value of CityRail's ICB, or the approach used to calculate this value. However, one stakeholder expressed support for using a physical capital model to value the RAB as this would provide a more predictable and constant base to work from.[72]

In addition, MoT raised several concerns about IPART's approach to valuing the ICB, and including forecast capital expenditure (primarily the value of ECRL) when rolling forward the RAB. In particular, it noted that IPART's proposed approach for valuing the ICB and including the ECRL at a value of $2.3 billion in 2008/09 would result in a "lumpy" increase in the asset base.[73] MoT argued that the whole of the asset base (ie, the ICB as well as subsequent capital expenditure) should be valued on a consistent basis. In particular, it asked IPART to consider the following points:

- Existing assets have a significant residual value beyond the value implied by the methodology employed by IPART. For example, the land value of rail corridors and station sites is considerable (especially given this land can be used for alternative modes of transport).
- Existing assets make a significant contribution towards delivering the external benefits that IPART valued in considering the share of the net annual revenue requirement to be funded through government funding and fares. Arguably, for a like with like comparison, the value of the RAB (and hence the annual revenue requirement) should reflect the actual economic value (or opportunity cost) of the existing assets.[74]

7.2.4 IPART's considerations in making its draft decision on the value of the ICB

In making its draft decision on the value of the ICB, IPART reaffirmed its view that the most reasonable approach is to draw a line in the sand at 30 June 2008, and use a deprival value approach, for the reasons outlined in the discussion paper and summarised in section 7.2.2 above. It also reaffirmed its view that the most appropriate way to apply the deprival value approach is to estimate the economic value of the assets using a DCF analysis.

71 This is important given the size of CityRail's future capital expenditure (more than $5bn over the next 5 years).
72 Federation of Parents and Citizens' Associations of New South Wales submission, July 2008, p 3.
73 MoT submission, July 2008, p 5.
74 Ibid, p 6.

However, after considering more up-to-date data and stakeholder comments, IPART revised several of the inputs to the DCF analysis. It increased some of the inputs to its calculation of CityRail's forecast cash inflows – that is, the forecast levels of government subsidy and fare box revenue – and decreased some of the inputs to its calculation of CityRail's forecast cash outflows – the forecast operating and capital expenditure.[75] It also revised some of its assumptions, including those related to estimating a terminal value of RailCorp's business in 2011/12, and the weighted average cost of capital. The net effect of these revisions was to increase in IPART's estimate of CityRail's ICB from $1.4 billion to $3.9 billion.

The sections below discuss each of the revisions and IPART's other considerations in more detail.

Increase in forecast level of the government subsidy

The government subsidy is the largest cash inflow for CityRail: in 2008/09, it is forecast to contribute approximately 64 per cent of CityRail's cash inflow.

In its discussion paper, IPART forecast the level of government subsidy included in future cash flows to be in the range $1.1 to $1.3 billion in real terms. This was based on historical trends where the level of government subsidy was typically the 'balancing item' between CityRail's revenues and expenses.

IPART acknowledges MoT's point that CityRail's existing assets make a significant contribution towards delivering the external benefits valued by IPART. Most people readily understand that passenger rail services provide direct benefits to the people who use those services. However, these services also generate substantial indirect benefits that accrue to the wider community – including reduced road congestion, traffic accidents and greenhouse gas emissions (these benefits are known as external benefits, because they are external to those who use of the services).

While a private operator seeking to value CityRail's assets would not necessarily attach a value to the external benefits, the level of these benefits is likely to increase the government's willingness to provide funding to CityRail and thus the level of the government subsidy.

Therefore, IPART considers it more appropriate that the future value of the government subsidy should be commensurate with the external benefits of CityRail services as valued by IPART. IPART's draft decision is that this should be in the range $1.7 to $1.9 billion in real terms, and the DCF valuation now incorporates this value.

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75 A DCF approach values a business based on its ability to generate free cash flows in the future, where free cash flow is calculated as the net of cash inflows and cash outflows. In the case of CityRail, cash inflows include items such as farebox revenue and government subsidies, while cash outflows include items such as operating expenses and capital expenditure. If all other factors remain constant, increases in future cash inflows will increase the future free cash flow available to the business (and thus the value of the businesses), while increases in future cash outflows will have the opposite effect.

Increase in forecast level of farebox revenue

Farebox revenue is CityRail's second largest cash inflow. In 2008/09, it is forecast to contribute approximately of 26 per cent of the total cash inflow.

In forming its preliminary view, IPART used forecast farebox revenue of $605 million in 2007/08 as the basis for forecasting the level of this revenue over the determination period. However, since the discussion paper was released, RailCorp has provided IPART with actual farebox revenue for 2007/08. This revenue was $642 million, or 6 per cent higher than forecast. As a result, IPART revised its forecast levels of farebox revenues for 2008/09 to 2011/12.

In addition, in reaching its preliminary view on the forecast levels of farebox revenue, IPART assumed that this revenue would grow in line with its preliminary view on forecast patronage growth. However, it did not assume that farebox revenue would grow as a result of an increase in fares.

IPART still considers it inappropriate to assume that farebox revenue would increase in line with the fare increase proposed in this draft determination as this would add an unacceptable level of circularity to the approach. However IPART now believes it is appropriate to assume some increase in farebox revenue as a result of fare increases. In IPART's view, an informed stakeholder would have had regard to recent fare increases,[76] and so is likely to have expected fares to rise by the rate of inflation in each year, or slightly more. Therefore, in making its draft decision for the initial capital base, IPART assumed that farebox revenue would increase in line with an annual fare increase of CPI+1%.

As a result of these revisions, the forecast level of farebox revenue used in the DCF analysis for the draft decision increased by 24 per cent over the period 2008/09 to 2011/12.

Decrease in levels of forecast operating and capital expenditure

Operating and capital expenditures are CityRail's primary cash outflows. In its discussion paper, IPART forecast the levels of operating and capital expenditure based on applying assumed growth rates to historical levels of operating and capital expenditure. These rates of change were consistent with the changes recommended by LEK, but they were applied to a different starting base.[77]

IPART has reconsidered these assumptions and considers it more appropriate to use the forecasts of operating and capital expenditure included in this draft decision. However, for capital expenditure, IPART has adjusted its DCF forecasts to levels consistent with the assumption that the approach is valuing the current service

[76] CityRail's last fare increase in November 2007 equated to an average increase of 3.5 per cent in real terms.

[77] The bases for these forecasts were historical levels of expenditure as opposed to the forecasts examined by LEK and discussed in Chapter 6.

capacity of CityRail's assets. This approach assumes no growth in the capacity of the system and thus IPART has excluded any growth capital expenditure from its forecasts for its DCF valuation.

As a result of these revisions, the levels of forecast operating and capital expenditure used in the DCF analysis decreased by around 8 per cent, compared to the preliminary view.

Increase in the terminal value of cash flows

For a business that has a finite life (eg, a company whose only asset is a mine with a set volume of ore that can be extracted), a DCF analysis would typically estimate the level of free cash flow for every year of the business' life. In the case of a business that is considered a going concern (ie, one that has a non-finite life), a DCF analysis needs to estimate a value for free cash flows beyond the forecast period. This is referred to as the terminal value and can often contribute a significant portion of the NPV of cash flows (eg, greater than 50 per cent). One common way of estimating the terminal value is to apply the following formula:

$$\text{Terminal value} = \frac{CF}{r - g}$$

where:

CF is the free cash flow in the final year of the forecast period

g is the growth in free cash flows after the final year of the forecast period

r is the discount rate or WACC

In its discussion paper, IPART assumed that the nominal growth in free cash flows after the final year of the forecast period was 2 per cent, which was slightly below the forecast level of inflation of 2.5 per cent assumed at that time. IPART now considers it more appropriate to assume that free cash flows would continue to grow at a rate consistent with inflation, which it has assumed to be 3.8 per cent. Holding all else constant, this change has increased the terminal value of cash flow by approximately 23 per cent.

Decrease the WACC

In forming its preliminary view, IPART assumed a WACC of 8.0 per cent in calculating the NPV of future free cash flows. In making its draft decision, IPART has assumed a WACC of 7.7 per cent. IPART considers this WACC is consistent with what an informed stakeholder would have assumed on 30 June 2008. It is also consistent with the WACC IPART has used in making its draft decisions on the allowances for a return on capital and of capital (discussed in Chapter 8).

IPART's other considerations

IPART considered MoT's view that CityRail's existing assets have a residual value that may not have been captured in IPART's preliminary ICB valuation. MoT appears to be concerned that IPART's methodology does not allocate a sufficient economic value to the land under rail corridors and station sites.

IPART considers that ideally the opportunity cost of the use of CityRail's network should be reflected in the asset valuation. While some of CityRail's past investments are can be considered sunk, some have an ex-ante value as well as an ex-poste value, in that they can be sold. This means that there is an opportunity cost in CityRail continuing to use them in providing services.[78]

However, IPART considers that including an additional amount in the ICB to reflect this ex-ante value is inappropriate for several reasons. First, a higher residual value does not necessarily mean that an equivalent value should be incorporated into the ICB. The residual value MoT refers to typically occurs in cases where there is a feasible alternative use for the asset that is not restricted by natural, legal or socio-political restrictions on the use and disposal of the asset. These restrictions commonly occur for many state-owned assets such as schools, hospitals and many specialised assets such as water systems.[79] For these assets, the unrestricted market value of the asset may be high, but it is highly unlikely that this value would be realised due to the restrictions on use and disposal of the asset. IPART considers it likely that similar restrictions would apply to most of the CityRail assets MoT refers to, such as land on which rail corridors and station sites are situated. Therefore, IPART considers that MoT's arguments do not justify a higher ICB based on the inclusion of a value for these assets.

Second, IPART's approach needs to provide a consistent methodology to valuing all CityRail assets. It would be inappropriate to include a residual value for these assets in the value of the ICB calculated using a deprival value approach. The land value of rail corridors and station sites has been incorporated into the ICB through the extent to which the assets on these sites contribute to the revenue of CityRail and thus its future free cash flow generating potential.

Finally, IPART questions whether CityRail incurred any cost in acquiring considerable areas of the land under its tracks and stations. Therefore, it questions whether it is appropriate for it to earn a return on and of this asset class.

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78 Put another way, while assets such as the land on which station sites and rail corridors are situated currently delivers much less than a market rate of return, it may have a higher value to a purchaser who could expect to sell the land and similar assets onto an alternative user.

79 New South Wales Treasury, *Guidelines for the Valuation of Physical and Non-Current Assets at Fair Value*, 2005, p 7.

7.3 Methodology for rolling forward the RAB

As discussed above, IPART's draft decision on the value of CityRail's ICB represents a valuation of the existing assets required to provide CityRail's services at 30 June 2008. The second step in determining the value of the RAB over the determination period is to decide on the methodology to be used for rolling forward this value to the end of the determination period, to reflect changes in the value of the RAB over this period.

For example, in addition to the impact of general inflation, the value of the RAB can change if:

- new assets are acquired during the determination period
- efficient and prudent capital expenditure is incurred to improve or extend the life of existing assets, or
- existing assets are sold or become redundant.

IPART considers that adopting a clear methodology (or set of rules) to guide the rolling forward process will simplify and improve the efficiency of the regulatory regime, by improving regulatory certainty and avoiding the subjectivity and cost of future revaluation exercises. It notes that this approach is consistent with the approach IPART takes in regulating prices in other industries, such as electricity, gas and water.

7.3.1 Draft decision on methodology for rolling forward the RAB

IPART's draft decision is that the methodology for rolling forward the RAB will distinguish between capital expenditure that *is not* associated with major projects and capital expenditure that *is* associated with major projects.

For capital expenditure that *is not* associated with major projects, the following methodology will be used for rolling forward the RAB to 2011/12:

- Capital expenditure that is deemed to be efficient and prudent will be incorporated into the RAB for the purpose of determining the revenue requirement:
  - forecast capital expenditure IPART deems to be efficient will be incorporated into the RAB in the year that it is incurred
  - but this capital expenditure will only be 'locked into' the RAB for the next determination period (ie, from 2012/13) if IPART deems it has been prudent as part of the next fare review.
- IPART will retain the ability to remove the value of assets from the RAB when those assets are no longer used in providing CityRail's services. However, IPART is not disposed towards removing assets from the RAB once incorporated.
- The value of regulatory depreciation of the RAB will be deducted, consistent with previous IPART decisions.

- The movement in the CPI rather than an Asset Index will be used to adjust the RAB for general economy-wide price increases, consistent with previous IPART decisions.

IPART is also not disposed towards revaluing the value of the ICB once established. However, IPART considers that a revaluation of the RAB may be necessary if the benefits derived from CityRail's assets are not commensurate with the costs or if future patronage growth is lower and therefore the associated externalities and assumed future government subsidy proved to be too high.

For capital expenditure that *is* associated with major projects (such as the ECRL), the following methodology will be used for rolling forward the RAB to 2011/12:

- Capital expenditure will be incorporated into the RAB at the time the project comes on stream.
- Capital expenditure will be included at cost unless IPART is provided with sufficient information to warrant including a different value for these assets. Any adjustment to the value to be included in the RAB would therefore need to be based on a thorough cost-benefits analysis of the relevant capital expenditure.
- IPART will retain the ability to remove the value of assets from the RAB when those assets are no longer used to provide CityRail's services. However, IPART is not disposed towards removing assets from the RAB once incorporated.
- The value of regulatory depreciation of the RAB will be deducted, consistent with previous IPART decisions.
- The movement in the CPI rather than an Asset Index will be used to adjust the RAB for general economy-wide price increases, consistent with previous IPART decisions.

IPART's draft decision in relation to the methodology for rolling forward the RAB is directionally the same as its preliminary view. However, IPART's draft decision involves a separate methodology for incorporating capital expenditure that is associated with major projects, whereas its preliminary view did not.

IPART also notes that under the passenger shares discussed in Chapter 12, IPART would assume that as a 'rule of thumb' an appropriate passenger share for funding new major capital projects would be 30 per cent. This implies that if Government invests an additional $1 billion in the CityRail network (for example on a South West Rail Link) an additional $300 million (in net present value terms) would need to be recovered from passengers over the life of the asset. A passenger share that differs from this 'rule of thumb' may be appropriate depending on the individual project in question and the external benefits it generates, but this would need to be demonstrated.

7.3.2 IPART's preliminary view

IPART's preliminary view was that for the purpose of making the 2009 fare determination, the following methodology was appropriate for rolling forward the RAB to 2011/12:

- Incorporating only new capital expenditure deemed to be prudent and efficient into the RAB. As part of the assessment for determining whether capital expenditure is prudent and efficient, a transparent benefit-cost assessment that considers the implications for fares should be undertaken:
  - Where this capital expenditure is routine, it should be incorporated into the RAB in the year that it is incurred.
  - Where this capital expenditure is associated with a major project, it may be incorporated into the RAB at the time the project comes on stream (which may involve capitalising any interest).
- 'Locking in' the value of the ICB, while recognising that IPART cannot make its decisions binding on any future regulator of CityRail. IPART also noted that it is not disposed towards revaluing the value of the ICB once established, but considers a revaluation of the RAB may be necessary if the benefits derived from CityRail's assets are not commensurate with the costs.
- Retaining the ability to remove assets from the RAB when those assets are no longer used to provide CityRail's services. However, IPART is not disposed towards removing assets from the RAB once incorporated.
- Using the movement in the CPI rather than an Asset Index to adjust the RAB for general economy-wide price increases, consistent with previous IPART decisions.

IPART also sought comments on the following two issues that affected the methodology for rolling forward the RAB:

- the appropriate value of the ECRL assets to be included in CityRail's RAB in light of the terms of reference and assessment criteria for this review
- whether it is appropriate to adopt an ex-post review of the prudency of actual expenditure incurred over the determination period, as part of the methodology for rolling forward the RAB and if so what should this review of consider.

7.3.3 Stakeholder responses

MoT did not indicate its preference for how the ECRL should be included in the RAB, but noted that the treatment of this major asset highlighted its concerns with the methodologies used by IPART for valuing assets. It argued that the inclusion of the ECRL at $2.3 billion results in a significant "lumpy" increase to the asset base with a sharp flow-on effect to fares, whereas including it at a zero value would have no impact on fares.[80] IPART notes that its draft decision to increase the value of CityRail's ICB to $3.9 billion addresses this concern to some extent.

[80] MoT submission, July 2008, p 5.

In addition, MoT sought clarification from IPART on the proposed ex-post review of the prudency of CityRail's actual capital expenditure incurred over the determination period. In particular, it sought further detail on:

- whether the review related only to capital expenditure and not all expenditure
- whether it is appropriate to subject major projects to such a review, given they a matter for Government policy decisions and, as such, are subject to cost benefit analyses and the Government's Gateway Review process.[81]

MoT also put the view that a prudency review such as IPART applies in the energy and water sectors (where costs are fully recovered from users) may not be immediately applicable to rail. Any prudency test for rail capital expenditure would need to take account of the benefits to the user and the broader community, and to be mindful that the benefits are unlikely to be fully realised in the short-term.[82]

Other stakeholders did not comment on the methodology for rolling forward the RAB.

7.3.4 IPART's considerations in making its draft decision

Methodology for incorporating capital expenditure that is *not* associated with major projects

IPART considers that the methodology it proposes for incorporating capital expenditure that *is not* associated with major projects is appropriate because it:

- will ensure that CityRail does not increase its short-term profitability by reducing actual capital investment below the efficient forecasts, which would result in a decline in service standards (ie, that cost savings are not achieved at the expense of service quality)
- will ensure that users only contribute to prudent capital expenditure incurred in providing CityRail services
- will ensure that CityRail is not disadvantaged for undertaking unforeseen prudent expenditure
- is consistent with IPART's approach in other capital-intensive industries, such as energy and water.

81 Ibid, p 6.
82 MoT submission, July 2008, p 7.

In relation to MoT's request for further information, IPART notes that the ex-post prudency review would relate only to CityRail's capital expenditure, and not operating expenditure.[83] 'Prudent', in its ordinary sense, means "discrete or cautious in managing one's activities; practical and careful in providing for the future & exercising good judgement".[84] Thus, the ex-post prudency review would:

- Assess whether the capital expenditure was reasonable, given the information available at the time it was incurred. That is, the review would focus on whether the investment decision was prudent at the time it was made, not with hindsight.
- Assess the final outcomes of the expenditure, taking account of the quality of, and commitment to, the planning and evaluation procedures. These procedures will typically be benchmarked against industry practice for the planning, provision and utilisation of assets and service standards.

Other factors that may be considered in assessing the prudency of capital expenditure include:

- current and projected system capacity
- appropriate asset utilisation levels benchmarked against best practice
- current demand and likely future demand
- current condition of assets and renewal requirements
- existing operational requirements
- current safety standards
- current and likely future policies in regard to factors such as environmental requirements and contestability
- relevant legislation and Government policies and initiatives.

In addition, IPART notes and agrees with MoT's comment that this prudency test will need to take into account the benefits of capital expenditure to both the user and the broader community, and that some of these benefits are unlikely to be fully realised in the short-term.

Methodology for incorporating capital expenditure that *is* associated with major projects

In making its draft decision in relation to the methodology for incorporating capital expenditure that *is* associated with major projects, IPART was mindful that this methodology needs to create incentives for efficient investment, and that such incentives are in the long-term interest of both passengers and the Government.

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83 Operating expenditure is recovered in the year it is incurred and not rolled into the RAB. However, this is not to say that there will be no consideration of CityRail's actual operating expenditure over the period 2008/09 to 2011/12 as compared to the efficient levels determined by IPART as part of this review. CityRail's ability to meet efficient levels of operating expenditure over 2008/09 to 2011/12 will be considered when IPART determines efficient levels of operating expenditure beyond 2011/12.

84 Collins Concise Dictionary, 2nd Australian Edition, 1990.

IPART still considers that that incorporating the capital expenditure into the RAB at the time the project comes on stream is appropriate, given that the development and construction of major projects, such as the ECRL, are managed by the TIDC,[85] and thus CityRail incurs no capital costs for these projects until they come on stream. It also notes that this approach would involve capitalising any interest associated with the project that has been incurred between construction commencing and the project coming on stream.

IPART considered MoT's question about the appropriateness of subjecting major projects to a prudency review, noting its advice that these projects are a matter for Government policy decisions and, as such, are subject to rigorous cost benefit analyses and the Government's Gateway Review process. IPART concluded that this would not be appropriate, and therefore made a draft decision that the capital expenditure associated with these projects would be included at cost unless IPART is provided with sufficient information to warrant including a different value for these projects. Under this decision, any adjustment to the value to be included in the RAB would need to be based on a thorough cost-benefit analysis of the relevant capital expenditure.

7.4 Level of capital expenditure to be incorporated when rolling forward the RAB

After determining the methodology for rolling forward the RAB, the third step in determining the value of the RAB over the determination period is to decide how much capital expenditure should be incorporated into the RAB in each year of this period, in line with this methodology. This involved IPART making a draft decision on CityRail's forecast efficient capital expenditure not associated with major projects, and on the value of the one major capital project expected to come on stream during the determination period – the ECRL.

7.4.1 Draft decision on capital expenditure to be incorporated when rolling forward the RAB

IPART's draft decision on the level of capital expenditure to be incorporated when rolling forward the RAB is as shown on Table 7.2.

[85] Transport Infrastructure Development Corporation (TIDC) is a State owned corporation which operates under the *Transport Administration Act 1988*.

Table 7.2 Draft decision on capital expenditure to be incorporated when rolling forward the RAB ($million, real $2008/09)

	2008/09	2009/10	2010/11	2011/12
Capital expenditure *not* associated with major projects	1,098	1,346	1,226	983
Capital expenditure associated with ECRL	2,300			
Total	3,398	1,346	1,226	983

In making its draft decision on the forecast efficient capital expenditure not associated with major projects, IPART has:

- accepted that RailCorp's forecast capital expenditure is efficient, in light of LEK's recommendation that efficiency savings were not achievable
- added the additional capital expenditure required to achieve LEK's operating cost savings and the renewal capital expenditure removed from the operating cost forecasts (see in Chapter 6).

In making its draft decision on the value of the ECRL, IPART has valued the ECRL at cost, and incorporated this value into the RAB at the time the project is expected to come on stream, in line with its draft decision on the methodology for rolling forward the RAB.

7.4.2 IPART's preliminary views

IPART's discussion paper noted that capital expenditure is a significant part of the total cost of providing CityRail's services, and that RailCorp has forecast an extensive capital program for the next five years. It also noted that LEK had found that, unlike CityRail's operating and maintenance costs, there is little scope for efficiency improvements in CityRail's forecast capital expenditure program. This is because most of CityRail's capital projects are competitively outsourced, which means the expenditure they require is determined by the market.

CityRail's forecast capital program is primarily driven by the clearways project, rolling stock upgrades, and infrastructure upgrades (including power supply and stations). These projects are intended to improve the standard and reliability of CityRail's services and address some of the capacity constraints resulting from the high demand for peak period travel to and from the CBD. However, the program excludes some major publicly announced projects, such as the Metropolitan Rail Expansion Program (MREP), which is not expected to be in operation until late 2012 (ie, after the end of the determination period).[86]

86 MREP includes the South West Rail Link. This project is being undertaken by TIDC. http://www.tidc.nsw.gov.au/Documents/1655_projupdate.pdf (accessed September 2008).

IPART's preliminary view was to accept LEK's recommendation to adopt RailCorp's forecast capital expenditure, but noted that it was appropriate to make two adjustments to this expenditure:

- adding the additional capital expenditure CityRail will require to achieve efficiency improvements in its operating costs, and
- adding the portion of major periodic maintenance expenditure associated with extending the life of existing assets (removed from the efficient operating and maintenance expenditure cost block, as discussed in Chapter 6).

IPART's discussion paper also noted that one of the key decisions in relation to forecast capital expenditure was if and how to include the value of assets associated with the ECRL. The ECRL is the only major project expected to come on line during the determination period. It is an underground passenger rail service that connects Epping to Chatswood via North Ryde/Macquarie Park. It is designed to improve the capacity of the CityRail network and provide rail access to North Ryde/Macquarie Park with three new stations. The original decision to build this line was made in the mid-1990's and construction commenced in 2002.

The development and construction of the ECRL is being managed by TIDC. The ECRL is expected to be in operation in late 2008, and when this occurs the assets will be transferred from TIDC's balance sheet to RailCorp.

IPART's preliminary view was that expenditure related to major capital programs should be included in the forecast capital expenditure (and therefore in the RAB) only once the service comes into operation, as this is consistent with an incentive approach to regulation, and ensures that passengers only contribute to the efficient costs of providing the services from which they benefit.

IPART also indicated that the value of the ECRL assets to be included into the RAB is likely to be defined by the following limits:

- a lower bound of zero, recognising that the ECRL assets could be considered sunk assets with little opportunity cost
- an upper bound of around $2.3 billion[87], recognising that this value represents the contingent liability associated with the assets (but excludes some operating expenditure associated with the assets which has already been accounted for in previous years).

7.4.3 Stakeholder responses

Stakeholders did not provide significant comment on the forecast efficient capital expenditure required to provide CityRail Services over the determination period.

87 Based on RailCorp, *Annual Report 2006/07*, October 2007, p 90 and information provided by RailCorp.

The BMC&TUA noted that the cost of refurbishing the Tangara fleet is likely to exceed the $500 million included in RailCorp's forecast capital expenditure.[88] One individual noted that passengers should not have to contribute to the capital costs of purchasing or upgrading existing rolling stock as this is the responsibility of the shareholder following years of under-investment.[89]

As discussed above, MoT expressed concern that incorporating the ECRL at a value of $2.3 billion would result in a significant "lumpy" increase to the asset base with a sharp flow-on effect to fares, whereas including it at a zero value would have no impact on fares.

7.4.4 IPART's considerations in making its draft decision

Capital expenditure not associated with major projects

IPART is not aware of any new information on the forecast efficient capital expenditure not associated with major projects required to provide CityRail services over the determination period. Therefore, its draft decision is to reaffirm its preliminary view as set out in the discussion paper and in Table 7.2 above.

In making this draft decision, IPART has:

- Accepted RailCorp's forecast capital expenditure in light of LEK's recommendation that efficiency savings were not achievable.
- Added the additional capital expenditure required to achieve LEK's operating cost savings. This is important in encouraging the optimal mix of operating and capital expenditure consistent with the supply of services at least cost. If the Government provides advice prior to IPART's final decision that some of the efficiency savings (particularly those related to staffing low patronage stations and employing guards on trains) will not be made this determination period, then IPART will remove the associated additional capital expenditure for its final fare decision.
- Added the renewal capital expenditure removed from the operating cost forecasts, consistent with the treatment of renewal capital expenditure in other industries IPART regulates. This ensures that passengers contribute to this expenditure over the life of the asset rather than in the year the expenditure is incurred.

88 BMC&TUA submission, July 2008, p 5.
89 Confidential submission.

Capital expenditure associated with major projects (the ECRL)

IPART's draft decision is that the ECRL be incorporated into the RAB at a value of $2.3 billion when it comes on stream is consistent with the draft decision on the methodology for incorporating capital expenditure associated with major projects, discussed in section 7.5 above. When this project comes on stream, the associated assets will be transferred from TIDC's balance sheet to RailCorp, and RailCorp will become responsible for operating and maintaining the infrastructure, and for servicing the debt associated it. The capital expenditure associated with this investment will have an opportunity cost and should be subject to a rate of return via inclusion in CityRail's RAB.

Additionally, IPART notes the advice from MoT that this project has been subject to more rigorous cost-benefit analyses and the Government's Gateway Review process. Therefore, in line with the methodology discussed above, it should be included at cost unless IPART is provided with sufficient information to warrant including a different value for these assets.

IPART also notes that including the ECRL at a value of $2.3 billion results in CityRail's revenue requirement for 20011/12 being approximately 8 per cent higher than it would have been if the ECRL was valued at zero. IPART considers that this is consistent with good regulatory practice, and sends the appropriate signals to those responsible for making decisions on major capital projects for CityRail, about the need for these decisions to be efficient and prudent.

As noted in section 7.3.1, IPART expects that as a 'rule of thumb' an appropriate passenger share for funding new major capital projects would be 30 per cent. This implies that if Government invests an additional $1 billion in the CityRail network (for example on a South West Rail Link) an additional $300 million (in net present value terms) would need to be recovered from passengers over the life of the asset. A passenger share that differs from this 'rule of thumb' may be appropriate depending on the individual project in question and the external benefits it generates, but this would need to be demonstrated.

8 Allowance for a return on capital

The inclusion of an allowance for a return on capital in the annual revenue requirement ensures that the shareholder receives appropriate compensation for committing capital to the business and bearing the risks associated with the business. To determine the size of this allowance, IPART determined an appropriate rate of return for CityRail, and then multiplied the value of RAB over the determination period by this rate.

The sections below discuss IPART's draft decision on the allowance for a return on capital, and its considerations in making this decision.

8.1 Overview of the draft decision on the allowance for a return on capital

IPART's draft decision on the allowance for a return on capital over the determination period is shown on Table 8.1.

Table 8.1 Draft decision on the annual allowance for a return on capital used in calculating CityRail's net annual revenue requirement ($million, real $2008/09)

	2008/09	2009/10	2010/11	2011/12
Return on capital	509	585	660	717

IPART's draft decision on the value of the RAB in each year of the determination period is discussed in Chapter 7. Its draft decision on the appropriate rate of return for CityRail is discussed below.

8.2 Rate of return

IPART's draft decision is that for the purposes of calculating the allowance for a return on capital, a real pre-tax rate of return of 7.7 per cent is appropriate.

This draft decision reflects IPART's view that:

- the public transport industry's weighted average cost of capital (WACC) is in the range 6.8 to 8.8 per cent
- a WACC equivalent to the mid-point of this range is appropriate for CityRail.

8.2.1 IPART's preliminary view

IPART's preliminary view was that a rate of return of 8 per cent was appropriate, based on the WACC approach.[90] This figure was based on IPART's initial assessment of the various input parameters used to calculate a WACC for CityRail shown in Table 8.2.

Table 8.2 Parameters used to calculate CityRail's WACC – Preliminary view

Parameter	Value
Nominal risk free rate	6.2%
Real risk free rate	2.3%
Implied inflation forecast	3.8%
Debt margin	2.8 to 4.1%
Debt funding	50 to 40%
Gamma	0.5 to 0.3
Tax rate	30%
Equity beta	0.8 to 1.0
Cost of equity	10.6 to 12.7%
Cost of debt	9.0 to 10.3%
WACC (real pre tax)	6.9 to 9.8%
WACC (midpoint)	8.0%

Note: Input parameters for IPART preliminary view were as at April 2008.

8.2.2 Stakeholders response

Several stakeholders considered that a WACC of 8 per cent was excessive, in the context of the public transport industry.[91] For example, one stakeholder argued that a WACC of 7 per cent is more appropriate for calculating a return on infrastructure projects, as this level is in line with the NSW Treasury Guidelines.[92] This stakeholder also argued that under the WACC approach, estimating the cost of equity through a combination of the capital asset pricing model (CAPM) and market approaches (as IPART did in its discussion paper) is inappropriate, because spare government funds will be invested in alternative government projects which do not earn a market rate of return.

90 The weighted average cost of capital approach calculates the cost of capital as the expected cost of the various classes of capital (debt and equity) weighted to take into account the relative share of debt and equity in the total capital structure.

91 APT submission, 9 July 2008, p 6 and Confidential submission.

92 Confidential submission.

8.2.3 IPART's considerations in making its draft decision

IPART considered stakeholders' comments about the optimal level of the return on capital element of CityRail's revenue requirement.

It noted that one stakeholder suggested that NSW Treasury's hurdle rate of 7 per cent should be used as the rate of return. IPART considers it more appropriate to use the WACC approach to determine an appropriate range for this rate as it is intended to identify the best alternative rate of return. This is consistent with the approach IPART uses in regulating the energy and water sectors.

IPART's draft decision that a real pre-tax WACC of 7.7 per cent reflects IPART's view that the industry weighted average cost of capital is in the range of 6.8 to 8.8 per cent, and that a WACC equivalent to the mid-point of this range is appropriate for CityRail.

The parameters IPART used to calculate this WACC range are shown in Table 8.3 and were based on market conditions as at 4 August 2008. Prior to its final determination, IPART will update the WACC parameters to reflect the market conditions at that time.

Table 8.3 Parameters used to calculate CityRail's WACC – Draft decision

Parameter	Value
Nominal risk free rate	6.3%
Real risk free rate	2.6%
Implied inflation forecast	3.7%
Debt margin	2.3 to 3.2%
Debt funding	50 to 40%
Gamma	0.5 to 0.3
Tax rate	30%
Equity beta	0.8 to 1.0
Cost of equity	10.7 to 12.8%
Cost of debt	9.4 to 10.5%
WACC (real pre-tax)	6.8 to 8.8%
WACC (midpoint)	7.7%

Note: Input parameters for IPART draft decision were as at 4 August 2008.

9 Allowances for a return of capital (depreciation) and on working capital

To determine the allowance for a return of capital (or depreciation), IPART assumed straight line depreciation. It then established an appropriate depreciation rate for CityRail's three asset groups, and then multiplied the annual value of each group by the appropriate rate.

To determine the allowance for a return on working capital, IPART estimated an appropriate level of net working capital for CityRail for each year of the determination period, and multiplied this amount by the appropriate rate of return for CityRail (as discussed in Chapter 5).

The sections below discuss IPART's draft decisions and considerations in relation to each of these allowances.

9.1 Overview of the draft decision on the allowance for a return of capital

IPART's draft decision on the allowance for a return of capital is as shown on Table 9.1.

Table 9.1 Draft decision on the allowance for a return of capital used in calculating CityRail's net annual revenue requirement ($million, real $2008/09)

	2008/09	2009/10	2010/11	2011/12
Return of capital	193	258	326	384

In making this draft decision, IPART assumed straight line depreciation. The straight line method of depreciation takes an equal amount from the asset value in each year of the assets' economic life, so that the real written-down value describes a straight line over time, from the initial value of the investment to zero at the expiry of the asset life.

IPART then established an appropriate depreciation rate for CityRail's three asset groups, and then multiplied the annual value of each group by the appropriate rate:

- existing assets (ie, the ICB) were depreciated at the average depreciation rate implicit in RailCorp's statutory accounts (3.7 per cent)
- new assets not associated with major projects were depreciated at the weighted average depreciation rate of future capital expenditure (5.5 per cent)

- new assets associated with major projects (ie, the ECRL) were depreciated at the rate of 1 per cent (based on an average asset life of 100 years).

As no comments were received from stakeholders on the allowance for a return of capital, IPART's draft finding is similar to its preliminary view. However, IPART has revised the depreciation rate for the new assets by applying different rates to assets not associated with major projects and assets associated with the ECRL.

9.1.1 Depreciating the ICB

IPART considers that the remaining asset life of the ICB is different from the remaining asset life of new assets. Therefore, it applied a different depreciation rate to the ICB. This depreciation rate is based on the average remaining asset life of the ICB of 27 years, which corresponds to an annual depreciation rate of 3.7 per cent on the written down value of CityRail's assets. The average depreciation rate will apply until the full amount of asset value implicit in the ICB is fully depreciated.

9.1.2 Depreciating new assets not associated with major projects

IPART considers that new assets associated with the forecast efficient capital expenditure not associated with major projects have a different average remaining asset life to the ICB, and thus should be depreciated at a different rate. RailCorp provided its estimates of the remaining asset lives for all of its six separate asset categories. Based on these estimates, IPART calculated a weighted average depreciation rate of 5.5 per cent (or an average asset life of 18 years) and applied this rate to forecast efficient capital expenditure not associated with major projects.

IPART intends to conduct further analysis prior to making its final decision, so it can depreciate CityRail's forecast efficient capital expenditure under each of the six categories presented in the discussion paper, rather than applying a weighted average depreciation rate.

9.1.3 Depreciating the ECRL

IPART considers that the ECRL should be depreciated at a rate specific to this asset, as it will result in a significant increase in the value of the RAB when it comes on stream (ie, it will add $2.3 billion to the ICB of $3.9 billion). In addition, RailCorp has advised that the average asset life of the assets associated with the ECRL to be transferred to CityRail in 2008/09 is significantly higher than the weighted average life of its other asset classes. The ECRL has a higher proportion of longer-lived assets (for example, tunnels and other infrastructure) and thus RailCorp estimates an average life of 100 years compared to the weighted average of 18 years. In view of this, IPART made a draft decision that the ECRL should be depreciated at an annual rate of 1 per cent.

9.2 Overview of the draft decision on the allowance for a return on working capital

IPART's draft decision on the allowance for a return on working capital is as shown on Table 9.2.

Table 9.2 Draft decision on allowance for a return on working capital used in calculating CityRail's net annual revenue requirement ($million, real $2008/09)

	2008/09	2009/10	2010/11	2011/12
Return on working capital	-19	-21	-18	-14

In general, the rationale for including an allowance for a return on working capital is that, if the business' net working capital is positive, it has invested capital to facilitate this and so should earn a regulatory return on this capital. However, if the business' net working capital is negative, its trade creditors are providing working capital to the business, and so it should earn a negative regulatory return to offset the returns being earned by the business on the capital provided by other parties.

IPART did not form a preliminary view on the allowance for working capital, as it did not have access to the information required to calculate this allowance. RailCorp has since provided the necessary information. Therefore, to make its draft decision IPART:

- estimated CityRail's forecast level of net working capital in each year of the determination period, as shown in Table 9.3
- multiplied this by the appropriate rate of return for CityRail, as discussed in Chapter 8.

Table 9.3 Forecast levels of net working capital used in calculating the draft decision on the allowance for return on working capital ($million, real $2008/09)

	2008/09	2009/10	2010/2011	2011/12
Accounts payable	345	373	350	315
Inventory	43	47	44	39
Accounts receivable	130	136	142	148
Net working capital	-172	-190	-164	-127

These levels are based on CityRail's forward estimates for the elements of net working capital relating to passenger services. These are:

- accounts payable at 40 days of operating and capital expenditure
- accounts receivable at 20 days of revenue
- inventory at 5 days of operating and capital expenditure.

As Table 9.3 indicates, CityRail's net working capital is negative for each year of the determination period. CityRail has low levels of accounts receivable and inventories compared to payables, resulting in a *negative* level of net working capital. This is largely driven by the nature of CityRail's business where all farebox revenue is received before the travel occurs and thus results in a low level of accounts receivables. Given this negative net working capital position, it is appropriate that the allowance for a return on working capital be negative.

10 Forecast patronage growth

IPART's decision on CityRail's forecast patronage growth over the determination period is an important part of the fare review, and has a major impact on the level of fares. This is because IPART sets the level of fares to generate the share of CityRail's revenue requirement to be recovered from passengers, based on the forecast number of passenger journeys for each fare type. In general, a higher patronage growth forecast will lead to lower fare increases, because the revenue requirement can be recovered from a higher number of ticket sales.

IPART's forecast patronage growth also affects the value of the external benefits of CityRail services over the determination period. Generally speaking, a higher forecast number of passenger journeys will lead to a higher value for the external benefits (for example, because more passenger journeys should mean that higher levels of the costs associated with private vehicle use are being avoided). And a higher value for the external benefits will lead to lower fare increases, because it suggests that a higher share of CityRail's annual revenue requirement should be recovered from taxpayers through Government subsidies rather than passengers.

Over the last 25 years, the average annual growth in the total number of CityRail passenger journeys has been 1.3 per cent. However, in recent years, this annual growth has been much stronger. In 2006/07, it was 3.1 per cent, while in 2007/08, it was 5.2 per cent.[93]

IPART would like to see this strong growth in demand for CityRail's services continue over the determination period because, as noted above, higher patronage growth will partly offset the need to increase fares. However, the key question is whether this is likely, or will the growth rate revert back to a level more consistent with the long-term average?

The section below provides an overview of IPART's draft decision on CityRail's annual forecast patronage growth over the determination period. The subsequent sections discuss this decision and IPART's considerations in more detail.

10.1 Overview of draft decisions on forecast patronage growth

IPART's draft decision is that CityRail's forecast patronage growth over the determination period is as shown in Table 10.1 below.

93 Information provided by RailCorp.

Table 10.1 Forecast patronage growth over the 2009 determination period (%)

	2007/08	2008/09	2009/10	2010/11	2011/12
Patronage change	5.2	5.0	2.5	2.5	2.5

Note: 2007/08 figure is an actual.
Source: RailCorp and IPART.

10.2 IPART's preliminary view

In its discussion paper, *Determining CityRail's revenue requirement and how it should be funded* IPART included forecast patronage growth in line with the draft decision shown above. IPART noted that its forecast annual patronage growth of 2.5 per cent in the final three years of the determination period was consistent with RailCorp's forecast and the State Plan. However, its forecast growth of 5.0 per cent in 2008/09 was higher than RailCorp's forecast of 2.5 per cent, and was consistent with recent trends in CityRail's patronage growth. IPART also noted that its forecast annual patronage growth over the determination period was significantly higher than of the long-term average growth in CityRail's patronage of 1.3 per cent per annum.[94]

In its second discussion paper, *Deciding on the structure and level of CityRail's fares*, IPART discussed the factors that are likely to affect CityRail's patronage over the determination period, and how the demand for CityRail services varies by location, time of day and day of the week. The paper noted that the strongest growth in the number passenger journey was for journeys to the CBD in the morning peak period, and for journeys leaving the CBD in the afternoon peak period.

10.3 Stakeholders responses

Several stakeholder submissions commented on the forecast patronage growth and discussion included in IPART's discussion papers. In general, these stakeholders argued that IPART's forecast patronage growth was too low, given recent trends in patronage growth, rising petrol prices, and the likelihood that the Federal Government will introduce a carbon trading scheme over the determination period.[95] Stakeholders considered that IPART's forecast should be higher, and therefore that its estimated value for the external benefits of CityRail services should be higher and the level of fares should be lower.

In its submission, MoT noted that it would be undertaking further analysis of CityRail's forecast patronage growth in conjunction with RailCorp and the Transport Data Centre (TDC). IPART understands that the results of this further analysis should be available in time for IPART to consider before making its final decision on forecast patronage growth.[96]

94 Information provided by RailCorp.
95 WSROC submission, July 2008, p 3 and Eco Transit submission, July 2008, p 5.
96 MoT submission, July 2008, p 7.

10.4 IPART's considerations in making its draft decision

In making its draft decision that CityRail's annual forecast patronage growth is 5.0 per cent in 2008/09 and 2.5 per cent in 2009/10, 2010/11 and 2011/12, IPART took into account a range of factors it considers will affect patronage growth over the next four years. These factors include:

- recent trends in CityRail's patronage growth
- growth in CBD employment over the determination period
- the completion of the EPCL
- the fare increases that result from this determination (including Booz's conditional fare elasticities in Table 10.2)
- the quantity and quality of CityRail services
- ongoing growth in patronage during peak periods, and the constraints of CityRail's network
- increases in fuel prices and road congestion.

IPART also considered RailCorp's forecast of 2.5 per cent patronage growth in each year of the determination period. This growth forecast is the same as that implied by the Government's State Plan. IPART considers that the 2.5 per cent growth forecast is the most robust given it is used internally by RailCorp and implied by the NSW Government State Plan targets. Therefore, IPART's draft decision on forecast patronage growth in the last three years of the determination period is consistent with RailCorp's forecast for these years. However, IPART considers that the strong growth in patronage CityRail has experienced over recent years is likely to continue during 2008/09. Therefore it has adopted higher forecast growth of 5.0 per cent for that year.

In addition, IPART considered stakeholders' responses to its preliminary view, particularly concerns that its forecast patronage growth was too low. However, IPART still considers that its forecast is appropriate, as it recognises the recent strong growth in CityRail passengers, but assumes that this growth will moderate somewhat in view of the uncertainties surrounding growth in CBD employment and CityRail's future capacity constraints. IPART also notes that its forecast patronage growth is still considerably higher than CityRail's long-term average patronage growth.

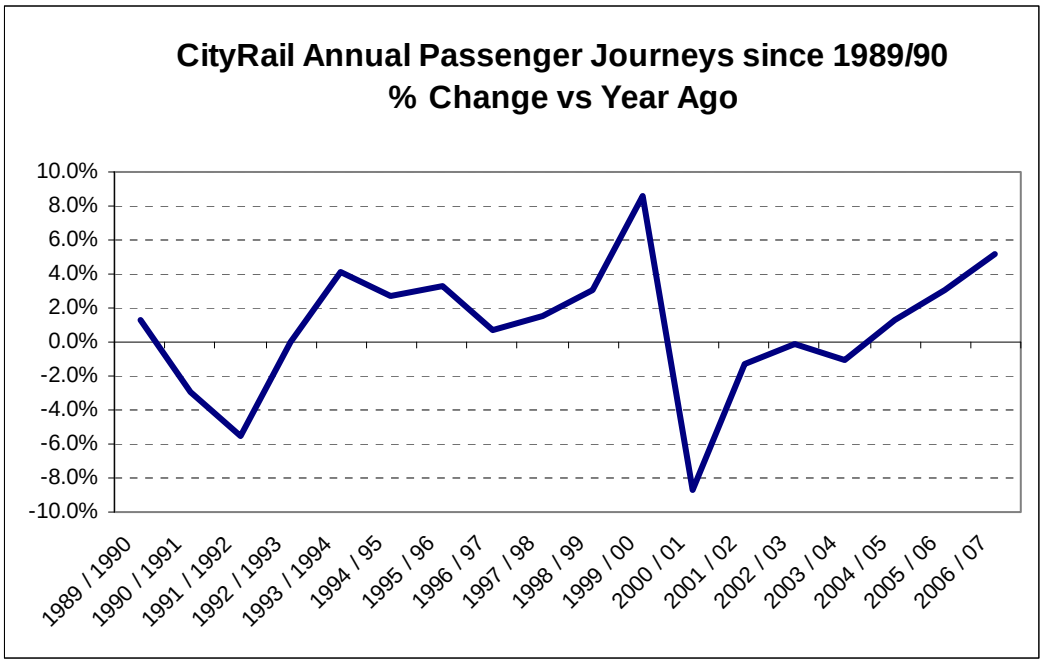
The sections below discuss in detail the key factors IPART considers will affect patronage growth over the coming four years.

10.4.1 Recent trends in CityRail's patronage growth

CityRail has experienced strong patronage growth over the last two years. In 2007/08, the estimated number of passenger journeys grew by 5.2 per cent,[97] while in 2006/07 this number grew by 3.1 per cent. There was a higher level of growth in passenger journeys during peak periods than during off-peak periods. In addition, there was higher growth in the weekly and other commuter tickets (8.4 per cent) and full fare tickets (5.4 per cent) than in off-peak tickets (3.2 per cent).[98]

However, as Figure 10.1 below illustrates, the change in CityRail's annual number of passenger journeys has been fairly volatile over the last 20 years.

Figure 10.1 Changes in CityRail's annual number of passenger journeys



Source: RailCorp.

10.4.2 Growth in CBD employment

Growth in employment in Sydney's CBD is likely to have been a major contributor to CityRail's recent strong patronage growth. Over half of CBD commuter journeys are undertaken on CityRail services, so any changes in the CBD employment market can be expected to flow through to CityRail's patronage levels.

97 This is an unadjusted figure, RailCorp consider that a more realistic estimate adjusted to reflect the number of Mondays (RailCorp's busiest day) in a financial year is 4.7 per cent.

98 Information provided by RailCorp.

However, the level of employment growth in the CBD over the next four years is not certain. While there has been strong growth in the CBD employment market in recent years, there are some current macroeconomic factors which may lead to a softening in this market over the coming years. For example, the outlook for CBD employment will obviously be affected by the extent to which the ongoing instability in financial markets affects employment within that sector and whether it impacts on the broader economy. Recent economic forecasts suggest a general slowing in employment growth in the near term.[99]

In addition, CRAI's modelling of demand for CityRail services found a statistically significant negative relationship between the unemployment rate in Sydney and this demand. Figure 10.1 above shows that the last time the Australian economy entered a recession – in 1990 – CityRail's patronage growth declined substantially.

While the factors discussed above indicate that there are some uncertainties surrounding the level of CBD employment growth in the coming years, IPART has not seen evidence to suggest that this growth will decline to the extent that it will prevent CityRail's recent strong patronage growth continuing into 2008/09. However, IPART considers that its lower forecast patronage of 2.5 per cent per annum for the remainder of the determination period is an appropriate balancing of the forecasting risks.

10.4.3 Completion of the ECRL

Based on information provided by RailCorp, IPART has included in its 2008/09 forecast of 5 per cent a one percentage point increase in patronage from the completion of the ECRL in late 2008.[100]

10.4.4 Fare increases that result from this determination

IPART considered how the fare increases that result from this fare determination are likely to affect CityRail's patronage growth over the determination period. It commissioned Booz and Co (Booz) to estimated the price elasticities of a range of CityRail ticket products (Table 10.2). It also commissioned CRAI, as part of its review of externaltities, to undertake econometric modelling to estimate these price elasticities and provide a demand model.

The results of both consultants' work suggest there is a negative relationship between demand for CityRail services and the level of CityRail fares (eg, demand tends to come down as fares go up). However, both pieces of work also suggest that demand is not very responsive to changes in price. For example, Booz found that overall fare elasticity in the short to medium-term to be -0.29 per cent (see Table

99 Australian Government 2008/09 budget papers, Budget Paper 1, May 2008 - employment growth of 1¼ per cent for 2008/09 - and NSW Government 2008/09 budget papers, Budget Overview, June 2008 - employment growth of 1 per cent for 2008/09.

100 Information provided by RailCorp.

10.2).[101] CRAI found that fare elasticity in the short term to be -0.24 and in the long-term to be -0.35. Based on these estimates, a 10 per cent increase in fares would be associated with a fall in patronage of around 2-3 per cent (all other factors being equal).

Table 10.2 Booz's conditional fare elasticities by ticket type

Ticket type	Elasticity
Single (return)	-0.48
Off-peak return	-0.23
RailPass/FlexiPass	-0.28
TravelPass	-0.12
Total	**-0.29**

Source: Booz and Co report, May 2008, p.ii.

However, the impact of higher fares on CityRail's demand importantly depends on the price of alterative travel modes. The fare elasticity effects suggested above assume the price of private cars and bus is unchanged. This is clearly not realistic. MoT has provided a proposal to increase metropolitan and outer metropolitan bus fares by 5.5 per cent.[102] The cost of automotive fuel has increased considerably in recent years and there is speculation that this trend could continue into the future. This suggests that the price of competing modes of transport will also increase in the future which would substantially diminish the impact of higher CityRail fares on its patronage levels. IPART has undertaken some preliminary modelling using the demand model provided by CRAI which supports this conclusion.

In addition, while accepting that there is a negative relationship between demand for CityRail's services and fare levels IPART considers that other factors are likely to play a substantial role in determining patronage growth. This is borne out by the fact that fare changes in recent years seem to have had little affect on patronage growth. For example, during the 2003-2006 period when fares were frozen and therefore decreased in real terms, CityRail's patronage fell or remained stable. In 2007, when fares increased by an average of 5.9 per cent (nominal), patronage grew by around 5 per cent. In IPART's view, this suggests that other factors – particularly growth in CBD employment, the quantity and quality of CityRail services and the price of competing transport modes – are likely to have a more significant impact on patronage then fare levels.

Overall, IPART considers that the fare increases arising from its draft fare determination will not substantially impact on CityRail's patronage growth over the determination period, particularly if the price of competing transport modes such as private cars and buses also increase as expected over the next four years.

[101] Booz and Co report to IPART, May 2008 available from IPART's website www.ipart.nsw.gov.au
[102] MoT bus submission to IPART, July 2008, available from IPART's website www.ipart.nsw.gov.au

10.4.5 Quantity and quality of CityRail's services

Recent surveys of CityRail users suggest that at current fare levels, the quantity and quality of CityRail services has a greater influence on demand for these services than the level of fares. For example, ITSRR's 2007 survey found that more than 75 per cent of respondents were satisfied with the cost of train travel.[103] In addition, respondents did not indicate that this cost was one of the most important issues for them. Rather, their responses suggest that issues such as train frequency and reliability, personal safety, and the provision of information to customers are far more important to them.[104] These findings are consistent with the results of internal RailCorp surveys, which suggest that quality and quantity of service is more important than price to existing users.[105]

The findings are also consistent with the changes in CityRail's patronage growth over recent years (see Figure 10.1). For example, at the time of the 2000 Olympic Games both the quantity and quality of CityRail's service and growth in demand were particularly high. In the years immediately after this, service levels deteriorated markedly and patronage declined significantly. However, in 2005, when a new timetable was introduced and service quality improved, patronage levels began to grow again.

Overall, IPART expects that CityRail will either maintain or increase its service performance over the determination period, as projects included in its cost allowance (such as new rolling stock and clearways) are implemented unless the network reaches full capacity, as discussed below.

10.4.6 Ongoing growth in patronage during peak periods and capacity constraints on CityRail's network

IPART's draft decision on CityRail's annual revenue requirement over the determination period includes a considerable amount of funding for implementing capital projects that will increase the capacity of the CityRail network. These projects include the purchase of new rolling stock and the completion of the EPCL.

However, if patronage during peak periods continues to grow at current levels, this additional capacity will be exhausted by 2012 at the latest. And as the network reaches full capacity, the quality of service will inevitably go down – for example, crowding on trains and in stations will increase, and ultimately reliability will decrease. This is likely to lead to a reduction in patronage growth.

The relationship between service quality and patronage growth means that the capacity constraints on CityRail's network create a natural limit to how much patronage can grow. Indeed, IPART suspects that even achieving the patronage growth it has forecast will place strains on the system. Achieving growth rates above

103 ITSRR Survey of CityRail customers 2007, September 2007, p 43.
104 Ibid, p 42.
105 Information from RailCorp.

this forecast, as suggested by some stakeholders, may simply not be achievable without substantial new investments that are likely to be both expensive and take considerable time to implement.

The need to spread the demand for CityRail's services from peak to off-peak is one of the main reasons IPART is recommending an increase in the off-peak discount to 50 per cent (see Chapter 13).

10.4.7 Increases in oil prices and road congestion

Several stakeholders suggested that factors such as increasing petrol prices and levels of road congestion are contributing to the current high patronage growth. They also suggested that, taking these factors into account, the patronage growth will be higher than IPART's forecast.

IPART acknowledges that these factors are likely to be contributing to patronage growth. However, it considers that their effects may be overstated by some stakeholders. In addition, IPART considers that the risks associated with a higher forecast which proves to be incorrect are greater than those of using a more conservative forecast that proves to underestimate patronage growth.

As the beginning of this chapter discussed, IPART's forecast of patronage growth affects two main components of its draft fare decision:

- It is used in financial and fares modelling. The forecast patronage growth has an important impact in the modelling used to set fare levels, as changes in patronage (as well as changes in fare levels) affect the amount of farebox revenue CityRail will collect over the determination period.
- It is also used in inflating the value of the external benefits provided by CityRail services over the determination period. As Chapter 11 will discuss, IPART has estimated the value of these external benefits at the start of the determination period based on actual data, including patronage data. Then it has increased this value annually by the forecast annual patronage growth and the forecast of Wages Price Index and the Consumer Price Index to derive the total value of these benefits over the determination period.

In both cases, a higher patronage growth forecast would lead to lower fares. This would be a good thing if the forecasts proved to be correct, but would be problematic for RailCorp and the Government if it proved to be incorrect. For example, a higher forecast patronage growth implies that CityRail will collect a higher level of farebox revenue over the determination period. If actual patronage growth is less than forecast, CityRail could be left with a funding shortfall and so would require additional Government funding through the period. On the other hand, if the forecast patronage growth is more conservative and actual growth is higher than forecast, CityRail could collect additional fare revenue. IPART considers the latter is more appropriate, as it provides greater funding certainty to CityRail.

IPART notes that in its report to the Government, *Improving CityRail's accountability and incentives through stronger governance arrangements*, it has recommended the funding agreement between RailCorp and MoT place a 'cap' on the level of funding for CityRail services, but include a revenue risk sharing arrangement that specifies the extent to which the Government will compensate RailCorp (ie, provide it with additional funding) if CityRail's actual patronage growth is less that forecast as part of the fare determination.[106] While such an arrangement will provide some protection for CityRail, IPART nevertheless considers that it should be conservative in forecasting CityRail's patronage growth as it would be better to avoid the need for additional Government funding if possible.

[106] IPART, *Improving CityRail's accountability and incentives through stronger governance arrangements*, October 2008, p 39.

11 Value of external benefits of CityRail

Public transport services play an important role in functional, liveable and sustainable cities. For example, the availability of these services improves people's access to work, education, health, recreation and other services, and provides them with an alternative to using private cars. The passenger rail services CityRail provides perform a key part of the public transport task in Sydney, especially in transporting people from the suburbs where they live to employment in the CBD.

Most people readily understand that passenger rail services provide direct benefits to the people who use those services. However, these services also generate substantial indirect benefits that accrue to the wider community – including reduced road congestion, traffic accidents and greenhouse gas emissions (these benefits are known as external benefits, because they are external to those who use of the services).

There is general agreement in Australia and other jurisdictions that the external benefits generated by passenger rail services justifies government subsidisation of passenger rail fares (see Box 11.1 for more detail). IPART shares this view, and considers that the size of the government subsidy should be related to the estimated value of these external benefits.

Given this view, IPART has examined and made a draft decision on the forecast value of the external benefits of CityRail services over the determination period. It then considered this value in making its draft decision on the appropriate share of CityRail's revenue requirement to be funded by taxpayers (through government subsidies) and by passengers (through fares).

IPART's draft decision on the value of the external benefits of CityRail, and its considerations in making this decision are discussed in the sections below. IPART's draft decision on the share of the revenue requirement to be funded by taxpayers and passengers is discussed in Chapter 12.

11.1 Overview of the draft decision on the value of the external benefits of CityRail

IPART's draft decision is that the value of the external benefits of CityRail in 2007/08 was $1.7 billion (real $2008/09), and the forecast value of these benefits over the determination period is as shown on Table 11.1.

Table 11.1 Draft decision on the value of the external benefits of CityRail ($billion, real $2008/09)

	2007/08	2008/09	2009/10	2010/11	2011/12
External benefits value ($b)	1.7	1.8	1.8	1.9	1.9

Note: Numbers are presented in real $2008/09.

Source: IPART calculation based on information provided by CRAI.

The draft decision is higher than IPART's preliminary view of the value of the external benefits set out in the discussion paper. This is because CityRail's actual patronage in 2007/08 is higher than previously estimated which has driven up IPART's draft decision on CityRail's forecast patronage in 2008/09. This higher patronage has increased the value of the external benefits estimated for the discussion paper. IPART has not changed its approach to this calculation, or included additional external benefits in the calculation.

In making its draft decision, IPART largely accepted the recommendations of its consultant, CRAI, on the values of the external benefits in 2006/07 (Table 11.2). It then increased these values, taking into account CityRail's actual patronage in 2007/08, the draft decisions on forecast patronage growth over the determination period, and the forecast change in the Wages Price Index (WPI) and Consumer Price Index (CPI) for 2008/09.

Table 11.2 CRAI's estimate of the value of the external benefits of CityRail in 2006/07 ($million, 2006/07)

Source of benefit	Recommended value
Avoided road congestion*	923.1
Avoided air pollution	109.1
Avoided greenhouse gas emissions	25.3
Avoided noise pollution	-
Avoided road accidents	-
Avoided road damage	-
Total external benefits	1,057.5

* Calculated using modelling results obtained from the TDC's Sydney Strategic Travel Model.

Source: CRAI report.

As the table shows, CRAI's estimate was based on estimates of the value of avoided road congestion costs and avoided air pollution and greenhouse gas emissions due to the use of CityRail services. CRAI considered including values for a broader set of external benefits, including avoided noise pollution, road accidents and road damage. However, it concluded that the value of these benefits was too small to warrant inclusion, or was ambiguous (ie, it could be either positive of negative).

CRAI also considered including external benefits related to improved social mobility and agglomeration benefits in its calculation. However, it decided not to do so because the value of these benefits were too difficult to accurately measure and/or the link between CityRail's services and the generation of these benefits could not be fully proven.

Box 11.1 The external benefits of rail passenger services, and why these benefits justify government subsidisation of fares

The external benefits of any action are the positive impacts of that action that accrue to parties external to the action (ie, to people who were not involved in taking the action, or deciding to take the action). The external benefits associated with passenger rail services are the benefits that accrue to the community in general (rather than to the individuals who use those services). In general, these external benefits are equivalent to the external costs associated with private car use that are avoided when people choose to travel by train rather than private car.

When commuters decide to drive their own cars to work, their decision contributes to the level of congestion on the roads, and therefore imposes an external cost on other motorists (such as longer trip times). But if some commuters decide to take the train to work instead, then this external cost to other motorists is avoided. The same applies to the other external costs associated with road use, including greenhouse gas emissions and local air pollution, traffic accidents, and traffic noise.

There are a number of tools available to governments to manage the external costs associated with road use. Economic theory suggests that the most effective and efficient tool is to signal to road users (through some sort of road use pricing) the value of the extra road congestion that their decision to make a trip by private car causes. In principle, the same approach can be used to signal the other external costs resulting from road use, such as greenhouse emissions and traffic accident costs. However, to date, there have been no attempts to introduce a comprehensive area-based road-use charging scheme in any Australian city for a range of reasons, including the complexity of such a task.

Another tool for managing the external costs of road use is the provision of reasonably priced public transport services that enable people to avoid imposing these external costs. In many cities throughout the world, public transport services are subsidised to differing degrees, as a second best solution to managing the external costs associated with road use.

In the Greater Sydney area, CityRail's provision of regular passenger services (and the Government's subsidisation of the fares for these services) undoubtedly leads some people who might otherwise travel by car to travel by rail instead. Therefore, the provision of CityRail's services does avoid some of the external costs of road use, such as greenhouse emissions, health related impacts and urban road congestion, particularly on traffic corridors to and from the CBD.

11.2 IPART's preliminary views

In its discussion paper, IPART expressed the preliminary view that the value of the external benefits of CityRail in 2007/08 was around $1.7 billion in real terms, and that this value would be $1.7 to $1.8 billion in real terms for the 2008/09 – 2011/12 period.[107] To derive the value of the external benefits for 2008/09, IPART inflated the 2007/08 value by a combination of the forecast change in the WPI and CPI over the determination period, to maintain their value in nominal terms. It also adjusted the value to reflect its preliminary view on forecast patronage growth over the period.

11.3 Stakeholder responses

Many stakeholders commented on IPART's preliminary views on the value of the external benefits of CityRail. In most cases, they argued that IPART had either underestimated the value of these benefits, or had not included all the relevant benefits in its calculation. The most frequently expressed views were that:

- IPART had not taken proper account of the role of passenger rail services in reducing greenhouse gas emissions, or had underestimated the value of the external benefits associated with avoided emissions.[108]
- IPART had not adequately considered external benefits related to improved social mobility, particularly for disadvantaged groups.[109]

Several stakeholders also argued that IPART had underestimated CityRail's forecast patronage growth over the determination period, given the current patronage growth, rising petrol costs and the introduction of an emissions trading scheme. They noted that a higher patronage growth forecast would lead to a higher estimated value for the external benefits over the determination period.

In addition, MoT put the view that IPART had not adequately considered the contribution CityRail services make to the economic prosperity of Sydney, by enabling businesses to locate in high-density clusters within the CBD and other centres such as Parramatta, which leads to efficiency and productivity benefits, often referred to as agglomeration benefits. MoT suggested that IPART examine the findings of the Eddington Transport Study, undertaken in the United Kingdom on the links between transport and the broader economy.[110]

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107 The estimates in the discussion paper were presented in nominal $ while the numbers in this draft fare report are presented in $ real 2008/09.
108 WSROC submission, July 2008, p 3, and Eco Transit submission, July 2008, p 3.
109 APT submission, 9 July 2008, p 7.
110 MoT submission, May 2008, p 8.

11.4 IPART's considerations in making its draft decision

IPART considered all stakeholder comments, both in submissions and at the roundtable. It also asked its consultant, CRAI, to revisit its estimate of the value of the external benefits in light of these comments. However, IPART's draft decision that the forecast value of the external benefits is $1.8 billion in 2008/09, increasing to $1.9 billion in 2011/12 reaffirms its preliminary view. As noted above, the draft decision on the value of the external benefits is higher than the preliminary view, but this is due to a higher than forecast patronage in 2007/08.

In making its draft decision on the forecast value of the external benefits, IPART:

- Accepted CRAI's recommendation that the total value of the external benefits in 2006/07 was $1.1 billion, noting that CRAI did not change this recommendation after reconsidering them in light of stakeholder comments. (A summary of CRAI's advice in relation to the value of the external benefits is provided at Appendix B.)
- Determined that the total value of the external benefits in 2007/08 was $1.6 billion by adjusting CRAI's recommended value for 2006/07 to reflect CityRail's actual patronage in 2007/08 of 296 million passenger journeys, and IPART's view that, for the purpose of calculating the value of external benefits related to avoided road congestion, the appropriate value of time is $15.80 per hour (rather than CRAI's estimate of $13.15 per hour).
- Determined the value of the external benefits in 2008/09 by:
  - adjusting the 2007/08 value by 4.4 per cent based on a combination of the forecast annual change in the WPI (4.6 per cent) and the CPI (3.7 per cent)
  - adjusted the previous year's value to reflect IPART's draft decisions on forecast annual patronage growth (5.0 per cent in 2008/09, and 2.5 per cent in the remaining years).

In reaching the view that, for the purpose of calculating the avoided road congestion benefits, the appropriate value of time is $15.80 per hour IPART:

- Started with CRAI's estimate that the NSW wage rate in 2008 was $28.8 per hour.[111]
- Multiplied this estimate by a factor of 1.1, to make it more consistent with the wage rate likely to be earned by the average CityRail passenger. This reflects IPART's analysis suggesting that the average CityRail passenger's household income is greater than the average Sydney household income and persons from the Sydney area also tend to have higher incomes than those from other regions of NSW.
- Multiplied this by 0.5, to reflect IPART's view that most people value their time when not at work at less than their prevailing wage.

111 CRAI report, June 2008, p 61.

IPART notes that the resulting figure of $15.80 is well within CRAI's recommendation that the appropriate value of time was in the range of $9.23 per hour to $22.60 per hour.

In relation to the stakeholder view that IPART did not adequately consider the external benefits associated with improved mobility, IPART acknowledges that CityRail services improve the mobility of those who can access its network, particularly those who do not have access to private forms of transport. It also acknowledges that access to affordable public transport services is important for disadvantaged groups, who are somewhat less likely to be able to access other forms of transport. However, it considers that most of the benefits associated with improved mobility are private benefits (ie, they accrue to the individuals concerned, rather than the community as a whole) and therefore should not be considered in calculating the value of the external benefits of CityRail.

Further, IPART notes the considerable concession fare funding currently provided for disadvantaged groups by the NSW Government. As MoT's submission noted, NSW's public transport concession fare funding scheme is the most comprehensive and generous in Australia. It enables around one third of CityRail's passengers to travel for less than the standard fare, and costs taxpayers around $800 million per annum.[112] From societal point of view, this scheme undoubtedly provides substantial benefits. Indeed, it is likely that the key reason the Government provides this scheme is to improve the mobility of disadvantaged groups. However, IPART considers that there could be considerable 'double counting' if these benefits were included in valuing the external benefits of CityRail for the purpose of justifying government funding for CityRail services in general, when they are already used to justify government funding for concession fares.

In relation to stakeholder comments about external benefits associated with avoided emissions, IPART notes that its preliminary view of the value of the external benefits of CityRail included avoided costs associated with adverse health impacts from automobile-related air pollution, and with contributions to global warming from automobile-related CO_2 emissions. Given stakeholder concerns that it had underestimated the value of the latter benefits, IPART re-examined CRAI's advice. However, it reaffirmed its preliminary view that a carbon price of $25/tonne of CO_2 is still appropriate, as this price is consistent with the available evidence.

It should be noted that the contribution of avoided greenhouse gas emissions to the total value of the external benefits estimated by CRAI and IPART is very small. Even increasing the carbon price to $40/per tonne of CO_2 (the higher end of the realistic range at present) would only have a small impact on the total estimated value of the external benefits (the increase would be around $20 million).[113] This is because only 5 per cent of the average number weekday travel trips made in the greater Sydney area are by CityRail.[114]

112 MoT submission, July 2008, p 13.
113 Information provided by CRAI.
114 TDC, 2006 Household Travel Survey Summary Report 2008, p 10.

In relation to MoT's view that IPART should give further consideration to the potential agglomeration benefits generated by CityRail services, IPART notes that in reaching its preliminary view, it accepted CRAI's recommendation to exclude these benefits because it was not possible to robustly calculate their value using available tools and data, and/or the link between them and CityRail's services could not be fully proven.

Nevertheless, IPART re-examined this issue, and reviewed the findings of the Eddington Transport Study undertaken in the UK, and a similar study undertaken in Victoria in relation to the East West Link. IPART found that while the Eddington Transport Study provides some interesting results, it confirms CRAI's view that the benefits are not readily quantifiable and the role of transport services in attaining agglomeration benefits is not conclusively proven.

Some of the key points IPART has taken from the Eddington Study include the following:

- The key economic benefit associated with agglomeration is improved productivity due to:
  - better matching of labour market skills through access to a pool of skilled workers as a result of denser labour markets
  - connection to suppliers and markets
  - information spillovers and growth in ideas.[115]
- A high proportion of benefits generated by transport infrastructure are related to travel time savings to users.[116]
- The role of transport infrastructure in facilitating productivity benefits associated with agglomeration is not clear. The study's results suggest that transport alone cannot generate agglomerations but can play a role in facilitating their expansion by reducing travel time and costs, and bringing workers, firms and consumers closer together.[117]

On balance, IPART concluded that agglomeration benefits should not be included in estimating the value of the external benefits of CityRail. In reaching this conclusion, IPART formed the following views:

- The main agglomeration benefits associated with the Sydney CBD stem from its development as a financial services centre, and although these benefits are likely to be substantial they are not primarily driven by CityRail.
- CityRail's largest contribution to the agglomeration benefits is reduced travel times for CBD workers. The external benefits generated by this contribution are already included in IPART's draft decision (in the value of avoided road congestion), and the private benefits (which accrue to the workers themselves) should not be included.

115 See the Eddington Transport Study Main Report, December 2006, p 26.
116 Ibid, p 23.
117 Ibid, p 26.

- CityRail is also likely to have contributed to the development of a dense labour market in the CBD, but it is unlikely to have been the main driver in Sydney's development as a financial services centre. A range of other factors – for example, the location of the Reserve Bank of Australia and the Australian Stock Exchange, the proximity of Australia's most important international airport, and the supply of skilled labour – would have been significantly more important.
- Sydney is likely to have developed as a major financial services centre without CityRail. While some of the back-office and lower skilled functions may have been conducted outside of the CBD without a mass rail system, the majority of the higher skilled functions would have remained in the CBD. For highly skilled professionals in the finance sector other forms of transport such as buses, ferries and the road network may be as substantial contributors as rail to the agglomeration benefits. In addition, with the introduction of new technological services the benefits of co-locating all financial services functions in the CBD is probably reduced considerably.
- The agglomeration benefits generated by the financial services industry are not necessarily external benefits that justify government subsidisation of passenger rail services. Many are likely to be private benefits, such as higher wages and increased rents.

IPART considers that its estimate of the value of the external benefits of CityRail is substantial, particularly those related to avoided congestion costs. However, it recognises that this value may not be as high as some stakeholders assume it to be. There are several reasons for this, including the following:

- While CityRail plays an important part in meeting the transports needs of Sydney, and more commuters travel by public transport in Sydney than in any other Australia city, private motor vehicles are still the most popular form of transportation by far. For example, more than 70 per cent of workers use private motor vehicles to commute.[118]
- Most of the external benefits associated with avoided road congestion are generated by passenger journeys to and from the CBD in peak periods. The avoided congestion on roads other than those in the CBD or leading to and from the CBD, and outside of peak periods are likely to be small, due to the lesser role CityRail plays in Sydney's non-CBD transport task.[119]

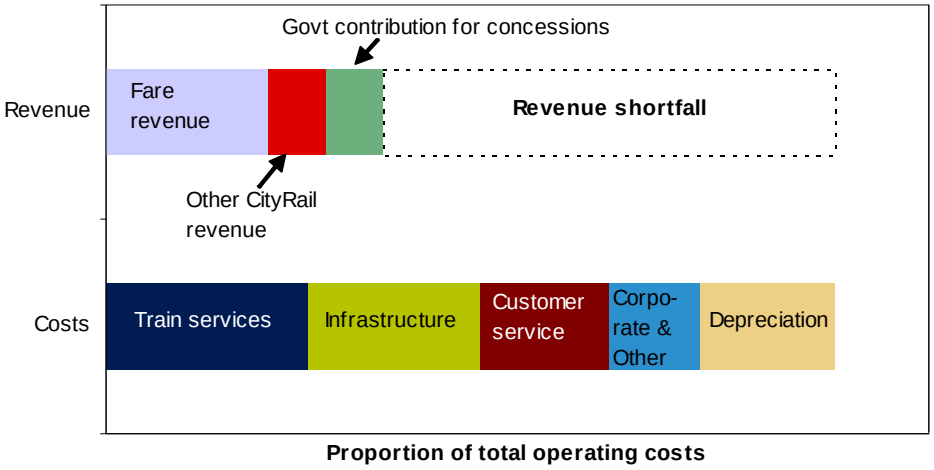
[118] TDC report, *2006 Employment and commuting*, Transfigures April 2008, p 6.

[119] This conclusion is borne by the results of the TDC modelling presented in CRAI's report which finds that under an extreme scenario of no rail, there would be profound changes in the way traffic into the CBD is orchestrated, however these changes would not be so drastic as to prevent Sydney from functioning. The majority of commuter journeys are not to or from the CBD, and rail's share of total passenger kilometres is only 11 per cent. See CRAI's report, *Value of CityRail externalities and optimal Government subsidy*, June 2008, p 91.

12 Share of the revenue requirement to be funded by passengers through fares

CityRail's revenue from fares and other sources is substantially less than its total costs. The resulting revenue shortfall is made up by taxpayers through government funding of CityRail. For example, in 2007/08, the level of government funding for CityRail was $1.9 billion. This level of funding is equivalent to a subsidy of $15 per week from each household in NSW,[120] even though only 20 per cent of Sydney's population are regular train users.[121]

Figure 12.1 CityRail's revenue relative to its total operating costs (2007/08)



Note: Total costs do not include interest payments.

Source: IPART discussion paper, *Determining CityRail's revenue requirements and how it should be funded.*

As Chapter 11 discussed, IPART considers that government subsidisation of CityRail services is justified on that grounds that the provision of these services does not only benefit those who use them, but also provides external benefits to the community as a whole. The question IPART has to answer in making its fare determination is what share of CityRail's revenue requirement should be funded by taxpayers through government funding in recognition of these external benefits? And therefore, what share should be funded by passengers through fares?

120 IPART calculation based on RailCorp information.
121 RailCorp, *A Compendium of CityRail Statistics*, Fifth Edition, April 2006, p 32.

The section below sets out IPART's draft decision on this question. The subsequent sections discuss this decision and IPART's considerations in more detail.

12.1 Overview of the draft decision on the share of revenue requirement to be funded by passengers through fares

IPART's draft decision is that it is appropriate for taxpayers to fund 70 per cent of CityRail's revenue requirement through government subsidies, and therefore passengers should fund the remaining 30 per cent through fares.

After considering the implications of a 70:30 funding share for the affordability of fares and for patronage levels, IPART made a draft decision that 70 per cent of CityRail's annual revenue requirement should be funded by taxpayers through government subsidies, and 30 per cent should be funded by passengers through fares (Table 12.1).

Table 12.1 Passenger funding shares over the regulatory period ($billion, real $2008/09)

	2008/09	2009/10	2010/11	2011/12	Average
External benefits ($m)	1,754	1,807	1,861	1,917	
Revenue requirements ($m)	2,443	2,592	2,659	2,709	
Government funding share	72%	70%	70%	71%	
Passenger funding share	28%	30%	30%	29%	30%

Note: In obtaining the average passenger funding share of 30 per cent over the period IPART has averaged the passenger funding shares in each year and rounded to 30 per cent. The revenue requirement is after netting out government concession payments and other revenue.

Source: IPART.

In making this draft decision IPART has taken into account:

- its draft decisions on CityRail's annual revenue requirement over the determination period (see Chapter 5)
- its draft decision that the estimated value of the external benefits provided by CityRail is $1.8 to $1.9 billion over the determination period (see Chapter 11)
- the impact of different funding shares on the affordability of fares and forecast patronage levels
- CRAI's expert advice, in particular its optimisation recommendations and policy conclusions (see section 12.4 below and CRAI's report).

The draft decision on the share of the revenue requirement to be funded by passengers and by taxpayers is consistent with IPART's preliminary view, as set out in the discussion paper. However, the dollar amounts shown in Table 12.1 above have changed, as IPART's draft decisions on CityRail's total revenue requirement and the estimated value of the external benefits over the determination period are different to its preliminary views on these matters (see Chapters 5 and 11).

12.2 IPART's preliminary views

In its discussion paper, IPART expressed the preliminary view that it may be appropriate for passengers to fund around 30 per cent of CityRail's total revenue requirement. This view reflected IPART's decision that the most appropriate approach to determining passengers' funding share was to use its judgement after considering a number of relevant factors, including the estimated value of the external benefits of CityRail services, CRAI's optimisation approach, and the impacts of different funding shares on the affordability of fares and patronage levels. A key input to this decision was IPART's preliminary view that the estimated value of the external benefits of CityRail services over the determination period was $1.6 to $1.8 billion, which was equivalent to around 70 per cent of CityRail's revenue requirement over that period.

IPART also noted that its decision on passengers' funding share could affect the Government's assessment of major new rail infrastructure projects, and the impact of these projects on fare levels. It noted that its preliminary view that passengers fund 30 per cent of CityRail's revenue requirement implied that a government decision to invest an additional $1 billion in the CityRail network (for example, on a South West Rail Link) would result in the need to recover an additional $300 million (in Net Present Value terms[122]) from passengers over the life of the asset.[123] IPART put the view that RailCorp and the Government should consider this broad 'rule of thumb' cost sharing ratio, and the associated impact on fare levels, when evaluating new infrastructure investments. IPART envisages that it will apply 30:70 ratio in future pricing decisions, unless it can be established that the new investment will provide exceptionally high external benefits to justify taxpayers funding more than 70 per cent of the associated costs.

12.3 Stakeholder responses

A number of stakeholders commented on the IPART's preliminary view that passengers should fund 30 per cent of CityRail's revenue requirement. APT considered that a 30 per cent share for passengers was reasonable, provided that CityRail properly manages its costs and delivers a visible improvement in services.[124]

However, most stakeholders put the view that taxpayers should fund more than 70 per cent of the revenue requirement. The rationale for this view varied, but included that:

- Social disadvantage and equity considerations should be given more weight, as public transport provides a key social service for the disadvantaged.[125]

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122 Net present value (NPV) reflects the present value of cash flows recovered over the life the asset taking into account the time value of money.

123 This includes recovery of both the return of capital (depreciation) and the return on capital (opportunity cost of capital).

124 PT submission, 9 July 2008, p 8.

125 RTBU submission, July 2008, p 4, and NCOSS submission, July 2008, p 2.

- Public transport should be considered as a social good, similar to pubic health, education and law enforcement, which are all fully funded by government. Full government funding of CityRail services is justified to ensure all people have reasonable access to economic and social opportunities, including those who are elderly, have impaired mobility, are on lower incomes, or do not have access to a car.[126]
- Road users are not required to cover the capital or maintenance cost of associated with their use of roads, as the fuel excise goes into general revenue rather than being hypothecated to road expenditure.[127]

Many stakeholders considered CityRail should be more active in pursuing alternative sources of revenue.[128] Many considered that additional non-fare revenue would offset the need for fare increases. Stakeholders also suggested a number of additional means by which the Government could earn additional taxation revenue to enable it to increase its funding of CityRail.[129]

In relation to IPART's preliminary view on the funding of major new rail infrastructure projects, WSROC supported the proposals to value the ECRL at zero, and to substantially write down future rail expansion projects that support explicit government commitments but do not provide major direct benefits to existing CityRail passengers.[130]

In relation to IPART's preliminary view on the approach it should use to determine the appropriate funding shares for passengers and taxpayers, MoT agreed that the most appropriate approach is for IPART to make a judgement based on all relevant factors including affordability, impact on patronage levels and Government policies.[131] MoT also noted that although CRAI's optimisation approach suggested that optimally, fares would be higher and the Government subsidy lower, near optimal results can be delivered by a broad range of funding scenarios. It put the view that this suggests that IPART could use various approaches for determining the funding shares and still achieve close to an optimal outcome.[132] WSROC argued that IPART should also take into account the capacity of the community to pay, particularly in Western Sydney, and that large fare increases should be phased in and preferably linked to substantial improvements in CityRail's performance.[133]

126 APT submission, 9 July 2008, p 8.
127 Dr P Laird submission, July 2008, p 2.
128 S Hession submission, July 2008, p 2.
129 Ibid, p 2.
130 WSROC submission, July 2008, p 5.
131 MoT submission, July 2008, p 8.
132 Ibid, pp 8-9.
133 WSROC, July 2008, p 8.

12.4 IPART's considerations in making its draft decision

After considering all stakeholder comments both in submissions and at the roundtable, IPART reaffirms its preliminary view that it is appropriate for passengers to fund around 30 per cent of CityRail's total revenue requirement, and that the remaining 70 per cent should be funded by taxpayers through government subsidies. Table 12.1 above shows IPART's draft decisions on CityRail's annual revenue requirement and the estimated annual value of the external benefits over the determination period, and the share of the revenue requirement to be funded by passengers implied by these decisions. The table shows that this share ranges from 28 to 30 per cent per year, and the rounded average share over the determination is 30 per cent.

IPART notes that MoT supported its view that it should use its judgement in making its decision on passengers' and taxpayers' funding shares, after considering all relevant factors. It also notes that a number of stakeholders expressed a view that IPART should give more weight to equity issues in determining these funding shares. However, IPART considers that in both forming its preliminary view and making its draft decision, it placed considerable weight on equity and affordability issues. IPART is satisfied that the fare outcomes provided by its draft decision on the funding shares will not overly impact on the affordability of fares or patronage growth (see Chapters 10 and 15 for a more detailed discussion of these issues).

IPART also considered some stakeholders' view that public transport is a public good, similar to public education, public health and law enforcement, and so CityRail services should be fully subsidised by government as is the case for other public goods. However, IPART does not agree with this view, as it considers there are substantial differences between CityRail services and these other services.

In IPART's view, public health, public education and law enforcement provide internal and external benefits that are both more substantial and more widespread than the benefits generated by CityRail services. For example, all NSW citizens are likely to use public health, law enforcement and public education services at some point in their lives. In contrast, CityRail services are used by a relatively small proportion of NSW citizens – they are only accessible to those who live in or near Sydney, and over 70 per cent of Sydneysiders either never use or use these services less than once a month. In addition, while CityRail services generate substantial external benefits (see Chapter 10), IPART considers that the value of these benefits is nowhere near the order of magnitude of those generated by public education, public health and law enforcement.

Furthermore, when users access health or education services which are less widely accessed (eg, universities) they are charged a fee which contributes to the funding of these services. This is essentially the same approach being used for CityRail. The vast majority of funding is provided by the Government and passengers are asked to provide a contribution in recognition of the direct benefits they receive from their use of CityRail's services.

While the funding arrangements for roads is beyond the scope of this review, IPART noted the view put by some stakeholders that road users are not requirement to contribute to the capital and maintenance costs of roads. IPART disagrees with this view, as road users pay a number of charges and taxes, including registration charges and fuel excise, which are considerable revenue items for governments and thus contribute to the costs of roads.

IPART agrees with stakeholders that CityRail should be encouraged to maximise its non-fare revenue as a means of providing additional funding for its services. To this end, IPART's approach to determining CityRail's revenue requirement over the determination period involves calculating its forecast total costs (using the building block method) then subtracting forecast non-fare revenue (including revenue from rent, advertising and government funding related to concessions). This reduces the amount of revenue that needs to be recovered through fares over the determination period. It also creates an incentive for CityRail to increase its non-fare revenue, as it is able to keep any non-fare revenue in excess of the forecast amount.

In addition, one of the potential sources of non-fare revenue for CityRail is the land or air space around major stations. In calculating the value of the CityRail's regulatory asset base (to calculate the allowance for a return on capital) IPART excluded the value of this land or air space. It also excluded the forecast costs associated with earning commercial revenue sources from its calculation of the forecast efficient operating costs and forecast efficient capital costs. IPART considers that as the costs associated with earning commercial revenue (including the opportunity cost of the land) are excluded from the revenue requirement, it is also appropriate to exclude the revenue from these sources.

In making its draft decision, IPART drew on CRAI's analysis but did not directly apply CRAI's optimisation approach. IPART considers that the optimisation approach does not adequately take account of the impact on the affordability of fares and patronage levels. IPART also considers that its own funding share approach provides a more stable pricing environment.

However, as noted in Chapter 1 in assessing whether the 20-30 per cent real fare increases implied by IPART's preliminary view that a 30 per cent passenger funding share was appropriate IPART has further considered the advice provided by its expert consultant CRAI on CityRail's externalities and the optimal government subsidy. In particular IPART has considered CRAI central or most likely case which recommended an optimum fare which is 21 per cent above the average fare in 2005/06 and compared this to another scenario developed by CRAI at IPART's request in which taxation was assumed to involve no net cost to the community overall. Under this scenario, the optimal fare is 7 per cent higher than the average fare in 2005/06. CRAI also noted that the welfare function has broad and flat peaks. This means that the loss of economic welfare from not having precisely the optimal fare is not very great. This point was also made by MoT in its submission on IPART's discussion paper.

IPART considers that the advice from CRAI as well as affordability and patronage concerns supports its conclusion that the real fare increase of 12 per cent on average provided by its draft fare determination is preferable to the higher fare increases implied in its discussion papers.

13 Fare structure

As part of its review, IPART examined the current structure of CityRail fares to see if it could be improved, for the benefit of passengers, the Government, and ultimately the taxpayers who fund a significant proportion of CityRail's costs. It considered two key aspects of the fare structure:

- the spatial aspect, which links the fare charged to the location in which travel in undertaken or the distance travelled by passengers
- the temporal aspect, which links the fare to the time of day or day of week in which travel is undertaken.

IPART has made draft decisions to change both aspects of the current fare structure, so that fares better reflect the different cost of providing services to passengers over different distances, and at different times of the day and week. IPART's revised fare structure, which is consistent with Government's policy on electronic ticketing, will promote more efficient use of the CityRail network and encourage efficient investment in the network. It will also promote more equitable outcomes between passengers travelling different distances and at different times of the day or week, and between passengers and taxpayers. In addition, it will begin to transition CityRail's fare structure towards one that will facilitate electronic integrated ticketing.

The section below provides an overview of IPART's draft decisions related to the fare structure. The subsequent sections discuss these decisions and IPART's considerations in detail.

13.1 Overview of draft decisions on fare structure

In relation to the spatial aspect of the fare structure, IPART's draft decision is that CityRail fares will include:

- distance-based products, comprising of:
  - a fixed 'flag-fall' charge of $2.50 in 2008/09 held constant in real terms to 2011/12
  - a variable distance-based charge, which reflects a per kilometre charge and distance bands, of 9 cents in 2008/09 rising to 10 cents (real $2008/09) in 2011/12

  - frequency discounts that transition towards a constant 20 per cent discount, consistent with the frequency discount for Sydney bus tickets
- zone-based weekly/quarterly/yearly TravelPass products, which include a frequency discount comparable to that of distance-based products
- flat fare products such as Pensioner Excursion Tickets, DayTrippers and the CityHopper.

IPART's draft decision is that return distance-based tickets that are purchased for use in the off-peak period will be discounted at 50 per cent, and that these tickets may be used on any regular CityRail service in the off-peak period, with valid usage times limited to services that are scheduled:

- to arrive at Central before 7 am or after 9.30 am
- to depart Central before 4 pm and after 6.30 pm
- on the weekend or public holidays.

In June 2008, the NSW Government approved, in principle, testing the market for options for an electronic ticketing system.[134] The new electronic fares will be structured to provide:[135]

- consistent, mode-specific, distance-based fares
- automatic discounting to reward frequent public transport users
- fare concessions
- differential pricing for peak/off-peak services.

IPART's draft decision transitions CityRail's fare structure towards a structure that is consistent with electronic ticketing. For example, the electronic ticketing single fare will be structured around a flag-fall and per kilometre charge.

IPART considers that there may be further opportunity to simplify the fare structure once electronic ticketing is introduced. Further reform, such as off-peak tickets for contra-peak journeys or services with significant excess capacity, as well as shoulder-period fares (for the periods adjacent to peak periods) may also be explored under electronic ticketing technology.

[134] MoT submission, July 2008, p 10.

[135] See Expressions of Interest for New Electronic Ticketing System documentation available from www.pttc.nsw.gov.au.

13.2 Draft decisions related to the spatial aspect of the fare structure

IPART considered a range of options for the spatial aspect of fare structure, which links the fare for a trip to the location in which the trip is undertaken or the distance travelled. These options included:

- A flat fare structure, where fares are charged at a uniform rate, regardless of the distance travelled.
- A zone-based fare structure, where the network is divided into defined geographical zones. Fares are based on the number of zones the passenger travels through, and a flat fare is charged per zone. The number of zones or fare increments in the system can vary substantially.
- A flag-fall and distance-based fare structure, where fares comprise a flat flag-fall charge and a variable distance-based charge. Distance can be measured in a variety of ways (eg, as the crow flies, or train kilometres travelled). The distance charge can also be applied on a pure per kilometre basis, or according to distance bands.

13.2.1 IPART's preliminary views

IPART's preliminary view was that CityRail's fare structure needs to be simpler and more transparent and consistent. In particular, it considered that a flag-fall and distance-based fare structure is the most appropriate option for CityRail's core products, and that the flag-fall and distance-based components should be made explicit in the determination. Under the preliminary view, the flag-fall charge was uniform across all fares to reflect CityRail's fixed costs, and the distance-based charge was applied on a per kilometre basis.

In addition, IPART considered that a constant frequency discount for all tickets, regardless of the distance travelled, was more equitable, transparent and easier to understand than the current discounts which vary significantly according to the distance travelled.

IPART also noted that there are currently some zone-based and flat fare products offered by CityRail, including TravelPasses, which are multi-modal weekly tickets and that these products have become increasing popular over recent years. Its preliminary view was to maintain these products during this regulatory period, and to maintain the existing relativities between TravelPasses and flag-fall plus distance-based periodical tickets (such as weekly tickets).

13.2.2 Stakeholder responses

Most stakeholders supported a simplified fare structure, consistent with the assessment criteria; however, many argued that this would be best achieved with a zone-based fare structure.[136] These stakeholders also considered that a zone-based structure would better facilitate integrated ticketing than a flag-fall plus distance-based fare structure. APT disagreed with IPART's view that a zone-based system does not suit Sydney due to its many regional centres. It pointed to the success of the zone-based structure in Melbourne, where there are also several regional centres.[137] One individual suggested that the problem of multiple regional centres could be overcome by adopting a 'honeycomb' type arrangement of zones rather than a radial zone-based system.[138]

In relation to the flag-fall plus distanced-based fare structure, one stakeholder agreed with IPART that the cost reflectivity of the fixed and variable components was important in fare decisions.[139] However, other stakeholders suggested that service quality, the need to be competitive with road, and the need to encourage greater suburban growth should be taken into consideration in determining the fixed and variable charges.[140]

In relation to the frequency discount, most stakeholders put the view that periodical tickets should include a significant discount. Some stakeholders supported IPART's argument that the level of this discount should be constant, regardless of the distance travelled.[141]

However, a number of stakeholders argued that the current very large weekly frequency discount for long-distance fares was appropriate, given that those who live at Sydney's extremities, including Western Sydney, Newcastle and the Blue Mountains, tend to have lower socio-economic status. These stakeholders were concerned that any reduction of the discount would result in increased wealth disparity between inner city and outer suburban/intercity areas.[142]

APT argued that larger discounts on longer distance journeys reflect the different usage patterns of periodical tickets of inner city passengers compared to longer distance passengers. It contended that inner city periodical ticket users were more likely to use the ticket more than 10 times a week, so their effective discount was higher than 20 per cent, implying that IPART should establish a higher discount for longer distance users reflecting the lower use of their periodical tickets.[143]

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136 APT submission, 9 July 2008, p 12; J Strauch submission, 16 June 2008, p 1; Confidential submission.
137 APT submission, 9 July 2008, p 13.
138 P Mills submission, 17 July 2008, p 5.
139 D Trinh submission, 30 June 2008, p 7.
140 Confidential submission, D Trinh submission, 30 June 2008.
141 Confidential submission.
142 APT submission, 9 July 2008, p 14; M Skeggs submission, 18 July 2008, p 2; Confidential submission.
143 APT submission, 9 July 2008, p 15.

Several stakeholders expressed support for an approach similar to the TravelTen tickets on Sydney buses, where passengers receive a discount if they bulk-buy single tickets rather than if they buy a periodical ticket. They considered this method of discounting to be fairer as passengers paid for the trips they actually used.[144] They also noted that these tickets are better suited to the travel patterns of part-time workers who, for example, might travel to work three days a week instead of five.

Some stakeholders argued that the level of discounting for TravelPasses should extend beyond frequency discounts, as many users of these products cannot complete a single journey by train alone. They submitted that the current discount is reflective of a removal of multiple flag-falls from the distance-based fare that would otherwise need to be paid if individual tickets were purchased for each mode of transport.[145]

13.2.3 IPART's considerations in making its draft decision

After considering all stakeholder comments, and in particular Government's policy on electronic ticketing IPART reaffirms its preliminary view that a distance-based fare structure that includes a fixed flag-fall charge and a variable distance-based charge is the most appropriate fare structure for most CityRail ticket products. However, it has made a draft decision to retain the distance-based charge in distance bands, rather than on a station to station per kilometre basis. In addition, although IPART still considers that a constant frequency discount is appropriate, it has made a draft decision to transition towards this level of discount. In relation to non distance-based products, IPART reaffirms its preliminary view that these products should be retained under the existing paper-based technology, but the frequency discount applied to TravelPass tickets should be reduced, to ensure they are consistent with the frequency discount provided for other periodical products such as weekly tickets.

Distance-based rather than zone-based fare structure

IPART maintains its preliminary view that a distance-based fare structure comprising a flat flag-fall charge and a variable distance charge is most appropriate for CityRail. It considers that this structure is the most cost reflective option. The flag-fall charge can be set to reflect the fixed costs of providing the CityRail network, and the distance-based charge can be set to reflect the variable costs of providing the services. This means that the overall fare for a particular trip is closely tied to the costs of providing that trip. This fare structure is consistent with Government's policy for electronic ticketing. It is also equitable and cost reflective.

144 APT submission, 9 July 2008, p 12; P Mills submission, 17 July 2008, p 4; M Skeggs submission, 18 July 2008, p 1; M Wellings submission, 19 July 2008, p 1.
145 APT submission, 9 July 2008, p 14; P Mills submission, 17 July 2008, p 4.

IPART recognises that a zone-based fare structure is often simpler for passengers. But it notes such a fare structure has to have a very small number of zones to achieve significant simplicity advantages. For example, Brisbane has a zone-based fare structure that has 23 zones, which is comparable to the number of distance bands under Sydney's current distance-based fare structure.

However, IPART considers that moving to a zone-based fare structure with a small number of zones (such as Melbourne's, which has only two zones) will result in winners and losers among passengers. To achieve the same level of farebox revenue, from a single zone with a uniform fare, fares paid by passengers travelling shorter distances within that zone need to increase, while those paid by passengers travelling longer distances decrease. As a result, the amount passengers pay per kilometre will vary significantly, depending on the distance they travel. IPART considers this would be an inequitable outcome for passengers.

Where there are multiple zones, substantial fare differences between zones can also generate negative zone-boundary effects, whereby significantly more passengers use the stations on the boundaries of each zone in order to avoid crossing a zone boundary (and therefore paying a much higher fare). Thus, the boundary stations may require additional infrastructure and parking spaces to cope with an influx of passengers.

IPART agrees that historically, zone-based fare structures have better facilitated integrated ticketing, because they have made it easy for service providers to offer a single ticket that can be used across all modes of transport, priced according to the number of zones crossed during the journey. However, when electronic ticketing is introduced, this advantage will no longer exist. This is because the Government's policy under electronic ticketing is for a uniform ticketing infrastructure to be used on trains, buses and ferries.

South Korea offers an example of integrated ticketing under a distance-based fare structure. South Korea originally moved from a distance-based fare structure to a zone-based fare structure in order to integrate ticketing using paper-based technology. However, when electronic ticketing made distance-based integrated fares possible, it chose to revert back to the distance-based fare structure because of the cost reflectivity and equity advantages of this structure, while maintaining a simple and integrated transport network.

Flag-fall and distance based charge

IPART maintains its preliminary view that a uniform flag-fall will be applied to all distance-based fares. The flag-fall is $2.50 in 2008/09 which is held constant in real terms to 2011/12. It also maintains the preliminary view that a consistent per kilometre variable charge be applied. The per kilometre charge in 2008/09 is 9 cents which increases to 10 cents (real $2008/09) in 2011/12. IPART's draft decision is to continue to apply the variable charge in distance bands.

The following distance bands will be used:

- for journeys up to 35 km, each band is 5 km
- for journeys from 35 km up to 135 km, each band is 10 km
- for journeys from 135 km up to 175 km, each band is 20 km
- for journeys 175 km and above, a flat charge will be applied.

Under this approach, the variable distance-based component of an individual fare would be calculated by multiplying the number of kilometres travelled by the uniform per kilometre charge, and the number of kilometres would be equal to the upper boundary of the relevant distance band. For example, for a journey of 40 km, the variable charge (which is $0.09 in 2008/09), would be applied to 45 km, as this is upper boundary of the 35 – 45 km distance band. IPART has elected to continue with distance bands due to data limitations. IPART's demand forecasts are broken down in accordance with the existing distance bands rather than in kilometre increments.

Under the current fare structure, the highest distance band is 255 to 305+ km. Very few tickets are sold for these distances. To simplify the structure and to allow for fare restructuring while having regard to affordability concerns, IPART has applied a flat fare to journeys 175 km and above.

IPART's draft decision is that distance should be measured in terms of track kilometres, as opposed to "as the crow flies", consistent with the existing fare structure. This approach allows the variable, distance-based charge to be set to reflect the costs of the infrastructure used.

The stations contained within each distance band are provided in Appendix E.

Transitioning towards a constant frequency discount

IPART considers that frequency discounts are appropriate for CityRail passengers, to encourage and reward regular patronage. This is consistent with Government policy on electronic ticketing and increasing patronage on rail services. IPART considers that periodical tickets also reduce queuing at stations, and reduce CityRail's ticketing costs. Therefore CityRail's periodical tickets, including weekly, monthly, and yearly tickets will contain discounts compared to single tickets.

IPART maintains its preliminary view that a constant frequency discount across all distances is cost reflective, equitable, transparent and easy to understand. It also maintains its view that a 20 per cent discount, in line with the frequency discount on buses, is an appropriate level of discount.

However, IPART recognises that applying a constant 20 per cent frequency discount to all periodical tickets as part of this determination would result in very large increases in the price of long-distance periodical tickets, as the current prices of these tickets include much higher frequency discounts than those for shorter distances. IPART also recognises that some users of long-distance periodical tickets live in

relatively low-income areas such as Wollongong, Newcastle and the Blue Mountains, and that some rail passengers have made decisions about where to live and work in part based on access to, and the price of public transport. A sudden, significant increase in the price of periodical tickets would not be fair to these passengers.

Taking these factors into account, IPART's draft decision is that it is necessary to transition towards a constant frequency discount, rather than implementing such a discount in one move. Table 13.1 shows the existing frequency discounts for periodical tickets for journeys of different distances, and compares them with the discounts that apply under the draft determination. IPART considers that these discounts are an appropriate first step towards implementing a constant frequency discount taking into account affordability and patronage impacts.

Table 13.1 Draft decision on frequency discount to apply to weekly tickets

Distance up to (km)	Existing discount 2008 fares	2009 fares	2010 fares	2011 fares	2012 fares
5km	19%	20%	20%	20%	20%
10km	17%	20%	20%	20%	20%
15km	18%	20%	20%	20%	20%
20km	18%	20%	20%	20%	20%
25km	19%	20%	20%	20%	20%
30km	22%	20%	20%	20%	20%
35km	20%	20%	20%	20%	20%
45km	27%	25%	25%	25%	25%
55km	33%	30%	30%	30%	30%
65km	33%	32%	32%	32%	32%
75km	41%	35%	35%	35%	35%
85km	44%	37%	37%	37%	37%
95km	47%	41%	41%	41%	41%
105km	47%	44%	43%	43%	43%
115km	51%	45%	45%	45%	45%
125km	54%	47%	47%	47%	47%
135km	50%	47%	47%	45%	45%
155km	53%	48%	47%	47%	47%
175km	56%	51%	50%	50%	50%
175km+	61-62%	57%	53%	52%	52%

Note: The weekly ticket has been compared to the price of 10 single tickets in order to calculate the discount.
Source: IPART.

RailCorp provided some evidence based on passenger surveys indicating passengers who travel shorter distances undertake a slightly higher number of journeys per week. IPART recognises that many periodical ticket users would enjoy substantial frequency discounts beyond those presented in Table 13.1. However, it is not

possible to accurately calculate the effective discount for each distance band. Therefore, in undertaking its analysis on the appropriate discount IPART has relied on the assumption that weekly ticket users make 10 trips a week so that a 20 per cent discount means that the weekly fare equates to 8 trips instead of 10. This issue should be resolved with the introduction of electronic ticketing as the available technology should ensure that the discount provided matches the appropriate number of trips by recording each single trip taken.

Current non distance-based products to be retained

CityRail currently also offers a number of ticket products with a zone-based or flat fare structure (shown on Table 13.2). All of these products except the CityHopper are integrated products, allowing for one ticket to be used for travel on trains, buses, and ferries. They offer a convenient alternative to flag-fall plus distance based tickets which must be purchased individually on each mode. In making its draft decision, IPART reaffirmed its preliminary view that these products should be retained under the existing paper-based technology. However, the frequency discount applied to TravelPass tickets will be reduced, to align its frequency discount with that provided for other periodical products.

Table 13.2 CityRail's non-distance-based products

Product	Fare Structure	Modes	Area	Period
TravelPass	Zone-based	Train, Bus, Ferry	Suburban network bounded by Cowan, Emu Plains, Richmond, Carlingford, Macarthur, Cronulla, Otford and Bondi Junction, divided into 5 zones.	Weekly, quarterly, annually
DayTripper	Flat fare	Train, Bus, Ferry	Suburban network bounded by Cowan, Emu Plains, Richmond, Carlingford, Macarthur, Cronulla, Otford and Bondi Junction	1 day
CityHopper	Flat fare	Rail	11 stations within the city area - Central, Martin Place, Museum, Town Hall, St James, Circular Quay, Kings Cross, Wynyard, Redfern, Milsons Point and North Sydney.	1 day
SydneyPass[a]	Flat fare	Train, Bus, Ferry, Sydney Explorer, Bondi Explorer, River Cat, JetCat	Red TravelPass zone	3,5, or 7 days within an eight day period
PET[a]	Flat fare	Train, Bus, Ferry	Entire CityRail network	1 day

a These products are not part of the IPART's review.

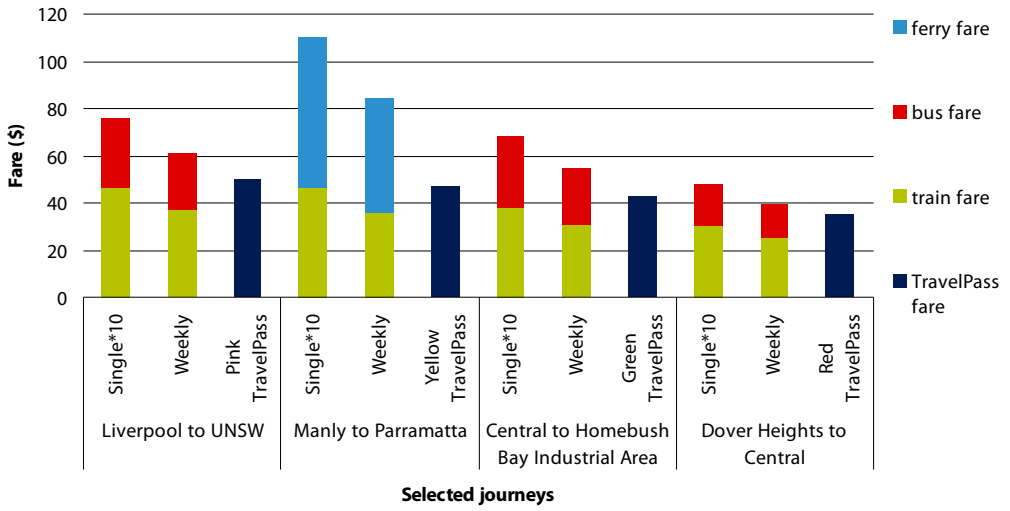
Source: RailCorp.

IPART notes MoT's submission which states;

> The Government considers the fare structure across the network should reward frequent users and encourage multi-modal travel, but also improve equity. The level of discount available to FlexiPass and TravelPass users beyond the standard commuter discount on a weekly pass, therefore, requires consideration.[146]

TravelPass discounts are currently greater than other frequency discounts. Figure 13.1 uses sample multi-mode journeys to illustrate the TravelPass fare versus the distance-based non-integrated fare. It shows that the level of discount embedded in TravelPasses exceeds the discounts included in distance-based weekly tickets for the same journey.

Figure 13.1 TravelPass fares compared to distance-based fares for selected multi-modal journeys (2008)



Source: RailCorp.

Given this, under IPART's draft decision, TravelPass fares would increase by more than the corresponding periodical tickets to bring their frequency discount more in line with that of other products. IPART's draft fare decision means that additional TravelPass discount shown in Table 13.3 below will be reduced over the course of the determination period. Chapter 14 sets out the fare outcomes for the TravelPass products.

As Table 13.3 shows, the extent to which the frequency discounts on the different TravelPass tickets **exceed** that on weekly tickets vary from 1 per cent to 10 per cent. Therefore, the extent to which TravelPass fares would increase under the draft determination also varies.

146 MoT submission, July 2008, p 12.

Table 13.3 Discount exceeding the current weekly discount (2008 fares)

TravelPass	Discount 2008
Purple ▼ 10 train trips (approximately 50 km) ▼ 10 bus trips (1-2 sections)	1%
Pink ▼ 10 train trips (approximately 35 km) ▼ 10 bus trips (1-2 sections)	3%
Yellow ▼ 10 train trips (approximately 25 km) ▼ 10 bus trips (1-2 sections)	2%
Green ▼ 10 train trips (approximately 20 km) ▼ 10 bus trips (1-2 sections)	4%
Red ▼ 10 train trips (approximately 10 km) ▼ 10 bus trips (1-2 sections)	10%

Source: IPART.

The TravelPass discounts shown in Table 13.3 are for the minimum bus journey of 1-2 sections. The effective discount will be significantly larger if the journey involves a longer bus trip, or if the TravelPass is used for ferry journeys. In these cases, users will continue to realise a discount of up to 50 per cent more than the discount on weekly tickets.

IPART notes that between August 2003 and July 2006 TravelPass fares did not increase, despite bus fares increasing during this time. Therefore, the price increase under the draft determination is in part to catch up for the years when prices did not change.

Newcastle offers two TravelPass products that are currently priced equivalent to the yellow and pink Sydney suburban TravelPass fares. IPART has reviewed these passes and has decided to consolidate the Newcastle TravelPass products into one and that it should be priced in line with the **green** Sydney suburban TravelPass. IPART considers that this will help address affordability impacts of the increase in TravelPass prices for Newcastle passengers. The low volume of Newcastle TravelPasses sold means that this will have a very low farebox revenue impact.

13.3 Draft decisions related to the temporal aspect of the fare structure

The temporal aspects of the fare structure link fares to the time of day or day of week in which travel is undertaken. In reviewing these aspects, IPART considered

- how the peak and off-peak periods are defined
- the products for which off-peak fares are available
- whether there should be a peak premium or an off-peak discount
- whether the peak/off-peak differential should be location or direction specific.

13.3.1 IPART's preliminary view

IPART's preliminary view was that the temporal aspect of fare structure should be improved to better reflect the cost of providing CityRail services at different times of day and week, in order to promote economic efficiency of CityRail services and help manage demand. In particular, IPART considered that the fare structure should:

- better reflect the extent to which demand for peak-period services to and from the CBD is driving the need for investment in additional capacity to alleviate congestion
- better reflect the significant excess capacity on the CityRail network during off-peak periods (such as weekends) and on some parts of the CityRail network during peak periods.

13.3.2 Stakeholder responses

There was agreement in submissions that there are crowding issues on CityRail's peak services. Several stakeholders suggested that off-peak-fares should be set at approximately half the cost of base fares to encourage a growth in demand for off-peak services.[147] However, other stakeholders argued that increasing the price differential for peak and off-peak fares would not lower demand for peak services. For example, BMC&TUA, APT, and several individuals noted the difficulty in shifting behaviour, and considered that the reliability and frequency of the off-peak services needs to be improved to achieve a shift in demand.[148]

In general, stakeholders supported the use of off-peak discounts, rather than peak premiums. Most stakeholders rejected the concept of peak premiums on the basis that peak-period passengers provide the passenger base that justifies the provision of rail infrastructure, which may then be enjoyed by all members of the community. One stakeholder noted the external benefits generated by peak services were higher than those generated by off-peak services, and that peak premiums were therefore

147 Confidential submission.
148 BMC&TUA, 14 July 2008; APT, 9 July 2008, p 12.

counter productive for the community, as more people would be encouraged to drive, contributing to greater road congestion.[149]

Other stakeholders expressed mixed views about restricting the use of off-peak tickets in the afternoon peak period. Some stakeholders supported this move, as it was consistent with the rationale for providing off-peak tickets.[150] Others opposed it, on the grounds that it would reduce passengers' flexibility, or increase their inconvenience by making it necessary for them to purchase two single tickets if their return journey is during the afternoon peak[151]. The BMC&TUA noted that restricting off-peak ticket usage in the afternoon was hard to police in outer suburbs[152].

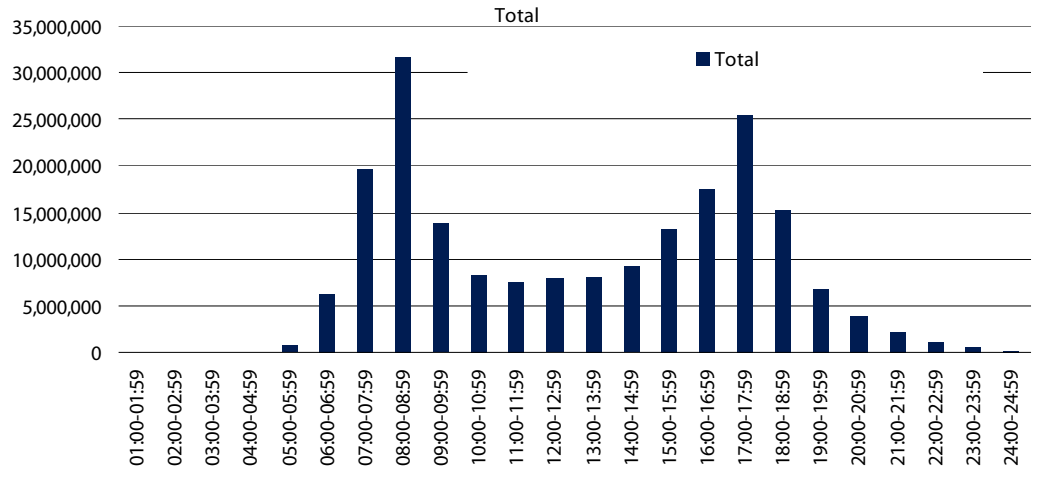
13.3.3 IPART's considerations in making its draft decisions

In making its decision on the temporal aspect of Cityrail's fare structure IPART had regard to:

- the costs of providing services in peak periods relative to off-peak periods in order to promote economic efficiency in the use of rail services
- patronage growth and the impact the fare structure may have to manage demand
- equity and fairness between peak and off-peak passengers.

As Figure 13.2 demonstrates, demand for CityRail services increases sharply during both the morning and afternoon peak. Around the two thirds of the weekday use of CityRail services occurred in the morning and afternoon peak periods.

Figure 13.2 Weekday passenger entries and exit 2006/07



Source: RailCorp.

149 M Skeggs submission, 18 July 2008, p 1.
150 D Trinh, 30 June 2008, p 6; Confidential submission.
151 NCOSS submission, 17 July 2008, p 3, APT submission, p 13.
152 BMC&TUA submission, 14 July 2008, p 5.

Costs of providing peak and off-peak services

A cost-reflective temporal structure should encourage prudent investment in the network because it should create a more transparent link between increases in peak fares, and capital expenditure incurred by CityRail to expand the capacity of the network to meet peak demand.

IPART's discussion paper noted that in line with many other network businesses, CityRail's network capacity must be designed to meet peak requirements. Therefore peak demand is a primary driver of CityRail's capital and operating costs. Increasing peak demand when capacity is scarce drives the need for further increases in capital and operating expenditure to expand capacity, increasing the unit cost of providing services. Around 80 per cent of CityRail's $7 billion (real $2008/09) capital program over the next five years is intended to address peak period constraints on the network, including the Clearways projects, the ECRL and new rolling stock to increase 4 and 6 car trains to 8 car services in peak times.

Analysis of data provided by RailCorp indicates it costs 30 to 50 per cent more to transport a passenger in the peak compared the off-peak.

Encouraging growth in off-peak patronage and shifting demand to off pear services

In the 18 months to February 2008, peak growth was 7-9 per cent, with the Inner West and Western lines experiencing even greater levels of growth. Non-peak growth was significantly slower at 2.3 per cent.[153] [The off-peak discount was reduced to 30 per cent in 2006.] As patronage growth pushes CityRail's peak services nearer to their maximum capacity, greater capital expenditure is required to increase the capacity of the network, increasing the costs of providing peak services.

The State Plan targets a 2.5 per cent annual growth in patronage. As noted in the discussion paper, given the current peak patronage constraints, IPART considers that increased patronage in the off-peak is more sustainable than attempting to increase CityRail patronage by encouraging more peak travel. A larger peak/off-peak differential is consistent with encouraging growth out of the peak.

IPART considers that high levels of crowding on CityRail peak services reduces the quality of these services, and can also have adverse affects on on-time running. Despite the significant funding provided to CityRail for its capital expenditure program in this draft determination which is designed to create additional capacity, the effect on crowding may not be significant over this determination period if peak patronage growth continues as current levels for a sustained period.

Therefore, in addition to these supply side measures to increase capacity, IPART considers that effective demand-side measures are required to encourage passengers to shift their travel out of the peak. IPART's draft decision is that further price incentives should be implemented.

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153 Information provided by RailCorp.

The available evidence suggests that some passengers are willing and able to shift their travel to the off-peak. In April 2008, TSN Social Research (TSN) prepared a report for RailCorp[154] which cited lower prices as one of the enablers of switching travel to the off-peak. A survey conducted by RailCorp in February 2008 found that between 30 and 36 per cent of people that are able to change their travel arrangements would shift due to lower fares.[155]

Using focus group feedback, TSN suggests that a 50 per cent discount is required to change behaviour. To further understand capacity of off-peak discounts to shift demand from peak periods, in August CityRail commenced a two and a half month trial of a 50 per cent discount off-peak "Smartsaver" fare for the Western and Richmond lines only. This trial restricts the use of off-peak return tickets in the afternoon peak – between 4 and 6.30pm. RailCorp intends to provide a report on the outcomes of the trial prior to IPART making its final determination.

Peak and off-peak conditions

IPART's draft decision is that return distance-based tickets that are used in the off-peak period will be discounted at 50 per cent, and that these tickets may be used on CityRail services that are scheduled:

- to arrive at Central before 7 am or after 9.30 am
- to depart Central before 4 pm and after 6.30 pm
- on the weekend or public holidays.

IPART considers that restricting the use of off-peak fares during the afternoon peak period is cost reflective and is more equitable. Restricting off-peak return ticket usage in the afternoon may cause some inconvenience to some passengers making a return journey between 4:00 pm and 6:30 pm as they will be required to purchase two tickets, rather than one. However, IPART considers that given that the cost of providing peak services is broadly the same for both the afternoon and morning peaks, it is inequitable for only morning peak passengers to carry the costs of the service.

The BMC&TUA noted that restricting off-peak ticket usage in the afternoon was hard to police in outer suburbs where there are no ticket machines upon exit. IPART notes that most users (over 85 per cent) pass through a ticket gate at end of their journey. For passengers leaving the city, the ticket gates will not allow entry for off-peak ticket holders in peak periods.

Figure 13.3 shows that some passenger loads in the afternoon exceed 135 per cent (a quarter of passengers standing).

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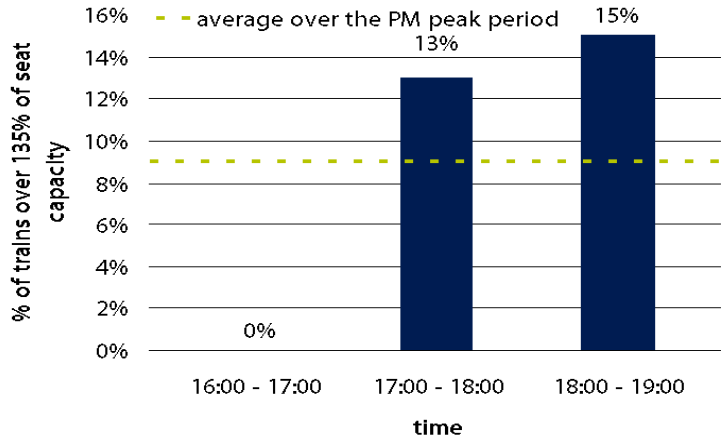
154 TSN Social Research, *Peak to off peak, encouraging the shift*, March/April 2008, p 3.
155 Railcorp, *CSS special report: potential to flatten peak demand,* February 2008, p 9.

Figure 13.3 Percentage of Afternoon Peak Trains over 135 per cent at the CBD Cordon by Hour (March 2008)



Source: RailCorp.

IPART's draft decision to increase the discount for off-peak return tickets to 50 per cent is conditional on passengers not travelling within either the morning or afternoon peaks. If the restriction was limited to only the morning peak, IPART would need to reconsider the level of the discount to reflect the costs of providing afternoon peak services.

While several stakeholders supported off-peak single tickets, off-peak fares for contra-peak services and services which have excess capacity, RailCorp has advised that its existing ticketing system can not accommodate new additional products. IPART considers the introduction of new products such as off-peak single fares and contra peaks should be considered once under electronic ticketing is operational.

14 New fares

This chapter outlines IPART's draft decision on the maximum price for all ticket types over the four years of the determination period.

14.1 Overview of draft decisions on fares

Under the draft determination, the prices of CityRail fares would increase by an average of 12 per cent in real terms[156] over the period 1 January 2009 to 31 December 2012. However, it should be noted that the price changes for a large number of individual tickets will depart from this average because of the fare restructuring undertaken by IPART (see Chapter 13). In particular, the draft decision to implement a consistent distance based fare structure, transition weekly fares towards a constant 20 per cent discount and the increase to in the off-peak discount drive significant variations in fare outcomes over the determination period. However, no individual fare would increase by more than 30 per cent in real terms over the four year period to 31 December 2012. More specifically:

- For distances up to 15 km, single tickets would increase by 40 cents on 1 January 2009, and by between 2 cents and 7 cents a year plus inflation over the subsequent three years. Weekly tickets would increase between $2.00 to $3.00 per week on 1 January 2009, and by between 15 cents and 60 cents per week a year plus inflation over the subsequent three years.
- For distances from 15 km up to 35 km, single tickets would increase by between 40 cents and $1.00 on 1 January 2009, and by between 5 cents and 20 cents a year plus inflation over the subsequent three years. Weekly tickets would increase by $3.00 to $8.00 per week on 1 January 2009, and by between 65 cents and $1.35 per week a year plus inflation over the three subsequent years.
- For distances from 35 km up to 175 km, single tickets would increase by up to $1.00 on 1 January 2009, and by between 20 cents and 90 cents a year plus inflation over the subsequent three years. Weekly tickets would increase by $7.00 to $9.00 per week on 1 January 2009, and by between $1.50 and $6.50 per week a year plus inflation over the three subsequent years.

156 'In real terms' means before the effect of inflation.

- For distances 175 km and above, single tickets would decrease by up to $8.00 on 1 January 2009. For the subsequent three years fares will vary: some will reduce by up to 80 cents, while some will increase by up to $1.00 a year plus inflation over the subsequent three years. Changes in weekly tickets in this group vary from a decrease of $18.00 per week on 1 January 2009 to an increase of $9.00 per week on 1 January 2009. Weekly tickets in this group increase by between $2.95 and $5.15 per week plus inflation over the subsequent three years.
- TravelPasses will increase by $3.00 to $5.00 on 1 January 2009, and by between $1.80 and $3.65 per week a year plus inflation over the subsequent three years. The Red TravelPass - will increase by $3 on 1 January 2009 and by approximately $2.00 per week a year plus inflation over the subsequent three years.

Table 14.1 provides a summary of the corresponding real percentage increases over the regulatory period compared to present fares.

Table 14.1 Average real cumulative percentage change in fares from 2008 to 2012

Distance	Single	Weekly	Off peak return
Up to 15 km	13%	10%	-18%
From 15 km up to 35 km	18%	18%	-15%
From 35 km up to 175 km	14%	25%	-17%
175 km and above	-16%	5%	-39%
TravelPass	-	20%	

Under the draft determination, there would also be some changes to the price and conditions related to off-peak return tickets:

- The discount for off-peak return tickets would increase to 50 per cent of the equivalent peak period ticket (compared to the current discount of 30 per cent). This reflects the lower costs of providing CityRail services outside peak periods, and the excess capacity on trains operating at those times.
- The periods in which off-peak tickets may be used would be limited to trains that are scheduled:
  - to arrive at Central before 7 or after 9:30 in the morning
  - to depart Central before 4 or after 6:30 in the afternoon/evening
  - on weekends or on public holidays.

  This more accurately reflects the periods of lower demand for CityRail services travelling to and from the CBD in the morning and afternoons, and the lower costs of providing these services.

All fares are presented in real dollars. An adjustment for inflation will be made annually. Fares will be rounded according to RailCorp's rounding conventions. The new adjusted fares will be published on an annual basis in IPART's Prices and Services Report.

The exact real prices that IPART has determined are presented below. The stations contained within each distance band are provided in Appendix E.

14.2 Single and return tickets

CityRail's single journey fares are shown in Table 14.1. Return fares, are twice the single fare ticket price. Half fares are half the corresponding single ticket price.

Table 14.1 Single tickets

Distance up to (km)	2008 Fare ($ nominal)	From 1 Jan 2009 Fare ($ nominal)	From 1 Jan 2010 ($real	From 1 Jan 2011 2008 /09	From 1 Jan 2012 unrounded) Fare	Cumulative percentage change (real)
5	2.60	3.00	2.96	2.98	3.01	12%
10	3.00	3.40	3.42	3.47	3.52	13%
15	3.40	3.80	3.88	3.95	4.03	14%
20	3.80	4.20	4.34	4.44	4.54	15%
25	4.20	4.60	4.80	4.92	5.05	16%
30	4.60	5.20	5.27	5.41	5.56	16%
35	4.60	5.60	5.73	5.89	5.98	25%
45	5.60	6.40	6.65	6.86	7.08	22%
55	6.60	7.40	7.57	7.83	8.10	18%
65	7.20	8.20	8.49	8.80	9.12	22%
75	8.60	9.00	9.41	9.77	10.14	14%
85	9.60	10.00	10.34	10.74	11.16	12%
95	10.60	10.80	11.26	11.70	12.18	11%
105	11.00	11.80	12.18	12.67	13.19	16%
115	12.20	12.60	13.10	13.64	14.21	12%
125	13.60	13.60	14.02	14.61	15.23	8%
135	13.80	14.40	14.94	15.58	16.25	14%
155	15.80	16.00	16.79	17.52	18.29	12%
175	18.00	18.00	18.63	19.46	20.32	9%
175+	22.00-30.00	22.00	21.22	21.39	22.36	-28% -to -2%

Note: Fares from 1 Jan 2010 to 2012 are presented in real dollars. An adjustment for inflation will be made annually. Fares will be rounded according to RailCorp's rounding conventions.

14.3 Weekly tickets

Weekly tickets allow unlimited journeys between the stations shown on the ticket for 7 consecutive days. The new fares for weekly ticket products compared to the existing fares are shown in Table 14.2.

Table 14.2 Weekly tickets

Distance up to (km)	2008 Fare ($ nominal)	From 1 Jan 2009 Fare ($ nominal)	From 1 Jan 2010 ($real 2008 /09 unrounded)	From 1 Jan 2011	From 1 Jan 2012 Fare	Cumulative percentage change (real)
5	21.00	24.00	23.69	23.88	24.07	11%
10	25.00	27.00	27.37	27.75	28.15	9%
15	28.00	30.00	31.06	31.63	32.22	11%
20	31.00	34.00	34.75	35.50	36.30	13%
25	34.00	37.00	38.44	39.38	40.37	14%
30	36.00	42.00	42.12	43.25	44.44	19%
35	37.00	45.00	45.81	47.13	47.85	25%
45	41.00	48.00	49.86	51.45	53.12	25%
55	44.00	52.00	52.99	54.80	56.71	24%
65	48.00	56.00	57.74	59.83	62.02	25%
75	51.00	59.00	61.19	63.49	65.90	25%
85	54.00	63.00	65.11	67.64	70.29	26%
95	56.00	64.00	66.42	69.06	71.83	24%
105	58.00	66.00	69.42	72.24	75.20	25%
115	60.00	69.00	72.05	75.03	78.17	26%
125	63.00	72.00	74.32	77.44	80.72	24%
135	69.00	76.00	79.21	85.69	89.37	25%
155	75.00	83.00	88.98	92.85	96.92	25%
175	79.00	88.00	93.16	97.28	101.61	24%
175+	86.00-113.00	95.00	99.71	102.69	107.33	-8% to 20%

Note: Fares from 1 Jan 2010 to 2012 are presented in real dollars. An adjustment for inflation will be made annually. Fares will be rounded according to RailCorp's rounding conventions.

CityRail also offers periodic tickets which are valid for travel over periods longer than a week, for example, monthly, quarterly or yearly. IPART has not changed the method for calculating fares for these long periodical tickets. The price for these tickets is based on multiples of the weekly ticket for the relevant distance scaled by a discount factor associated with the period for which the ticket is purchased.[157] CityRail's 14 Day Rail Pass remains as twice the price of the corresponding weekly ticket.

14.4 Off-peak tickets

The proposed fares for Adult off-peak tickets compared to the existing fares are shown in Table 14.3. The new child off-peak fares are shown in Table 14.4. Off-peak tickets are only sold as return tickets, and under this draft determination are not to be used in the **morning** and **afternoon** peak periods.

[157] The exact formula can be found in IPART's draft determination (attached).

Table 14.3 Adult off-peak tickets

Distance up to (km)	2008 Fare ($ nominal)	From 1 Jan 2009 Fare ($ nominal)	From 1 Jan 2010 ($real 2008 /09 unrounded)	From 1 Jan 2011 ($real 2008 /09 unrounded)	From 1 Jan 2012 Fare ($real 2008 /09 unrounded)	Cumulative percentage change (real)
5	3.60	3.00	2.96	2.98	3.01	-19%
10	4.20	3.40	3.42	3.47	3.52	-19%
15	4.60	3.80	3.88	3.95	4.03	-16%
20	5.20	4.20	4.34	4.44	4.54	-16%
25	5.80	4.60	4.80	4.92	5.05	-16%
30	6.40	5.20	5.27	5.41	5.56	-16%
35	6.40	5.60	5.73	5.89	5.98	-10%
45	7.60	6.40	6.65	6.86	7.08	-10%
55	9.00	7.40	7.57	7.83	8.10	-13%
65	10.00	8.20	8.49	8.80	9.12	-12%
75	11.80	9.00	9.41	9.77	10.14	-17%
85	13.20	10.00	10.34	10.74	11.16	-18%
95	14.60	10.80	11.26	11.70	12.18	-20%
105	15.20	11.80	12.18	12.67	13.19	-16%
115	16.80	12.60	13.10	13.64	14.21	-18%
125	18.80	13.60	14.02	14.61	15.23	-22%
135	19.00	14.40	14.94	15.58	16.25	-18%
155	22.00	16.00	16.79	17.52	18.29	-20%
175	25.00	18.00	18.63	19.46	20.32	-22%
175+	30.00-41.00	22.00	21.22	21.39	22.36	-47% to -28%

Note: Fares from 1 Jan 2010 to 2012 are presented in real dollars. An adjustment for inflation will be made annually. Fares will be rounded according to RailCorp's rounding conventions.

Table 14.4 Child off-peak tickets

Fare zone	2008 Fare ($ nominal)	From 1 Jan 2009 Fare ($ nominal)	From 1 Jan 2010	From 1 Jan 2011	From 1 Jan 2012 Fare ($real 2008 /09 unrounded)	Cumulative percentage change (real)
Sydney suburban	2.60	2.80	2.86	2.94	3.03	12%
Newcastle suburban	2.60	2.80	2.86	2.94	3.03	12%
Outer metropolitan	3.70	4.00	4.07	4.19	4.31	12%
CityRail network	6.10	6.60	6.71	6.91	7.11	12%

Note: Fares from 1 Jan 2010 to 2012 are presented in real dollars. An adjustment for inflation will be made annually. Fares will be rounded according to RailCorp's rounding conventions.

14.5 TravelPasses

TravelPasses are available for unlimited travel on the CityRail, State Transit and Sydney Ferries for the zone specified on the ticket purchased. The new prices for these products compared to existing prices are shown in Table 14.5.

Table 14.5 Sydney TravelPass tickets

TravelPass type	2008 Fare ($)	From 1 Jan 2009 Fare ($)	From 1 Jan 2010	From 1 Jan 2011	From 1 Jan 2012 Fare ($) real unrounded	Cumulative percentage change (real)
Red	35.00	38.00	39.93	41.89	43.94	21%
Green	43.00	46.00	48.18	50.08	52.06	17%
Yellow	47.00	50.00	52.27	54.13	56.05	15%
Pink	50.00	55.00	57.46	60.48	63.67	23%
Purple	57.00	62.00	65.50	68.95	72.58	23%

Note: Fares from 1 Jan 2010 to 2012 are presented in real dollars. An adjustment for inflation will be made annually. Fares will be rounded according to RailCorp's rounding conventions.

IPART has not changed the method for calculating the fare for longer period TravelPasses. For quarterly TravelPasses the fare is equivalent to 11 times the relevant weekly TravelPass. The fare for the yearly TravelPasses is the relevant weekly TravelPass multiplied by 40.

As explained in Chapter 13 IPART's draft decision is that the existing two TravelPasses for Newcastle services be combined into a single TravelPass zone and priced in line with Sydney's green TravelPass. The fares for the Newcastle TravelPass are shown in Table 14.6 below.

Table 14.6 Newcastle TravelPass tickets

	2008	From 1 Jan 2009	From 1 Jan 2010	From 1 Jan 2011	From 1 Jan 2012	Cumulative percentage change (real)
	Fare ($)	Fare ($)			Fare ($) real unrounded	
Newcastle TravelPass	47.00 – 50.00	46.00	48.18	50.08	52.06	0-7 %

Note: Fares from 1 Jan 2010 to 2012 are presented in real dollars. An adjustment for inflation will be made annually. Fares will be rounded according to RailCorp's rounding conventions.

14.6 CityHopper

CityHopper tickets are valid for unlimited travel within the CityHopper zone on the day purchased and up to 4 am the following day. If CityHopper tickets are purchased outside the CityHopper zone, an add-on must be purchased. The new prices for CityHopper tickets compared to existing prices are shown in Table 14.7.

Table 14.7 CityHopper tickets

Ticket type	2008	From 1 Jan 2009	From 1 Jan 2010	From 1 Jan 2011	From 1 Jan 2012	Cumulative percentage change (real)
	Fare ($)	Fare ($)			Fare ($) real unrounded	
CityHopper	7.40	8.20	8.41	8.60	8.80	15%
CityHopper child	3.70	4.10	4.21	4.30	4.40	15%
CityHopper off-peak	5.20	5.80	5.91	6.04	6.18	15%
CityHopper child off-peak	2.70	2.90	3.07	3.14	3.21	15%
CityHopper add-on	2.20	2.40	2.50	2.56	2.61	15%
CityHopper add-on child	1.10	1.20	1.25	1.28	1.31	15%

Note: Fares from 1 Jan 2010 to 2012 are presented in real dollars. An adjustment for inflation will be made annually. Fares will be rounded according to RailCorp's rounding conventions.

14.7 DayTripper

DayTripper tickets are valid for unlimited travel on CityRail, Sydney Buses and Sydney Ferries within the boundaries of the Pink TravelPass zone on the day purchased and up to 4 am the following day. The new prices for DayTripper tickets compared to existing prices are shown in Table 14.8.

Table 14.8 DayTripper tickets

Ticket type	2008 Fare ($)	From 1 Jan 2009 Fare ($)	From 1 Jan 2010	From 1 Jan 2011	From 1 Jan 2012 Fare ($) real unrounded	Cumulative percentage change (real)
DayTripper	16.00	17.00	17.59	18.11	18.65	12%
DayTripper child	8.00	8.60	8.80	9.06	9.33	12%

Note: Fares from 1 Jan 2010 to 2012 are presented in real dollars. An adjustment for inflation will be made annually. Fares will be rounded according to RailCorp's rounding conventions.

14.8 Other CityRail tickets

CityRail offers a number of other fares that use more than one transport mode such as the Moore Park ticket (train and bus) or the Manly ticket (train and ferry). These tickets are calculated as the sum of the single/return price of the relevant distance fare travelled on the CityRail network plus the ad-on fare for the other transport mode used in the relevant Link ticket.

The fares for these tickets will increase annually, in proportion to the distance travelled on the CityRail network based on the type of fare used and the fares applying for each year (for example adult single or return). For Link tickets using public buses or ferries, the add-on proportion of the fare is dependent on IPART's relevant determinations of public buses and ferries.

14.9 Half fare and concession fares

Half fares for all fares are half of the full fare. Concession fares cannot be more than half of the full fare. IPART does not set the rules according to which concession fares are set. IPART does not regulate pensioner excursion tickets or the SSTS.

15 Social impact of the fare determination

In making its draft decision, IPART has considered the impact on the affordability of fares taking into account the income and employment profile of CityRail passengers, average weekly expenditure on CityRail fares, as well as the availability of concession and off-peak fares. In particular IPART has considered the impacts of the fare restructuring on particular groups of passengers. IPART's analysis of how its draft will impact on passengers is set out below.

IPART is also required to consider other matters, such as environmental impacts and managing demand as set out in Section 15 of the IPART Act (see Appendix C). Analysis of these aspects has been provided throughout this report.

15.1 Profile of CityRail passengers

IPART considers that its fare determinations primarily affect regular users of CityRail services. About 20 per cent of the population of the Greater Sydney Metropolitan Area (GMA) use CityRail services at least once a week (shown in Table 15.1). Less than 6 per cent of the Sydney population travel by train 5 days a week or more.[158] This is consistent with earlier data which shows that around 40 per cent of Greater Sydney's population use CityRail services less than once a month, and more than 30 per cent never use these services.[159]

[158] Railcorp, *A Compendium of CityRail Statistics*, Sixth edition, April 2008, p 32.
[159] Railcorp, *A Compendium of CityRail Statistics*, Fifth Edition, April 2006, p 26.

Table 15.1 Rail usage of the Sydney Greater Metropolitan Area (GMA) Residents[a] 2005

Days used train in last week	persons	%
0	3,216,975	79%
1	327,352	8%
2	129,928	3%
3	80,614	2%
4	69,377	2%
5	177,057	4%
6	30,909	1%
7	21,356	1%
Total	4,053,568	100%

a Sydney GMA includes the Sydney and Illawarra Statistical Divisions and the Newcastle Statistical Subdivision.

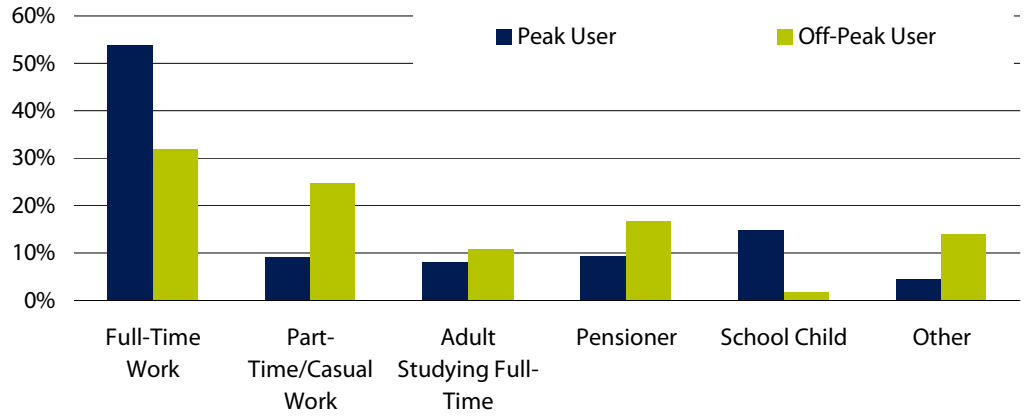
Source: Railcorp, *A Compendium of CityRail Statistics*, Sixth edition, April 2008, p 37.

15.1.1 Labour force status of CityRail's passengers

The primary market for CityRail services is the commuter market, which is made up of passengers who use these services for non-discretionary travel for work or education purposes. Consistent with this, the 2005 Household Travel Survey conducted by the TDC found that during peak periods, 54 per cent of CityRail passengers are full-time workers, while 9 per cent are part-time or casual workers (shown in Figure 15.1). Significant proportions of other passengers who use peak period services are likely to be eligible for concession fares or free travel, notably pensioners (10 per cent) and school children (15 per cent).

During off-peak periods, higher proportions of CityRail passengers are part-time and casual workers (25 per cent), pensioners (17 per cent), and adult students (11 per cent). However, due to the nature of school hours, a smaller proportion of passengers are school children (2 per cent).

Figure 15.1 Labour force status of CityRail's passengers 2005



Source: TDC, *Household Travel Survey 2005*.

15.1.2 Income profile of CityRail passengers

The TDC's 2005 Household Travel Survey found that 80 per cent of CityRail passengers belong to households with an annual income of more than $32,037 (Table 15.2). This survey also found that on an average weekday, the median household income of CityRail passengers was $79,174.

Table 15.2 Annual household incomes of CityRail passengers 2005 (real $2008/09)

Percentile 20	Percentile 40	Percentile 60	Percentile 80	Mean	Median
$32,037	$68,870	$99,722	$156,926	$97,917	$79,174

Source: TDC, *Household Travel Survey 2005*.

IPART has attempted to gather comparable data on average household incomes in the Sydney region, to assess how CityRail passengers' incomes compare to those in the general population. Unfortunately, there is no data which is directly comparable. The best approximation IPART could find was ABS census data. The data from the 2006 census indicates that the median annual household income in Sydney was $66,219,[160] which is around $13,000 less than the median income of CityRail passengers indicated by the Household Travel Survey.

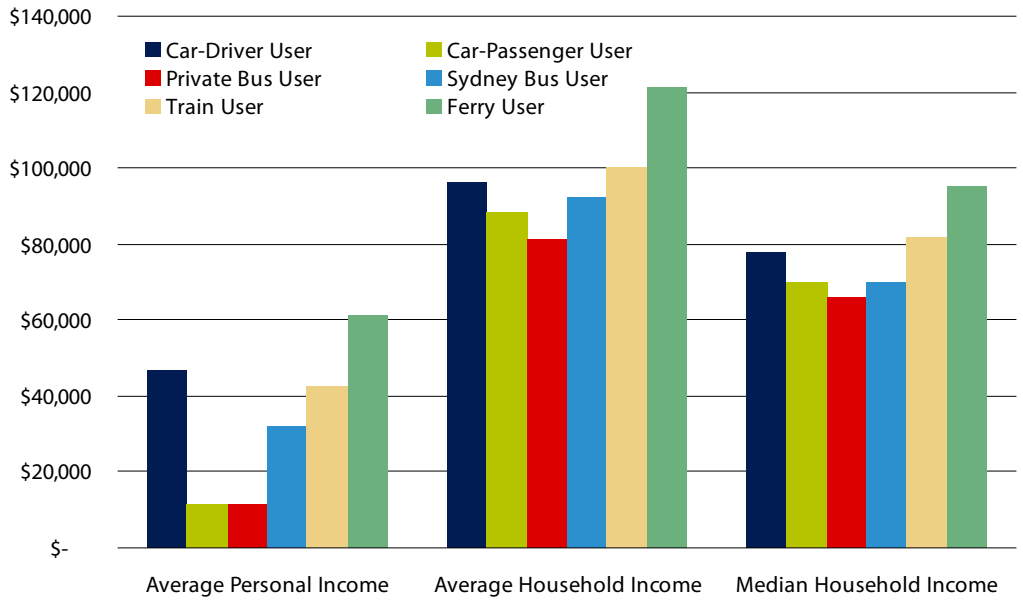
IPART notes that caution must be exercised in drawing conclusions from these data, as the difference in the median household income findings may be due to differences in the survey methodologies, rather than indicating households that use CityRail's services have higher incomes. For example, the TDC's findings are based on the household income of users per trip, rather than measuring distinct CityRail users. Therefore if members of households with high incomes use CityRail services more

[160] In $real 2008/09, based on the median weekly household income for the Sydney Statistical Division of $1,273.

frequently than households with low incomes it would lead to the TDC to overstate the median (and average) household income of CityRail passengers. Nevertheless the data suggests that the median income of CityRail users is not less than the Sydney median income.

This is borne out by the Household Travel Survey results on the incomes of users of other transport modes in Sydney. Figure 15.2 suggests that CityRail passengers have higher household incomes than car drivers and car passengers, although they have lower personal incomes than car drivers. It also shows that CityRail passengers tend to have higher personal and household incomes than Sydney metropolitan bus passengers and lower incomes than Sydney Ferries passengers.

Figure 15.2 Average and median incomes by transport mode 2005 (real $2008/09)

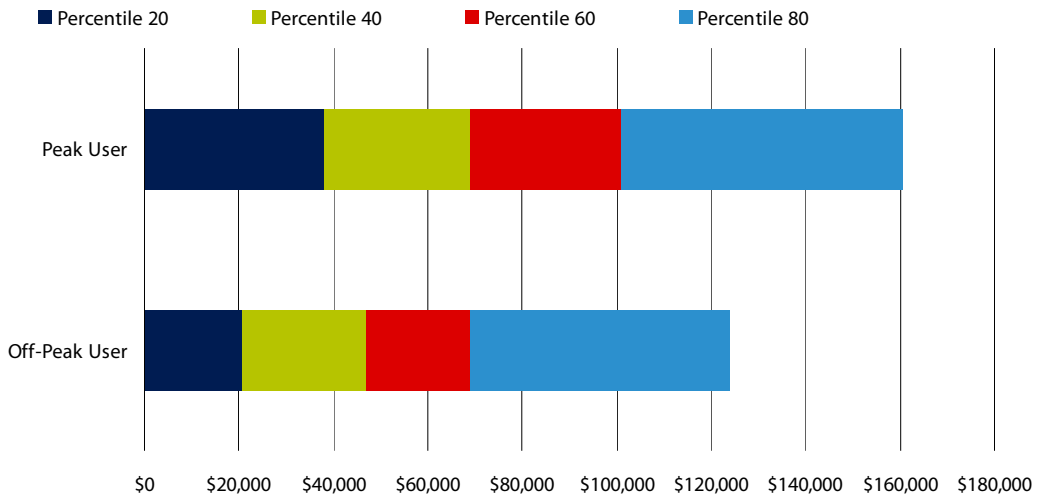


Source: TDC, *Household Travel Survey 2005*.

Off-peak users

IPART has also examined income data broken down by peak and off-peak times, in recognition that the purpose of journeys differs between these periods. Figure 15.3 shows the median household income for off-peak users is $52,348 compared with $83,319 for peak users, which is consistent with a significantly lower level of full time employment for CityRail's off-peak passengers.

Figure 15.3 Comparison of peak [a] and off-peak user household incomes 2005 (real $2008/09)



a a peak user for the purposes of this survey is a person on a train arriving at Central between 0631 and 930 or departing between 1501 and 1800.

Source: TDC, *Household Travel Survey 2005*.

Given the lower off-peak household income, IPART considers that an increased off-peak discount from 30 per cent to 50 per cent will assist in mitigating the fare increases for off-peak passengers. Part time and casual workers, unemployed persons and students make up 51 per cent of off-peak users, reflecting that many of these users are in a position to take advantage of cheaper fares and travel outside the peak.

However IPART recognises that its decision to restrict off-peak ticket usage in peak times will mean that some passengers travelling in the afternoon peak will either have to alter their travel patterns or pay higher fares if they wish to continue to travel in the afternoon peak. IPART notes that almost 50 per cent of passengers travelling in the afternoon peak period use weekly tickets, and therefore will be unaffected by the restriction. By contrast, only a quarter of afternoon peak passengers use return tickets. This compares to 44 per cent of passengers that use a return ticket during off-peak times.[161]

Over 50 per cent of passengers travelling in the afternoon peak are commuting from work or for work related purposes, with over 60 per cent of passengers employed in full time work.[162] On balance, IPART considers that while its decision to restrict the use of off-peak return in the afternoon peak will lead to passengers not able to alter their travel patterns having to pay more, the fact that the majority of these customers are in full time employment should mean the additional costs would not have a substantial impact on affordability. IPART also notes that some commuters currently using return tickets may be able to purchase a weekly ticket with an additional

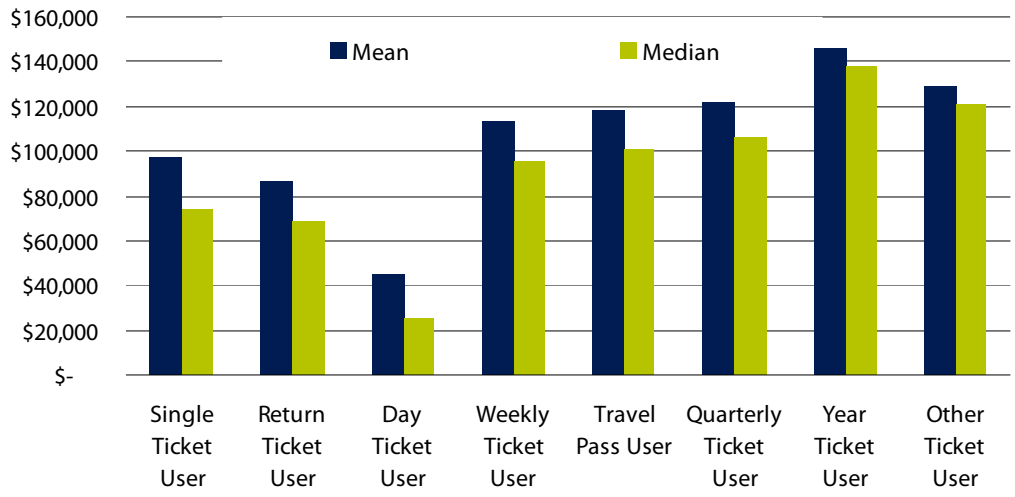
[161] Railcorp, *A Compendium of CityRail Statistics,* Sixth edition, April 2008, p 35.
[162] Ibid, p 35.

discount which would mitigate the cost impact of having to buy full price return tickets for peak travel.

Periodical ticket users

The Household Data Centre surveys shows that users of periodical tickets (TravelPass/weekly/quarterly, yearly), which attract increasing discounts with longer time periods, typically earn higher incomes than single ticket users (shown in Figure 15.4). Commuters, who are generally engaged in full-time employment, are likely to be the main purchasers of these tickets. IPART has taken this into account in its draft decision to increase the fares of some periodical tickets and TravelPasses as part of its fare restructuring. However, it has capped fare increases at 30 per cent (real) over 4 years in recognition of affordability concerns.

Figure 15.4 Average household income for train users by ticket type 2005 (real $2008/09)

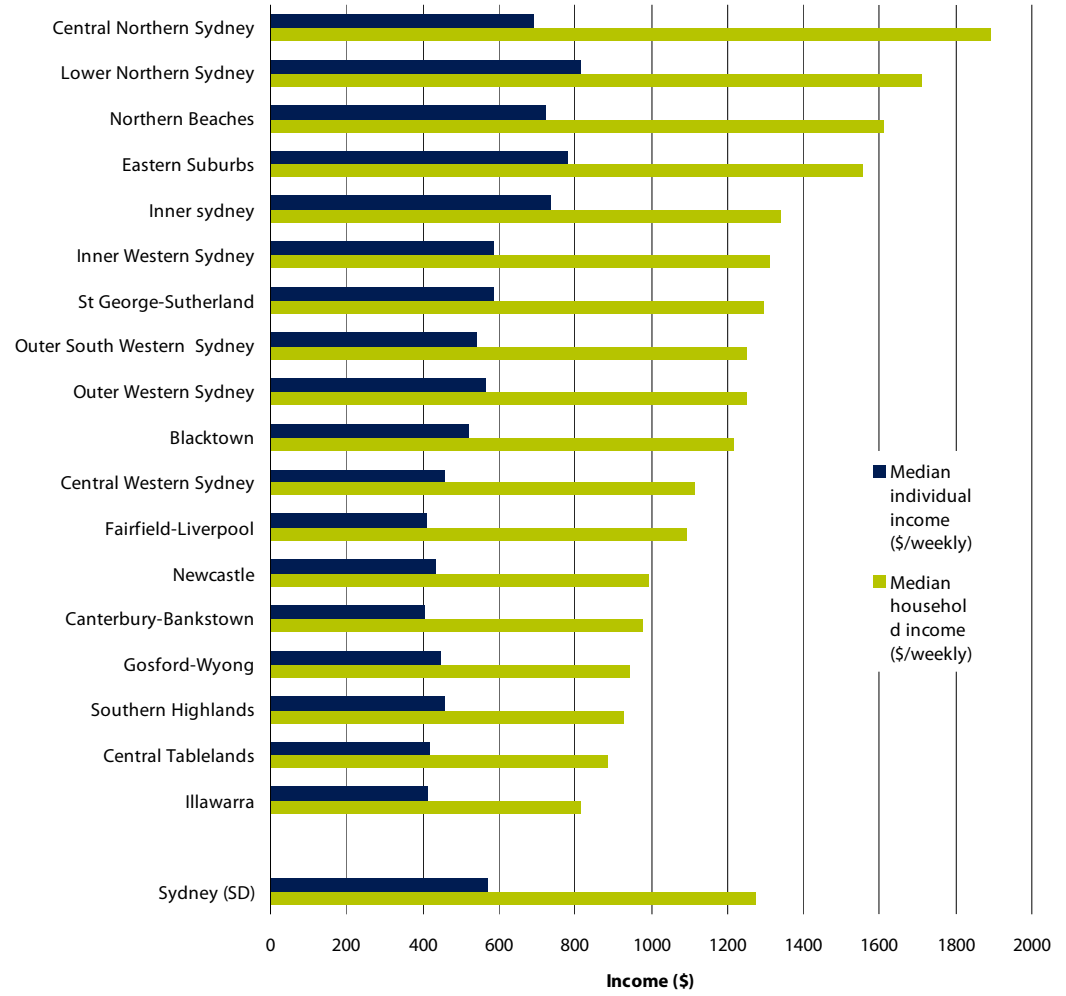


Note: "Day Ticket user includes" City Hopper, Day Rover, Pensioner excursion ticket, Rail Rover, and Day Tripper.
Source: TDC, *Household Travel Survey 2005*.

Income by region

The CityRail Network spans suburban Sydney, the Hunter, Central Coast, Blue Mountains, Southern Highlands and South Coast regions. Incomes vary among these regions, as shown in Figure 15.5.

Figure 15.5 Median incomes within the Sydney Greater Metropolitan Area 2006 (real $2008/09)



Source: 2006 census.

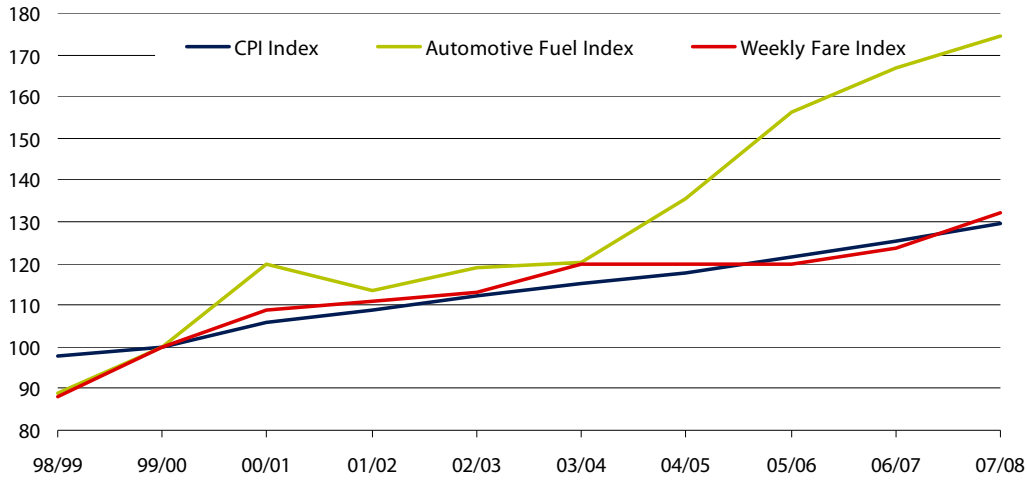
In the submissions, some stakeholders argued that the fare structure should not be consistent across all distances, as people travelling longer distances typically have lower incomes. However Figure 15.5 demonstrates that this argument is not straightforward. For example, Hornsby station, which is 30 km from the City, is located within the Central Northern Sydney statistical subdivision which has the highest median household weekly income in the Sydney Greater Metropolitan area, whereas Canterbury station, in the Canterbury-Bankstown statistical subdivision is only 15 km from the City and is located in the Sydney statistical subdivision with one of the lowest median incomes. IPART's draft determination is that consistent fares (per kilometre charges and a 20 per cent frequency discount) are applied up to 35 km of travel.

IPART notes that average incomes in the intercity regions of Newcastle, Gosford-Wyong, Illawarra, and the Southern Highlands are all significantly lower than the Sydney Statistical Division median incomes. In restructuring fares, IPART has had particular regard to affordability concerns for these commuters. IPART has not applied a consistent frequency discount for passengers that travel more than 35 km. Instead, as part of the transition to consistent discounts, for distances between 45 km and 175+ km IPART has applied a frequency discount that ranges from 22 per cent to 52 per cent. In addition, from 1 January 2009, IPART has reduced the single fare for passengers travelling 215 km and above.

15.2 Relative costs of CityRail fares

Fare increases for CityRail's services have been modest over the past eight years relative to price movements in the Sydney economy. Since 2000, compared to the price of automotive fuel, CityRail fares have increased at a much slower rate. Throughout the period, fare increase levels for weekly tickets have been comparable to the CPI (shown in Figure 15.6).

Figure 15.6 Index of CityRail weekly fares, CPI and petrol prices (base year 1999/00)



Note: Weekly fares are weighted by distance using 2007/08 ticket revenue.
Source: ABS and IPART.

As well as the much higher rate of petrol price increases compared to train fares, car trips account for much higher proportion of all journey made in Sydney, magnifying the social impact of increased petrol prices compared to train fare increases. In 2003, rail accounted for only 5 per cent of all trips by residents of the Sydney Statistical Division on an average weekday. This contrasts with 69 per cent of all trips being made by car. On an average weekend day, the figure for rail trips as a proportion of

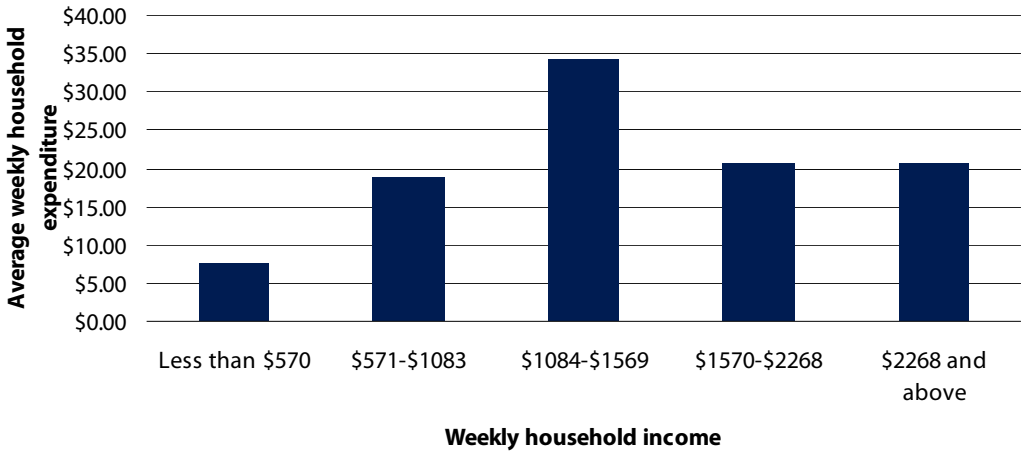
all trips made in Sydney falls to 2 per cent, compared to 76 per cent of trips made by car for vehicle drivers.[163]

15.2.1 Average expenditure on CityRail fares

According to the most recent Household Expenditure Survey, which was conducted in 2003/04, the average weekly household expenditure on train fares by train users[164] in Sydney was $21.25 (08/09 real), equating to 2 per cent of the average household expenditure in New South Wales.

Figure 15.7 shows that average weekly expenditure on train fares is lowest for train users in the lowest weekly household income quintile, and highest for train users with a weekly income of $1,084-$1,569. This is likely to reflect that the majority of CityRail users are in full time employment. It may also reflect that the lowest income users (such as pensioners) have access to discounts.

Figure 15.7 Average weekly household expenditure on train fares of train users by weekly household income 2003/04 (real $2008/09)



Note: The estimate for the income range $929-$1345 has a relative standard error of 25% to 50% due to the small sample size, and should be used with caution.

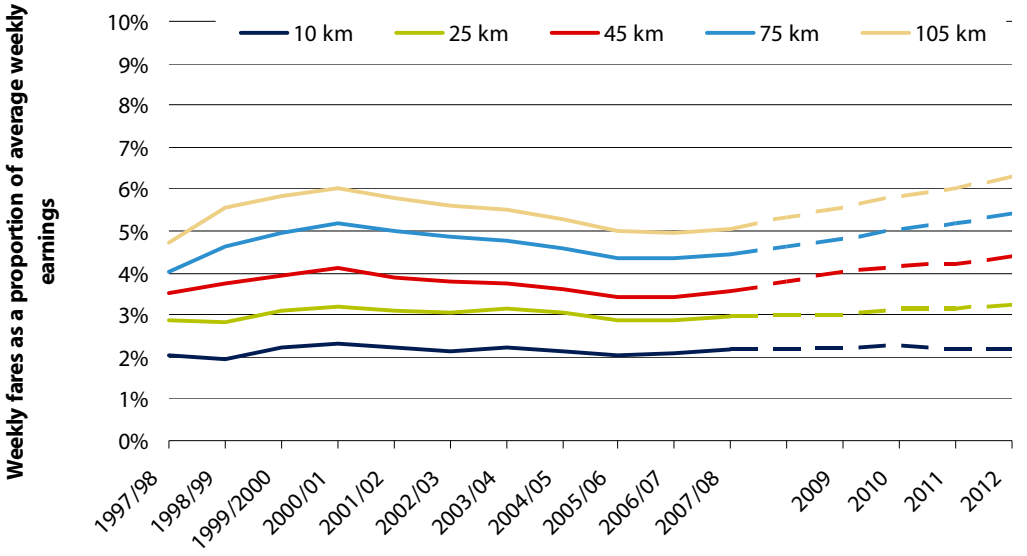
Source: *Household Expenditure Survey 2003/04*, Commonwealth of Australia 2008.

For most distances, current fares represent a slightly higher proportion of weekly wages in NSW than in 1997/98, but remain around 2000/01 levels. Current fares lie between 2 and 6 per cent of average weekly adult earnings for distances less than 105km, however this proportion is expected to increase slightly over the regulatory period for longer distance fares (shown in Figure 15.8).

163 Railcorp, *A Compendium of CityRail Statistics*, Sixth Edition, April 2008, p 25.

164 "Train users" are defined as people that have reported a positive weekly expenditure on train fares.

Figure 15.8 Selected CityRail weekly fares as a proportion of average adult ordinary time weekly earnings in NSW 1997/98 - 2012



Note: Earnings for 2009-2012 are assumed to increase at the 1997/98-2007/08 average yearly rate.
Source: ABS, RailCorp and IPART.

15.3 Concession fares and PET

IPART considers that the social impact of any fare increases should be considered in the context of the availability of concession fares, other social policies (for example, Pensioner Excursion Tickets (PET) and School Student Transport Scheme) which may mitigate the impact of fare increases on particular groups.

The Government is responsible for determining social policy relevant to train travel and for determining the eligibility criteria for concession fares. However IPART does have a role in the implementation of such policies. For example, if the Government were to reduce the level of the concession it would first require a determination from IPART so that it could set concession fares above their maximum levels.

The Government's concession fare policy provides a 50 per cent discount to the adult ticket price for concession card holders (shown in Box 15.1).

Box 15.1 Concession fare entitlements

CityRail's concession fare policy provides reduced fares for several different groups, including:

- primary school and high school students
- full-time university, TAFE or private college students provided that they are:
  - NOT engaged in business or employment
  - NOT a full-fee paying overseas student;
  - NOT an external study student; and
  - NOT in receipt of remuneration (excluding Austudy, allowances, etc).
- 1st, 2nd or 3rd year apprentices/trainees
- persons in receipt of Commonwealth benefits (including the unemployed)
- Seniors cardholders (NSW only)
- Pensioner concession cardholders
- War widow/er concession cardholders (NSW and Victoria only)
- Blinded Soldier Gold Pass holders

Source: RailCorp.

Other Government policy includes:

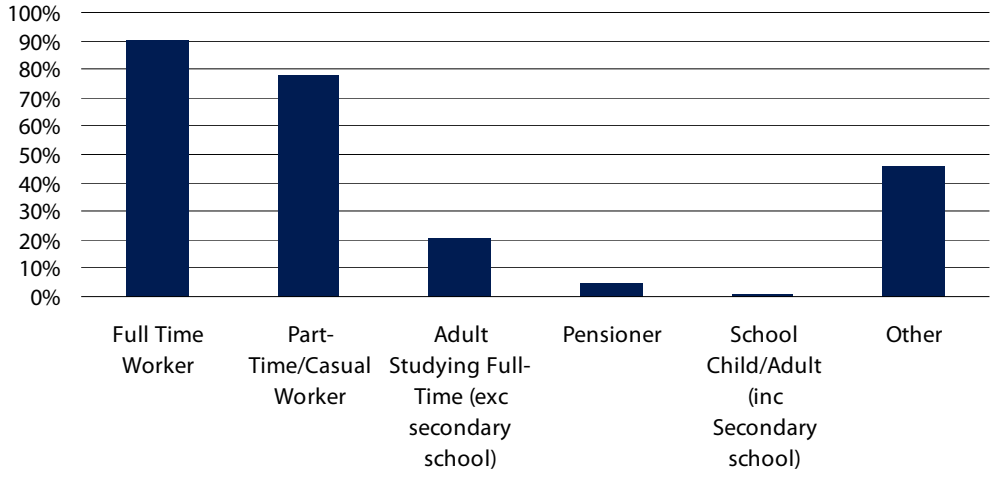
- a flat $2.50 daily fare for pensioners
- free train travel for children travelling to and from school
- capped child off-peak tickets, and
- family discounts - when at least one fare paying adult travels with their children or grandchildren, the first child travels for a child fare and the other children travel free.

While IPART's determination increases concession fares at the same rate as adult fares, IPART notes that over 90 per cent of concession users use single and return tickets, which on average have smaller increases than periodical tickets. IPART also points to the extensive concession scheme in place. In 2005, 40 per cent of CityRail's passengers used concessions, concession pensions, free school, child fare and family discounts. Thus the full adult fare was purchased by only 60 per cent of CityRail's passengers.[165]

Figure 15.9 shows that while 91 per cent of full time workers purchased full fare tickets, this figure drops to 78 per cent of part time and casual workers, 20 per cent for adults studying full time, 5 per cent for pensioners and 1 per cent of school children.

165 TDC, *Household Travel Survey 2005*.

Figure 15.9 CityRail users of full fare tickets 2005



Source: TDC, *Household Travel Survey 2005*.

Appendices

A IPART's assessment of CityRail's recent service performance

As part of its fare review, IPART examined evidence provided by RailCorp on CityRail's recent performance against the service performance indicators and targets included in the current RPA, and the indicators that IPART has recommended be included in future RPAs (with targets to be set by the Government). Its findings are summarised below.

A.1 Performance against targets in current RPA

As Chapter 3 discussed, RailCorp's current RPA includes a small number of service performance indicators and targets for CityRail. These relate to the reliability of CityRail services and the level of crowding on CityRail trains.

A.1.1 Reliability of services

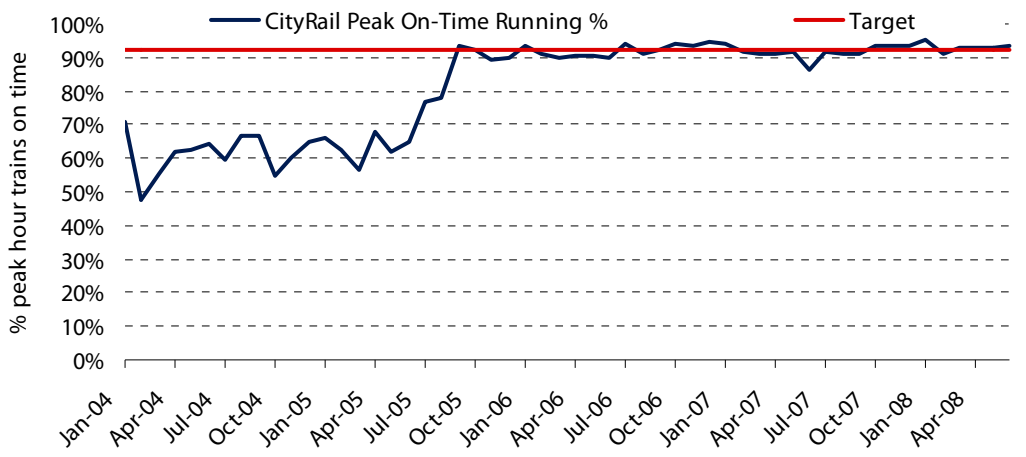
The RPA includes three network-wide indicators plus targets related to the reliability of services:

- **On-time running.** For this indicator, CityRail's performance is measured as the percentage of suburban and intercity peak period train services passing through Central station that run on time at their destination. 'Suburban train services' are defined as those on the Eastern Suburbs, Illawarra, Bankstown, Inner West, Airport, East Hills, South, North Shore, Western and Northern lines. 'Peak period services' are defined as those arriving at Central station between 6 and 9 am, and those departing Central station between 4 and 6 pm. 'On time' is defined as within 5 minutes of the timetabled time for suburban services, and within 6 minutes of the timetabled time for intercity services. The target is for 92 per cent of the defined services to run on time, based on the combined results for the suburban and intercity networks.
- **Skipped stops.** CityRail's performance is measured as the percentage of CityRail stations at which a suburban peak period train service does not stop but is timetabled to do so. Suburban train services and peak period services are defined as above. 'Skipped stops' includes those skipped due to a cancelled service and the early termination of a service. The target is for not more than 1 per cent of the total stops on the suburban network during peak periods to be skipped.

- **Cancelled services.** CityRail's performance is calculated as the number of suburban peak period train services that are cancelled per month as a percentage of timetable suburban peak period train services per month. The target is for not more than 1 per cent of these services to be cancelled.

Since mid 2006, CityRail has fairly consistently met the target for on-time running, although there have been occasional months where performance has fallen below the target (Figure A.1). CityRail has also consistently met the targets for skipped stops and cancelled services (Figure A.3).

Figure A.1 CityRail peak period on-time running



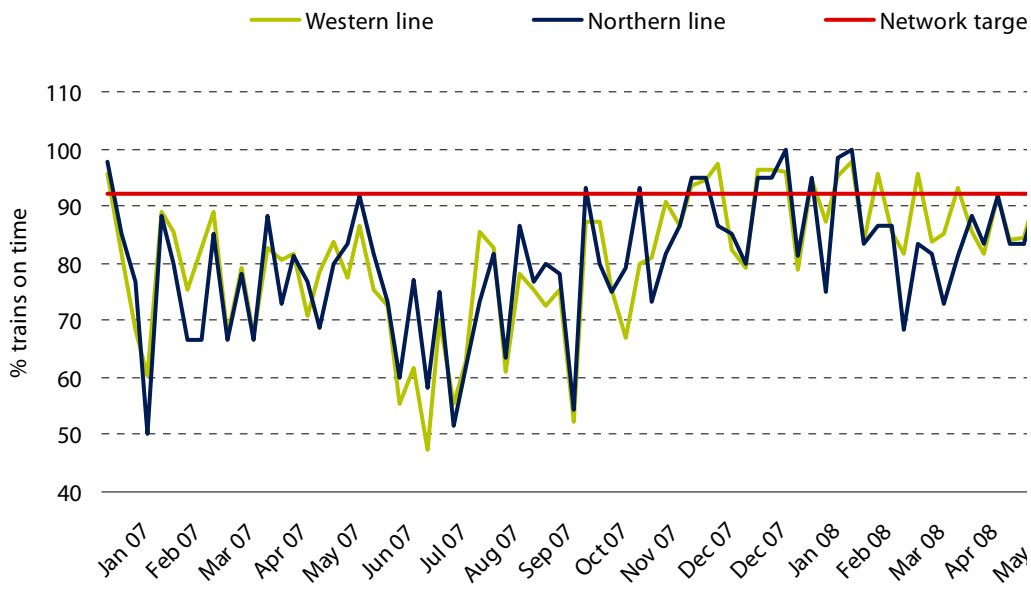
Source: RailCorp.

However, on-time running on the Western and Northern lines has consistently been poorer than the network-wide target of 92 per cent. At times, on-time running in the pm peak period on the Western and Northern lines has been below 70 per cent. IPART considers that variability in performance across the network should be addressed, and has recommended that the Government set on-time running targets and monitors performance by line and in peak and off-peak periods. It has also recommended that the definition of peak periods is reviewed, to make this definition more consistent with the periods of peak demand. (See IPART's draft report *Improving CityRail's accountability and incentives through stronger governance arrangements*.)

IPART's cost allowances for CityRail include funds for undertaking or completing capital projects, such as the clearways projects, which should allow CityRail to maintain or improve its on-time running performance over the determination period. IPART notes also that CityRail is also putting in place a Customer Services Improvement Program which aims to improve key areas of CityRail performance, including reliability, particularly on the Western and Northern lines, within its current budget. For example, it has introduced a package of measures (including

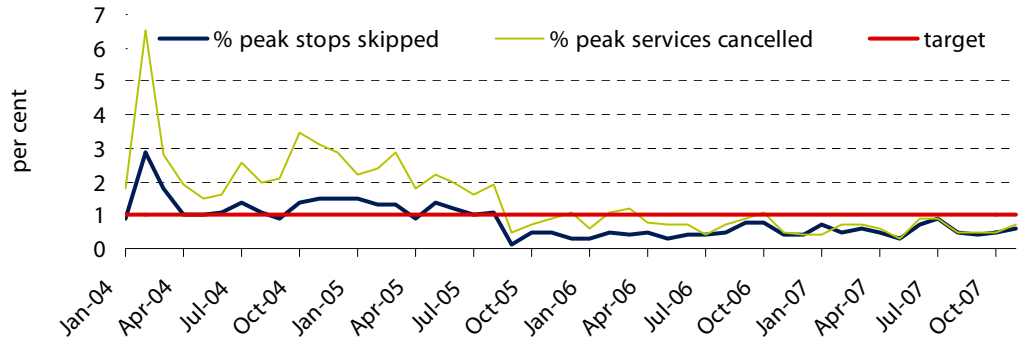
staff to direct the flow of passengers, signage, reconfigured seating) aimed at reducing dwell times at key city stations.

Figure A.2 PM peak hour on-time running – selected lines 2007-2008



Source: CityRail website.

Figure A.3 CityRail peak period stops skipped and peak period services cancelled



Source: CityRail website.

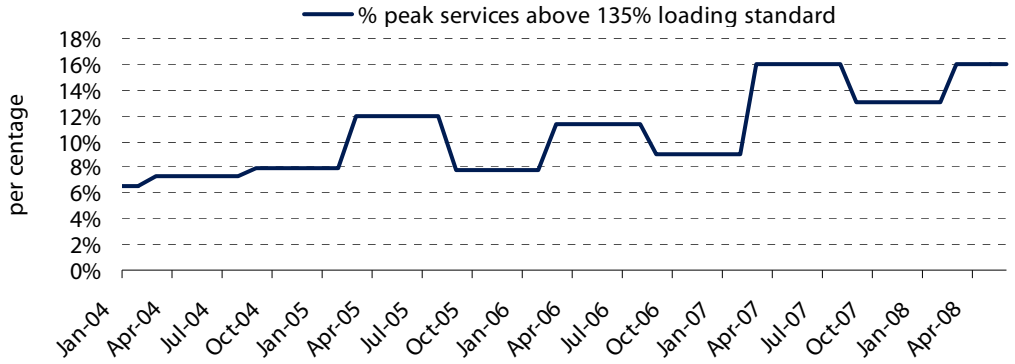
A.1.2 Crowding on trains

The current RPA includes one indicator related to crowding on trains – the percentage of suburban peak period trains at a load factor above 135 per cent – and sets a target of 5 per cent by 2008.

In 2008, approximately 13-16 per cent of peak period trains carried loads above 135 per cent of their seating capacity, so CityRail did not meet the target for this indicator. ITSRR's 2007 and 2008 surveys of passengers found that crowding was the most common area of dissatisfaction among train users, with 55 per cent of train users stating that their expectations on crowding had not been met. This was the only aspect of CityRail service that train users in the survey perceived to have worsened since 2006.[166]

IPART's estimation of CityRail's efficient costs over the determination period has included allowances for operational and capital expenditure which may help to relieve crowding. CityRail is trialling fare discounts to encourage passengers to shift the time of their travel to off-peak periods to reduce crowding. However, in the short term, IPART expects crowding above the target level will continue. In the longer term, the acquisition of additional rolling stock will allow some currently six car services to run as eight car services. The opening of the EPCL will also increase the number of services on the Western and North Shore lines. Nevertheless, CityRail may continue to find it difficult to meet its 5 per cent target for crowding.

Figure A.4 CityRail percentage of peak period trains above 135% loading, 2004-2008



Source: RailCorp.

166 ITSRR Survey of CityRail Customers, 2007, p 3.

A.2 Performance against indicators recommended for inclusion in future RPAs

IPART has made a draft recommendation that in addition to the reliability and crowding indicators and targets discussed above, a greater range of indicators and targets should be included in future RPAs.[167] These additional indicators relate to service quantity, journey delays, journey time, passenger security, train cleanliness, the provision of information to passengers, and passenger comfort. IPART has attempted to assess CityRail's recent performance against these additional indicators (based on available data). It notes that CityRail's past performance, in conjunction with the Customer Service Improvement Plan and other planned improvements, will guide the Government in setting performance targets for these indicators in future RPAs.

A.2.1 Service quantity

In relation to service quantity, IPART has recommended that the Government set specific, measurable targets for the following indicators:

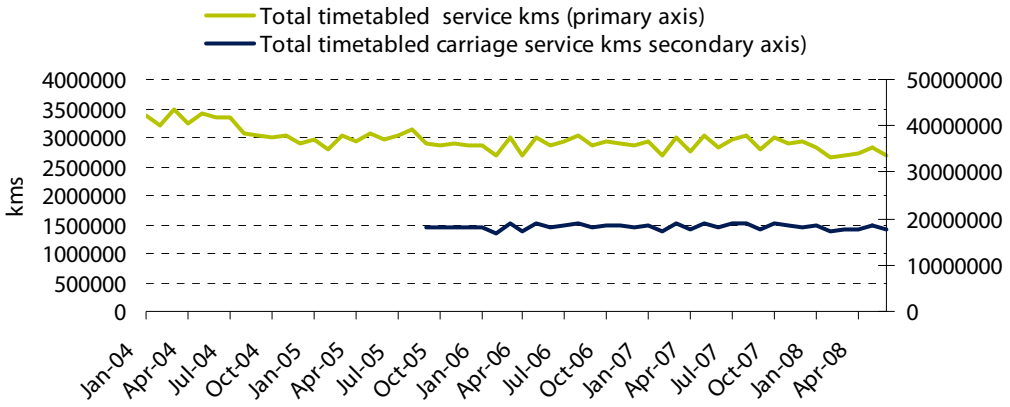
- minimum frequency of services:
  - by line
  - in various time bands (am/pm peak, between peaks, evening)
  - by direction (to/from CBD)
  - on weekdays and weekends/public holidays, and
  - by the time of the first and last services
- peak and off-peak train service kilometres and carriage service kilometres
- peak and off-peak patronage (passenger journeys).

Figure A.5 shows the quantity of service CityRail provided since 2004, in terms of train service kms and carriage service kms.

In 2006/07, CityRail experienced an overall increase in passenger journeys of around 8 million (around 3 per cent). In 2007/08, this increase was 5 per cent. Patronage growth is also occurring in other Australian capital cities. IPART considers that this growth is likely being driven by a number of factors, including strong growth in CBD employment, rising oil prices, increasing road congestion and improved train reliability.

[167] See IPART's draft report, *Improving CityRail's accountability and incentives through stronger governance arrangements*, October 2008.

Figure A.5 CityRail timetabled service kilometres, 2004-2008

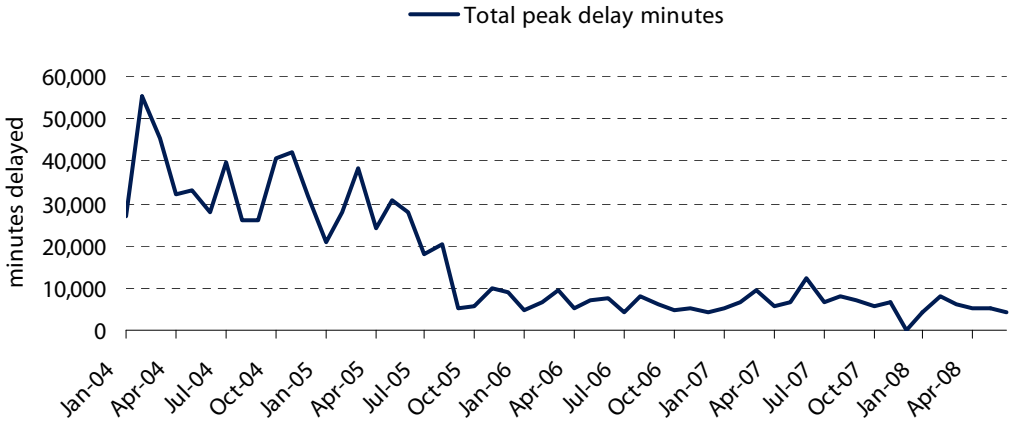


Source: RailCorp.

A.2.2 Journey delays

IPART has recommended that an indicator related to journey delays be included in the RPA -- total delay minutes in peak and off-peak periods. In recent years, CityRail's performance against this indicator during peak periods has improved significantly (Figure A.6).

Figure A.6 Total peak delay minutes 2004-2007



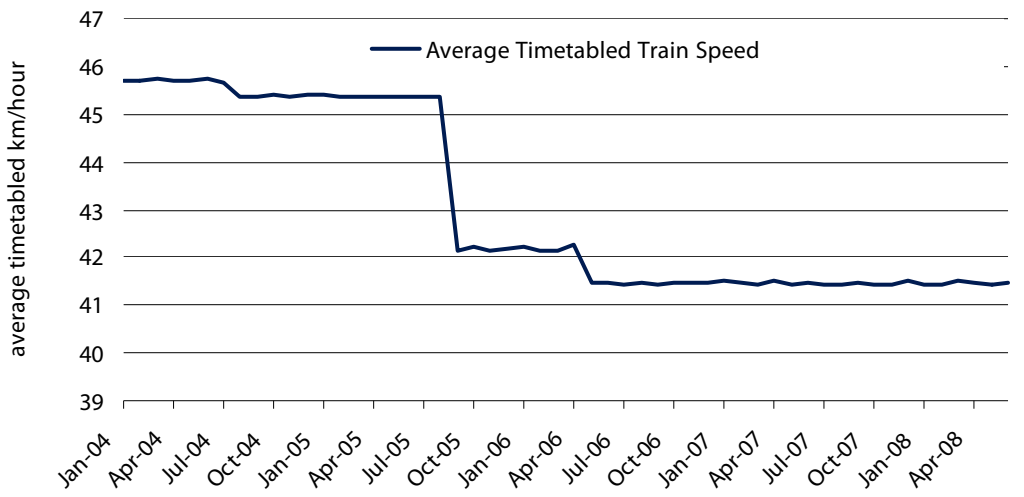
Source: RailCorp.

A.2.3 Journey time

IPART has recommended that the RPA include as an indicator average timetabled train speed, as a proxy for journey time. Timetabled trains speed fell in late 2005 (Figure A.7). The new timetable now allows for longer dwell times at stations which reduces the average timetabled train speed. On the other hand, the new timetable has delivered significant improvements in reliability and reductions in delays. Train crowding also influences speed as overcrowded trains take longer to load and unload.

It should also be noted that there is a trade-off between train speed and reliability.

Figure A.7 CityRail – average timetabled train speed, 2004-2008



Source: RailCorp.

Longer journey times are more likely to be an issue for people making longer trips (such as intercity travellers) than for people making short suburban trips. Despite slower services and cuts in some train services introduced with the 2005 timetable changes, ITSRR surveys of CityRail users indicate the proportion of train users dissatisfied with journey time and frequency of trains has *fallen* since 2006 (from 20 per cent in 2006 to 14 per cent in 2008)[168]. ITSRR has suggested that that frequency and journey time might be less of an issue for train users if they can depend on their train being on time.[169]

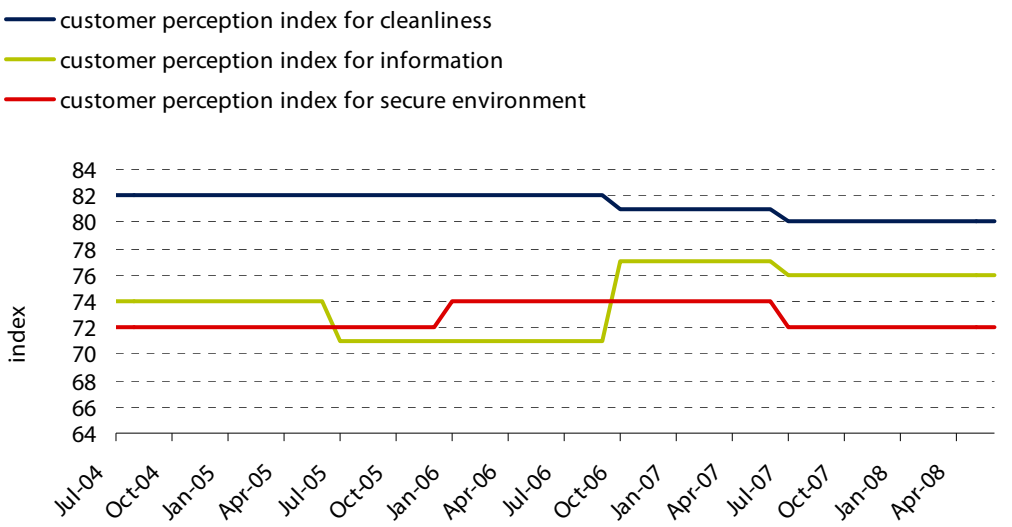
[168] ITSRR Survey of CityRail Customers 2006, 2007 and 2008, Appendix 5.
[169] ITSRR Survey of CityRail Customers 2007, p 19.

A.2.4 Passenger security, train cleanliness and provision of information to passengers

IPART has recommended that the number of offences against persons (derived from the Bureau of Crime Statistics and Research data) and indices of customer perceptions of safety, information provision and train cleanliness (based on the results of ITSRR's annual passenger surveys) be included in the RPA.

Bureau of Crime Statistics and Research (BOSCAR) data indicate that 'offences against persons' occurring on or adjacent to railway property per million passenger journeys has steadily declined in recent years – from 10.3 offences per million passenger journeys in 2004/05, to 8.7 in 2007/08.[170] However, passengers' perceptions of security, based on ITSRR surveys, have remained fairly steady (see Figure A.8).

Figure A.8 Customer perceptions for cleanliness, information and security



Note: These indices are based on results of ITSRR annual surveys of CityRail passengers.
Source: RailCorp.

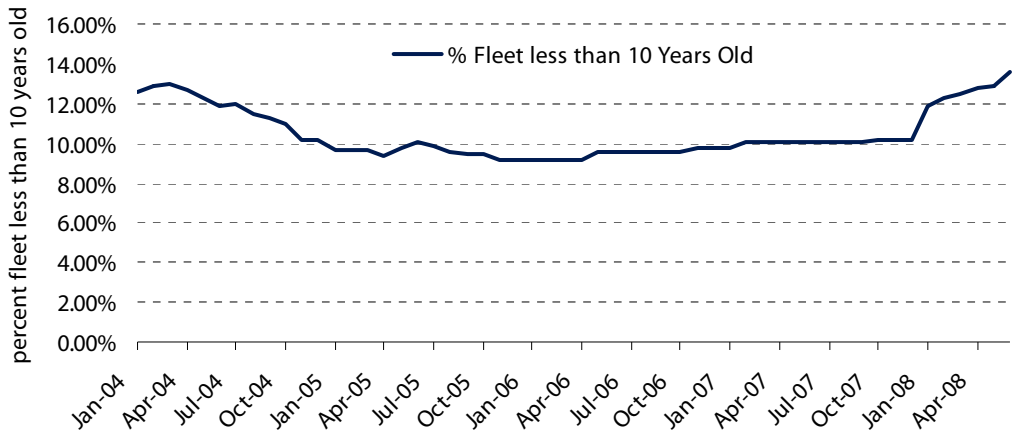
Customer perceptions of the quality of information provided by CityRail have improved since 2006, while perception of cleanliness appears to have declined slightly (Figure A.8).

[170] Based on CityRail website information - safety and security – BOCSAR statistics, 14 August 2008.

A.2.5 Passenger comfort

Passenger comfort encompasses a range of characteristics – for example, temperature/air conditioning, and comfort of seating and smoothness of ride. IPART has recommended that the percentage of the fleet less than 10 year old be included as a proxy indictor for passenger comfort. Since the end of 2007, there has been a marked increase in the proportion of fleet less than 10 years old. IPART's calculation of CityRail's revenue requirement has included allowance for operating expenditure for the procurement and maintenance of over 600 new carriages in a PPP contract which should see improvements in the modernity of the fleet and so in average passenger comfort by the end of the determination period.

Figure A.9 Age of CityRail fleet



Source: RailCorp.

A.3 A.3 Perceptions of CityRail services

ITSRR has conducted annual surveys of perceptions of CityRail travellers since 2004, asking respondents to rate the importance and quality of 37 aspects of service. Table A.1 indicates that since 2004 the proportions of people with expectations met remained constant or improved for 11 out of the 13 aspects of services rated in 2008 as most important.[171] Since 2006 crowding has been the aspect of service about which the highest proportion of train users said there expectations were not met.

[171] The changes are not necessarily statistically significant.

Table A.1 ITSRR surveys – CityRail Aspects of service – percentage of train users with expectations met [(a)(b)]

	Percentage with expectations met					Importance ranking
	2004	2005	2006	2007	2008	2008
Personal safety on stations in the evenings	66	71	70	66	68	1
Personal safety in train carriages, evenings	64	67	64	62	61	2
Station information about arrival/departure times	71	66	78	79	84	3
Punctuality of trains	44	38	64	68	73	4
Frequency of trains	56	52	63	69	69	5
Quality of information about delays and cancellations	63	57	69	68	74	6
Removal of litter from the train	79	80	78	77	77	7
Clarity of announcements on platform	64	61	64	64	69	8
Timeliness of delay/cancellation announcements	62	58	67	70	72	9
Staff effectiveness in dealing with security problems	63	65	69	64	68	10
Delays and cancellations	41	38	59	62	66	11
Facilities for calling for help in carriages/on platform	63	68	66	64	65	12
Personal safety on stations, non-peak, day	81	81	82	82	83	13
Aspect of service with highest % of expectations not met **(c)**	*delays and cancellations (56%)*	*punctuality (59%)*	*crowding (50%)*	*crowding (55%)*	*crowding (55%)*	

Notes

a ITSRR surveys 37 aspects of service. Aspects included in this table were those ranked most important by customers surveyed in 2007. The aspect of service with lowest levels of satisfaction that year is also included.

b percentage of train users who rated that aspect of service as being desirable or higher in importance and acceptable or better in quality**.**

c percentage of train users who rated the service as being high in importance and low in quality.

Statistically significant (at 1% significance) increase from the previous year.

Statistically significant (at 1% significance) decrease from the previous year.

Source: ITSRR Surveys of CityRail Customers 2004, 2005, 2006, 2007 and 2008.

B CRAI's estimate of the value of the external benefits of CityRail

IPART engaged CRAI to assist it in estimating the external benefits of CityRail services and to provide advice on an appropriate range for the allocation of costs between CityRail passengers and government[172]. CRAI's report was released in June 2008 and is available on IPART's website.[173]

In contrast to RailCorp, CRAI used a marginal approach to estimate CityRail's external benefits. First, it used the TDC's Sydney Strategic Travel Model (SSTM) output to calculate the external benefit per road vehicle kilometre. CRAI estimated that this benefit varies continuously with rail patronage: that is, as more commuters choose to take the train, roads become less congested, so the marginal external benefit falls as rail patronage increases. Second, CRAI calculated the total externality benefit of CityRail as the sum of the marginal external benefit every train user brings to the wider community in the form of avoided road congestion, air pollution and greenhouse gas emissions.

CRAI's estimate of CityRail's total external benefits in 2006/07 is slightly higher than RailCorp's, at approximately $1.06 billion (Table B.1). CRAI's estimate of the value of reduced road congestion was substantially higher than RailCorp's (approximately $923 million compared with $741 million).

Table B.1 Comparison of RailCorp's and CRAI's estimate of benefits of CityRail ($2006/07 million)

	RailCorp 2006/07	CRAI 2006/07
Road congestion	740.5	923.1
Air pollution	71	109.1
Greenhouse gas emissions	52.1	25.3
Noise pollution	20.4	-
Accidents	114.6	-
Road damage	3.7	-
Total external benefits	**1,002.3**	**1,057.5**

Source: RailCorp 2007 and CRAI 2008.

[172] CRAI International, *Value of CityRail externalities and optimal Government subsidy*, Report to IPART, June 2008.

[173] http://www.ipart.nsw.gov.au

C Section 15 requirements of the IPART Act

Table C.1 indicates where the relevant section 15 requirements are addressed within IPART's report.

Table C.1 IPART's considerations of section 15 matters

Section 15	
a) cost of providing the service	Chapters 6 to 8
b) protection of consumers from abuse of monopoly power	Chapter 4
c) appropriate rate of return and dividends	Chapter 8 s17B of the Transport Administration Act prohibits RailCorp from paying dividends
d) effect on general price inflation	Chapter 14
e) improved efficiency in supply of services	Chapter 6
f) ecologically sustainable development	Chapter 11
g) impact on borrowing, capital and dividend requirements	Chapters 5 to 8
h) additional pricing policies	Chapter 12 and 13
i) need to promote competition	NA
j) considerations of demand management	Chapters 10 and 12
k) the social impact on customers	Chapter 15
l) standards of quality, reliability and safety of the services	Chapter 3

D Terms of Reference

Review of CityRail regulatory framework

I, Morris Iemma, Premier of New South Wales, under Section 12A of the *Independent Pricing and Regulatory Tribunal Act 1992* ('the Act'), refer to the Independent Pricing and Regulatory Tribunal (Tribunal) for investigation and report the following matter:

The Tribunal is to recommend a regulatory framework which will provide CityRail with the incentives to provide efficient passenger rail services.

In conducting this review, the Tribunal is to consider the matters listed under Section 15 of the Act, in particular the need for greater efficiency and reliability in the supply of services so as to reduce costs and improve quality, safety and reliability for the benefit of consumers and taxpayers.

Other issues the Tribunal is to consider in undertaking this review are:

1. the appropriate regulatory period for the Tribunal's fare decisions;
2. the efficient costs of providing CityRail's services and the scope for greater efficiency in the supply of these services;
3. NSW Government policy on passenger rail services and public transport, including the future investment in CityRail set out in the *Urban Transport Statement*, and the *State Plan*;
4. an appropriate range for the allocation of costs between government and users, taking into consideration the positive environmental, economic and social benefits for the community generated by CityRail's services;
5. how service standards can be incorporated into the regulatory approach;
6. appropriate fares for CityRail which take into account the cost of providing CityRail's services, the capacity of users to pay and current and future government policy on public transport fares; and
7. if necessary, transitional arrangements from the current form of regulation to the new regulatory approach.

A draft report is to be publicly released by 12 September 2008, with a final report due by 12 December 2008.

The Tribunal has indicated that it intends to conduct this review in conjunction with the 2008 determination of fares for CityRail services, conducted in accordance with the Tribunal's standing reference under Section 11 of the Act. This reference under Section 12A of the Act is in addition to, and does not replace, the Tribunal's standing reference under Section 11 of the Act.

E Stations by distance bands

Table E.1 Stations contained in each distance band (measured to/from the City)

Distance band Up to (km)	Stations
5	Edgecliff, Kings Cross, Redfern
10	Bondi Junction, Erskineville, Green Square, Lewisham, Macdonaldtown, Marrickville, Mascot, Milsons Point, Newtown, North Sydney, Petersham, St Leonards, St Peters, Stanmore, Sydenham, Waverton, Wollstonecraft
15	Arncliffe, Artarmon, Ashfield, Banksia, Bardwell Park, Bexley North, Burwood, Campsie, Canterbury, Chatswood, Croydon, Dulwich Hill, Hurlstone Park, Kogarah, Rockdale, Roseville, Strathfield, Summer Hill, Tempe, Turrella, Wolli Creek
20	Allawah, Belmore, Beverly Hills, Carlton, Concord West, Flemington, Gordon, Homebush, Hurstville, Killara, Kingsgrove, Lakemba, Lidcombe, Lindfield, Narwee, North Strathfield, Olympic Park, Penshurst, Punchbowl, Rhodes, Wiley Park
25	Auburn, Bankstown, Berala, Birrong, Clyde, Como, Denistone, Eastwood, Granville, Meadowbank, Mortdale, Oatley, Padstow, Pymble, Regents Park, Revesby, Riverwood, Sefton, Turramurra, Wahroonga, Warrawee, West Ryde, Yagoona
30	Asquith, Camellia, Carramar, Cheltenham, Chester Hill, Dundas, East Hills, Epping, Guildford, Harris Park, Hornsby, Jannali, Kirrawee, Leightonfield, Loftus, Merrylands, Normanhurst, Panania, Parramatta, Rosehill, Rydalmere, Sutherland, Telopea, Villawood, Waitara, Wentworthville, Westmead
35	Beecroft, Cabramatta, Canley Vale, Caringbah, Carlingford, Engadine, Fairfield, Gymea, Holsworthy, Miranda, Mt Colah, Mt Kuring-Gai, Pendle Hill, Pennant Hills, Thornleigh, Toongabbie, Warwick Farm, Yennora
45	Berowra, Blacktown, Casula, Cowan, Cronulla, Doonside, Glenfield, Heathcote, Ingleburn, Liverpool, Macquarie Fields, Marayong, Minto, Quakers Hill, Rooty Hill, Seven Hills, Waterfall, Woolooware
55	Campbelltown, Hawkesbury River, Helensburgh, Leumeah, Macarthur, Mt Druitt, Riverstone, Schofields, St Marys, Vineyard, Werrington
65	Clarendon, Coalcliff, East Richmond, Emu Plains, Kingswood, Menangle, Menangle Park, Mulgrave, Otford, Penrith, Richmond, Stanwell Park, Windsor, Wondabyne
75	Austinmer, Blaxland, Coledale, Douglas Park, Glenbrook, Gosford, Koolewong, Lapstone, Point Clare, Scarborough, Tascott, Thirroul, Wombarra, Woy Woy
85	Bellambi, Bulli, Corrimal, Fairy Meadow, Lisarow, Narara, Niagara Park, North Wollongong, Ourimbah, Picton, Springwood, Towradgi, Valley Heights, Warrimoo, Woonona
95	Buxton, Coniston, Couridjah, Cringila, Faulconbridge, Kembla Grange, Linden, Lysaghts, Port Kembla, Port Kembla North, Tahmoor, Thirlmere, Tuggerah, Unanderra, Wollongong, Woodford, Wyong
105	Balmoral, Bargo, Bullaburra, Dapto, Hazelbrook, Lawson, Warnervale
115	Albion Park, Colo Vale, Dunmore, Hill Top, Katoomba, Leura, Oak Flats, Wentworth Falls, Wyee, Yerrinbool

Distance band Up to (km)	Stations
125	Blackheath, Bombo, Dora Creek, Kiama, Medlow Bath, Minnamurra, Morisset
135	Awaba, Bowral, Burradoo, Fassifern, Gerringong, Mittagong, Mt Victoria, Robertson
155	Adamstown, Bell, Berry, Blackalls Park, Booragul, Cardiff, Cockle Creek, Exeter, Kotara, Moss Vale, Teralba, Toronto, Zig Zag
175	Beresfield, Bombaderry (Nowra), Broadmeadow, Bundanoon, Civic, Hamilton, Hexham, Lithgow, Newcastle, Penrose, Sandgate, Tarro, Thornton, Wallerawang, Warabrook, Waratah, Wickham, Wingello
175+	Aberdeen, Bathurst, Branxton, Dungog, East Maitland, Goulburn, Greta, High St, Hilldale, Kelso, Lochinvar, Maitland, Martins Creek, Marulan, Meadow Flat, Metford, Mindaribba, Mt Lambie, Muswellbrook, Paterson, Raglan, Scone, Singleton, Tallong, Telarah, Victoria St, Wirragulla, Yetholme

Table E.2 Stations contained within each TravelPass zone

TravelPass Zone	Stations included in zone
Red TravelPass	Bondi Junction, Edgecliff, Kings Cross, Circular Quay, Wynyard, Town Hall, St James, Museum, Central, Redfern, Macdonaldtown, Newtown, Stanmore, Petersham, Summer Hill, Ashfield, Croydon, Green Square, Mascot, Domestic Airport, International Airport, Wolli Creek, Turrella, Bardwell Park, Erskineville, St Peters, Sydenham, Tempe, Arncliffe, Banksia, Rockdale, Marrickville, Dulwich Hill, Hurlstone Park, Canterbury, Milsons Point, North Sydney, Waverton,. Wollstonecraft, St Leonards, Artarmon, Chatswood
Green TravelPass	Burwood, Strathfield, Homebush, Flemington, Lidcombe, Berala, Regents Park, Birrong, Yagoona, Bankstown, Punchbowl, Wiley Park, Lakemba, Belmore, Campsie, Bexley North, Kingsgrove, Kogarah, Olympic Park, North Strathfield, Concord West, Rhodes, Meadowbank, West Ryde, Denistone, Eastwood
Yellow TravelPass	Waitara, Wahroonga, Warrawee, Turramurra, Pymble, Gordon, Killara, Lindfield, Roseville, Auburn, Clyde, Granville, Rosehill, Camellia, Harris Park, Parramatta, Chester Hill, Sefton, Beverly Hills, Narwee, Riverwood, Padstow, Revesby, Panania, Carlton, Allawah, Hurstville, Penshurst, Mortdale, Oatley, Como, Jannali
Pink TravelPass	Sutherland, Loftus, Engadine, Kirrawee, Gymea, Miranda, Caringbah, Cheltenham, Beecroft, Pennant Hills, Thornleigh, Normanhurst, Rydalmere, Dundas, Telopea, Carlingford, Westmead, Wentworthville, Pendle Hill, Toongabbie, Seven Hills, Merrylands, Guildford, Yennora, Fairfield, Canley Vale, Leightonfield, East Hills, Holsworthy, Villawood, Carramar, Warwick Farm, Liverpool
Purple TravelPass	Asquith, Berowra, Blacktown, Campbelltown, Casula, Clarendon, Cowan, Cronulla, Doonside, East Richmond, Emu Plains, Glenfield, Heathcote, Helensburg, Ingleburn, Kingswood, Leumeah, Macarthur, Macquarie Fields, Marayong, Minto, Mount Colah, Mount Druitt, Mount Kuring-gai, Mulgrave, Otford, Penrith, Quakers Hill, Richmond, Riverstone, Rooty Hill, Schofields, St Marys, Vineyard, Waterfall, Werrington, Windsor, Woolooware

F Approaches to regulation against selection criteria

	Methodology to determiner the revenue requirements		
IPART's selection criteria	**Building blocks**	**Operating and maintenance**	**Long-run marginal cost**
Encourages CityRail to be more disciplined in its spending	By including all costs including building blocks provides the greatest disciplines	Provides less discipline then building blocks because some costs are excluded	Does not provide the same transparency as building blocks so creates less discipline
Encourages CityRail to reduce the costs of providing its services while also improving the quality, reliability and safety of these services	By including all costs including capital building blocks provides the greatest incentive powers	Provides less incentives then building blocks because some costs are excluded	Does not provide the same transparency as building blocks so creates less incentives
Promotes economic efficiency of rail services	For the same reasons as above promotes the most economic efficiency	For the same reasons as above promotes less economic efficiency than building blocks	For the same reasons as above promotes less economic efficiency than building blocks
Is consistent with government policy objectives	Has regard to Government policy objectives	Has regard to Government policy objectives	May not factor in Government policy objectives as well as the other two approaches
Is targeted to and proportionate with the problem	Meets this criteria by transparently setting out all costs, funding shares etc	Meets this criteria but provide less transparency then building blocks on capital costs	Does not provide the same transparency as building blocks
Promotes clear and appropriate accountabilities	Meets this criteria by transparently setting out all costs, funding shares etc	Meets this criteria but provide less transparency then building blocks on capital costs	Does not provide the same transparency as building blocks
Increases transparency of decisions	Transparently includes all costs and externalities	Meets this criteria but provide less transparency then building blocks on capital costs	Does not provide the same transparency as building blocks
Is internally consistent, and consistent with regulatory approaches used in other industries	Widely used by regulators in many industries	Used in some other jurisdictions but with different circumstances to CityRail	Not as widely used as building blocks
Is practical, pragmatic and feasible	Meets this criteria	Meets this criteria	This approach is not suitable for CityRail at present because of impracticality
Is simple and understandable	Meets this criteria but arguably the operating and maintenance costs is more simple and understandable	Meets this criteria but arguably the operating and maintenance costs is more simple and understandable	Hard to understand for the average stakeholder

Source: IPART.

IPART
New South Wales

Independent Pricing and Regulatory Tribunal

CityRail

Draft Determination No. 4, 2008

Contents

Preliminary

1 Background

(a) Section 11 of the *Independent Pricing and Regulatory Tribunal Act 1992* (**IPART Act**) provides IPART with a standing reference to conduct investigations and make reports to the Minister on the determination of the pricing for a government monopoly service supplied by a government agency specified in Schedule 1 of the IPART Act.

(b) Rail Corporation New South Wales (**RailCorp**) is listed as a government agency for the purposes of Schedule 1 of the IPART Act. The services of RailCorp declared as monopoly services under the *Independent Pricing and Regulatory Tribunal (Passenger Transport Services) Order 1998* (**Order**) are the railway passenger services supplied under the name of "CityRail" by RailCorp excluding the services supplied in accordance with the ticket known as the "SydneyPass" (**Monopoly Services**). Accordingly, IPART may determine the prices for the Monopoly Services.

[Note: The Order applies to RailCorp by operation of clause 122, Schedule 7 of the *Transport Administration Act 1988*]

(c) In investigating and reporting on the pricing of the Monopoly Services, IPART has had regard to a broad range of matters, including the criteria set out in section 15(1) of the IPART Act.

(d) In accordance with section 13A of the IPART Act, IPART has fixed a maximum price for the Monopoly Services or has established a methodology for fixing the maximum price.

(e) By section 18(2) of the IPART Act, RailCorp may not fix a price below that determined by IPART without the approval of the Treasurer.

2 Application of this determination

(a) This determination fixes the maximum prices (or sets a methodology for fixing the maximum prices) that RailCorp may charge for the Monopoly Services.

(b) This determination commences on the later of 1 January 2009 and the date that it is published in the NSW Government Gazette (**Commencement Date**).

(c) The maximum prices in this determination apply from the Commencement Date until this determination is replaced.

3 Replacement of Determination No 2 of 2007

This determination replaces clauses 2, 3, 4 and 6 of Schedule 1 of Determination No. 2 of 2007 from the Commencement Date. The replacement does not affect anything done or omitted to be done, or rights or obligations accrued, under Determination No. 2 of 2007 prior to its replacement.

4 Monitoring

IPART may monitor the performance of RailCorp for the purposes of:

(a) establishing, and reporting annually on, the level of compliance by RailCorp with this determination; and

(b) preparing an annual review of pricing policies in respect of the Monopoly Services.

5 Schedules

(a) Schedule 1 and the Tables in that schedule set out the maximum prices that RailCorp may charge for the Monopoly Services.

(b) Schedule 2 sets out the Rounding Rules.

(c) Schedule 3 sets out a worked example for the price of a FlexiPass Ticket.

(d) Schedule 4 sets out definitions and interpretation provisions used in this determination.

Schedule 1 Maximum Prices

1 Application

This schedule sets the maximum prices that RailCorp may charge for certain passenger services which form part of the Monopoly Services.

2 CityRail tickets (other than tickets described in clauses 3 to 5 of this Schedule 1)

2.1 The maximum price that may be charged by RailCorp for:

(a) a Single Ticket is the price in Table 1 that corresponds to the relevant distance band in column 1 of that table for the relevant Period, rounded in accordance with the Rounding Rule (if applicable).

(b) a Return Ticket is two times the price of the relevant Single Ticket calculated in accordance with subclause 2.1(a) above.

(c) a Seven Day RailPass Ticket is the price in Table 2 that corresponds to the relevant distance band in column 1 of that table for the relevant Period, rounded in accordance with the Rounding Rule (if applicable).

(d) a Fourteen Day RailPass Ticket is two times the price of the relevant Seven Day RailPass Ticket calculated in accordance with subclause 2.1(c) above.

(e) an Off Peak Return Ticket is the same price as the relevant Single Ticket calculated in accordance with subclause 2.1(a) above.

(f) a Child Off-Peak Return Ticket is the price in Table 3 that corresponds to the relevant type of Child Off-Peak Ticket in column 1 of that table for the relevant Period, rounded in accordance with the Rounding Rule (if applicable).

2.2 The maximum price that may be charged by RailCorp for a Concession Fare for any ticket listed in subclauses 2.1(a) to (d) above is 50% of the relevant Adult Fare for that ticket calculated in accordance with the relevant subclause.

2.3 The maximum price that may be charged by RailCorp for a Child Fare for any ticket listed in subclauses 2.1(a) to (d) above is 50% of the relevant Adult Fare for that ticket calculated in accordance with the relevant subclause.

3 FlexiPass Tickets

3.1 The maximum price that may be charged by RailCorp for a FlexiPass Ticket is to be calculated according to the following formula:

$$PN = R * (3.66 + K * x - L * y)$$

where:

PN = FlexiPass Ticket price (before rounding off)

R = Seven Day RailPass Ticket price in Table 2 that corresponds to the relevant distance band for the relevant Period

N = Number of days of validity (from 28 to 366)

x = N - 28

y = N - 90; for N > 90

0; for N ≤ 90

K = 0.12

L = 0.011

3.2 The FlexiPass Ticket price determined in clause 3.1 above must be rounded in accordance with the Rounding Rule.

3.3 The maximum price that may be charged by RailCorp for a Concession Fare for a FlexiPass Ticket is 50% of the appropriate FlexiPass Ticket price, calculated in accordance with clauses 3.1 and 3.2.

3.4 The maximum price that may be charged by RailCorp for a Child Fare for a FlexiPass Ticket is 50% of the appropriate FlexiPass Ticket price, calculated in accordance with clauses 3.1 and 3.2.

4 CityHopper Tickets

4.1 The maximum price that may be charged by RailCorp for a CityHopper Ticket purchased within the CityHopper Zone is the price in Table 4 that corresponds to the relevant type of CityHopper Ticket in column 1 of that table for the relevant Period, rounded in accordance with the Rounding Rule (if applicable).

4.2 The maximum price that may be charged by RailCorp for a CityHopper Ticket purchased outside the CityHopper Zone is:

(a) in the case of a CityHopper Adult Ticket:

(i) the price of the relevant Return Ticket for the relevant Period for travel to the CityHopper Zone calculated in accordance with subclause 2.1(b) above, plus

(ii) the CityHopper Adult Supplement for that Period shown in Table 5, rounded in accordance with the Rounding Rule (if applicable); or

(b) in the case of a CityHopper Adult Off-Peak Ticket:

(i) the price of the relevant Off-Peak Return Ticket for the relevant Period for travel to the CityHopper Zone calculated in accordance with subclause 2.1(e) above, plus

(ii) the CityHopper Adult Supplement for that Period in Table 5, rounded in accordance with the Rounding Rule (if applicable); or

(c) in the case of a CityHopper Child Ticket:

(i) the price of a Child Fare for the appropriate Return Ticket for the relevant Period for travel to the CityHopper Zone calculated in accordance with subclause 2.3 above, plus

(ii) the CityHopper Child Supplement for that Period in Table 5, rounded in accordance with the Half Rounding Rule (if applicable); or

(d) in the case of a CityHopper Child Off-Peak Ticket:

(i) the price of the appropriate Child Off-Peak Return Ticket for the relevant Period for travel to the CityHopper Zone calculated in accordance with subclause 2.1(f) above, plus

(ii) the CityHopper Child Supplement for that Period shown in Table 5, rounded in accordance with the Half Rounding Rule (if applicable).

5 Link Tickets and Intermodal Destination Tickets

5.1 RailCorp offers tickets comprising of travel partly by means of the Monopoly Services and partly by other means of transport that are not Monopoly Services (including by bus or by ferry) (**Link or Intermodal Destination Tickets**), that include but are not limited to:

(a) Olympic Park Tickets;

(b) Blue Mountains ExplorerLink Tickets;

(c) Moore Park Tickets;

(d) Manly Tickets;

(e) Bondi Beach Tickets;

(f) Tramlink- Zone 1 Tickets;

(g) Tramlink - Zone 2 Tickets;

(h) BusPlus Tickets; and

(i) T-way BusPlus Tickets.

5.2 The maximum price of the Monopoly Services component for a Link or Intermodal Destination Ticket is the price of the relevant ticket type and journey (as specified for the Link or Intermodal Destination Ticket type) for the relevant Period calculated in accordance with subclause 2.1(a) or (b) above as applicable.

6 New or additional charges

RailCorp must not levy any new or additional charges for the Monopoly Services, other than in accordance with this determination.

Tables 1-5

Table 1 Maximum prices for Single Tickets

Distance up to (Km)	Commencement Date to 31 December 2009 ($)	1 January 2010 to 31 December 2010 ($)	1 January 2011 to 31 December 2011 ($)	1 January 2012 to 31 December 2012 ($)
5	3.00	2.96 x (1+ΔCPI_1)	2.98 x (1+ΔCPI_2)	3.01 x (1+ΔCPI_3)
10	3.40	3.42 x (1+ΔCPI_1)	3.47 x (1+ΔCPI_2)	3.52 x (1+ΔCPI_3)
15	3.80	3.88 x (1+ΔCPI_1)	3.95 x (1+ΔCPI_2)	4.03 x (1+ΔCPI_3)
20	4.20	4.34 x (1+ΔCPI_1)	4.44 x (1+ΔCPI_2)	4.54 x (1+ΔCPI_3)
25	4.60	4.80 x (1+ΔCPI_1)	4.92 x (1+ΔCPI_2)	5.05 x (1+ΔCPI_3)
30	5.20	5.27 x (1+ΔCPI_1)	5.41 x (1+ΔCPI_2)	5.56 x (1+ΔCPI_3)
35	5.60	5.73 x (1+ΔCPI_1)	5.89 x (1+ΔCPI_2)	5.98 x (1+ΔCPI_3)
45	6.40	6.65 x (1+ΔCPI_1)	6.86 x (1+ΔCPI_2)	7.08 x (1+ΔCPI_3)
55	7.40	7.57 x (1+ΔCPI_1)	7.83 x (1+ΔCPI_2)	8.10 x (1+ΔCPI_3)
65	8.20	8.49 x (1+ΔCPI_1)	8.80 x (1+ΔCPI_2)	9.12 x (1+ΔCPI_3)
75	9.00	9.41 x (1+ΔCPI_1)	9.77 x (1+ΔCPI_2)	10.14 x (1+ΔCPI_3)
85	10.00	10.34 x (1+ΔCPI_1)	10.74 x (1+ΔCPI_2)	11.16 x (1+ΔCPI_3)
95	10.80	11.26 x (1+ΔCPI_1)	11.70 x (1+ΔCPI_2)	12.18 x (1+ΔCPI_3)
105	11.80	12.18 x (1+ΔCPI_1)	12.67 x (1+ΔCPI_2)	13.19 x (1+ΔCPI_3)
115	12.60	13.10 x (1+ΔCPI_1)	13.64 x (1+ΔCPI_2)	14.21 x (1+ΔCPI_3)
125	13.60	14.02 x (1+ΔCPI_1)	14.61 x (1+ΔCPI_2)	15.23 x (1+ΔCPI_3)
135	14.40	14.94 x (1+ΔCPI_1)	15.58 x (1+ΔCPI_2)	16.25 x (1+ΔCPI_3)
155	16.00	16.79 x (1+ΔCPI_1)	17.52 x (1+ΔCPI_2)	18.29 x (1+ΔCPI_3)
175	18.00	18.63 x (1+ΔCPI_1)	19.46 x (1+ΔCPI_2)	20.32 x (1+ΔCPI_3)
175+	22.00	21.22 x (1+ΔCPI_1)	21.39 x (1+ΔCPI_2)	22.36 x (1+ΔCPI_3)

Table 2 Maximum prices for Seven Day RailPass Tickets

Distance up to (Km)	Commencement Date to 31 December 2009 ($)	1 January 2010 to 31 December 2010 ($)	1 January 2011 to 31 December 2011 ($)	1 January 2012 to 31 December 2012 ($)
5	24.00	23.69 x $(1+\Delta CPI_1)$	23.88 x $(1+\Delta CPI_2)$	24.07 x $(1+\Delta CPI_3)$
10	27.00	27.37 x $(1+\Delta CPI_1)$	27.75 x $(1+\Delta CPI_2)$	28.15 x$(1+\Delta CPI_3)$
15	30.00	31.06 x $(1+\Delta CPI_1)$	31.63 x $(1+\Delta CPI_2)$	32.22 x $(1+\Delta CPI_3)$
20	34.00	34.75 x $(1+\Delta CPI_1)$	35.50 x $(1+\Delta CPI_2)$	36.30 x $(1+\Delta CPI_3)$
25	37.00	38.44 x $(1+\Delta CPI_1)$	39.38 x $(1+\Delta CPI_2)$	40.37 x $(1+\Delta CPI_3)$
30	42.00	42.12 x $(1+\Delta CPI_1)$	43.25 x $(1+\Delta CPI_2)$	44.44 x $(1+\Delta CPI_3)$
35	45.00	45.81 x $(1+\Delta CPI_1)$	47.13 x $(1+\Delta CPI_2)$	47.85 x $(1+\Delta CPI_3)$
45	48.00	49.86 x $(1+\Delta CPI_1)$	51.45 x $(1+\Delta CPI_2)$	53.12 x $(1+\Delta CPI_3)$
55	52.00	52.99 x $(1+\Delta CPI_1)$	54.80 x $(1+\Delta CPI_2)$	56.71 x $(1+\Delta CPI_3)$
65	56.00	57.74 x $(1+\Delta CPI_1)$	59.83 x $(1+\Delta CPI_2)$	62.02 x $(1+\Delta CPI_3)$
75	59.00	61.19 x $(1+\Delta CPI_1)$	63.49 x $(1+\Delta CPI_2)$	65.90 x $(1+\Delta CPI_3)$
85	63.00	65.11 x $(1+\Delta CPI_1)$	67.64 x $(1+\Delta CPI_2)$	70.29 x $(1+\Delta CPI_3)$
95	64.00	66.42 x $(1+\Delta CPI_1)$	69.06 x $(1+\Delta CPI_2)$	71.83 x $(1+\Delta CPI_3)$
105	66.00	69.42 x $(1+\Delta CPI_1)$	72.24 x $(1+\Delta CPI_2)$	75.20 x $(1+\Delta CPI_3)$
115	69.00	72.05 x $(1+\Delta CPI_1)$	75.03 x $(1+\Delta CPI_2)$	78.17 x $(1+\Delta CPI_3)$
125	72.00	74.32 x $(1+\Delta CPI_1)$	77.44 x $(1+\Delta CPI_2)$	80.72 x $(1+\Delta CPI_3)$
135	76.00	79.21 x $(1+\Delta CPI_1)$	85.69 x $(1+\Delta CPI_2)$	89.37 x $(1+\Delta CPI_3)$
155	83.00	88.98 x $(1+\Delta CPI_1)$	92.85 x $(1+\Delta CPI_2)$	96.92 x $(1+\Delta CPI_3)$
175	88.00	93.16 x $(1+\Delta CPI_1)$	97.28 x $(1+\Delta CPI_2)$	101.61 x $(1+\Delta CPI_3)$
175+	95.00	99.71 x $(1+\Delta CPI_1)$	102.69 x $(1+\Delta CPI_2)$	107.33 x $(1+\Delta CPI_3)$

Table 3 Maximum prices for Child Off-Peak Return Tickets

Ticket type	Commencement Date to 31 December 2009 ($)	1 January 2010 to 31 December 2010 ($)	1 January 2011 to 31 December 2011 ($)	1 January 2012 to 31 December 2012 ($)
Sydney Suburban Area Child Off-Peak Return Ticket	2.80	2.86 x $(1+\Delta CPI_1)$	2.94 x $(1+\Delta CPI_2)$	3.03 x $(1+\Delta CPI_3)$
Newcastle Suburban Area Child Off-Peak Return Ticket	2.80	2.86 x $(1+\Delta CPI_1)$	2.94 x $(1+\Delta CPI_2)$	3.03 x $(1+\Delta CPI_3)$
Outer Metropolitan Area Child Off-Peak Return Ticket	4.00	4.07 x $(1+\Delta CPI_1)$	4.19 x $(1+\Delta CPI_2)$	4.31 x $(1+\Delta CPI_3)$
Greater CityRail Network Area Child Off-Peak Return Ticket	6.60	6.71 x $(1+\Delta CPI_1)$	6.91 x $(1+\Delta CPI_2)$	7.11 x $(1+\Delta CPI_3)$

Table 4 Maximum prices for CityHopper Tickets purchased within the CityHopper Zone

Ticket type	Commencement Date to 31 December 2009 ($)	1 January 2010 to 31 December 2010 ($)	1 January 2011 to 31 December 2011 ($)	1 January 2012 to 31 December 2012 ($)
CityHopper Adult Ticket	8.20	8.41 x $(1+\Delta CPI_1)$	8.60 x $(1+\Delta CPI_2)$	8.80 x $(1+\Delta CPI_3)$
CityHopper Adult Off-Peak Ticket	5.80	5.91 x $(1+\Delta CPI_1)$	6.04 x $(1+\Delta CPI_2)$	6.18 x $(1+\Delta CPI_3)$
CityHopper Child Ticket	4.10	4.21 x $(1+\Delta CPI_1)$	4.30 x $(1+\Delta CPI_2)$	4.40 x $(1+\Delta CPI_3)$
CityHopper Child Off-Peak Ticket	2.90	3.07 x $(1+\Delta CPI_1)$	3.14 x $(1+\Delta CPI_2)$	3.21 x $(1+\Delta CPI_3)$

Table 5 Maximum prices for Supplement for CityHopper Tickets purchased outside the CityHopper Zone

Supplement type	Commencement Date to 31 December 2009 ($)	1 January 2010 to 31 December 2010 ($)	1 January 2011 to 31 December 2011 ($)	1 January 2012 to 31 December 2012 ($)
CityHopper Adult Supplement	2.40	2.50 x $(1+\Delta CPI_1)$	2.56 x $(1+\Delta CPI_2)$	2.61 x $(1+\Delta CPI_3)$
CityHopper Child Supplement	1.20	1.25 x $(1+\Delta CPI_1)$	1.28 x $(1+\Delta CPI_2)$	1.31 x $(1+\Delta CPI_3)$

Schedule 2 Rounding Rules

1 Rounding Rule

(a) For any ticket sold on or after 1 January 2010:

(1) if the price is greater than or equal to $20.00 it is to be rounded to the nearest dollar;

(2) if the price is less than $20.00, it is to be rounded to the nearest 20 cents.

(b) For the avoidance of doubt, the Rounding Rule should be applied as follows:

(1) if an unrounded ticket price is equal to $X and 50 cents (where X is greater than 20), then the rounded price for that ticket will be $(X+1).

(2) if an unrounded ticket price is equal to $Y and 10*Z cents (where Y is less than or equal to 20 and Z is equal to 1, 3, 5, 7 or 9), then the rounded ticket price for that ticket will be $Y and 10*(Z+1) cents.

2 Half Rounding Rule

(a) For any CityHopper Child Ticket or CityHopper Child Off-Peak Ticket sold on or after 1 January 2010:

(1) if the price is greater than or equal to $20.00 it is to be rounded to the nearest dollar;

(2) if the price is less than $20.00, it is to be rounded to the nearest 10 cents.

(b) For the avoidance of doubt, the Half Rounding Rule should be applied as follows:

(1) if an unrounded ticket price is equal to $X and 50 cents (where X is greater than 20), then the rounded price for that ticket will be $(X+1).

(2) if an unrounded ticket price is equal to $Y and 5*Z cents (where Y is less than or equal to 20 and Z is equal to 1, 3, 5, 7 or 9), then the rounded ticket price for that ticket will be $Y and 5*(Z+1) cents.

Schedule 3 Worked Example

The following is a worked example of how to calculate the price of a FlexiPass Ticket. Assume that in 2009 you wished to purchase a FlexiPass Ticket to travel between Granville station and Central station for a total of 123 days. Therefore the price of the FlexiPass Ticket would be calculated as follows:

(a) The distance between Granville station and Central station is 21.38 kilometres. The price of a Seven Day RailPass Ticket from Granville station to Central station would be $37.00 (the price for a Seven Day RailPass for distances up to 25 kilometres from the relevant Period in Table 2). Therefore R = 37.

(b) The number of days of validity for the Ticket is 123 days. Therefore:

(1) x = 123 – 28 = 95

(2) y = 123 – 90 = 33

(c) The calculation is as follows:

PN = 37 * (3.66 + (0.12 * 95) – (0.011 * 33))

= $543.789 (unrounded fare)

= $544 (fare rounded in accordance with the Rounding Rule)

Schedule 4 Definitions and Interpretation

1 Definitions

1.1 General definitions

In this determination:

Adult means a person who is aged 16 years or over.

Adult Fare means a fare payable by an Adult in respect of a particular ticket.

Blue Mountains ExplorerLink Ticket means a ticket that includes the entitlements of a Return Ticket permitting rail travel between one CityRail station of origin and Katoomba station, plus bus travel to and from Katoomba station servicing the Blue Mountains area.

Bondi Beach Ticket means a ticket that includes the entitlements of a Single Ticket or a Return Ticket permitting rail travel between one CityRail station of origin and Bondi Junction station, plus bus travel to and/or from Bondi Beach.

Business Day means any weekday (Monday to Friday) which is not a Public Holiday.

BusPlus Ticket means a ticket that includes the entitlements of a Seven Day RailPass Ticket, plus bus travel on services operating to and from CityRail's Blacktown, Rooty Hill, Mt Druitt, Quakers Hill, Campbelltown, Minto, Gosford, Woy Woy and Wyong stations.

Child means a person who is 4 years or over, but less than 16 years of age.

Child Fare means a fare payable by a Child in respect of a particular ticket.

Child Off-Peak Return Ticket means an Off-Peak Return Ticket for a Child.

CityHopper Ticket means a ticket permitting unlimited journeys within the CityHopper Zone, plus (if purchased outside the CityHopper zone) one journey to the CityHopper Zone from the CityRail station of origin and one journey from the CityHopper Zone to the station of origin. All journeys must be completed on the date printed on the ticket or up to 4am on the following day.

CityHopper Adult Off-Peak Ticket means a CityHopper Ticket for an Adult that does not permit journeys to be undertaken on Peak Services.

CityHopper Adult Ticket means a CityHopper Ticket for an Adult.

CityHopper Child Ticket means a CityHopper Ticket for a Child.

CityHopper Child Off-Peak Ticket means a CityHopper Ticket for a Child that does not permit journeys to be undertaken on Peak Services.

CityHopper Zone means the area bounded by CityRail's Redfern, Kings Cross and North Sydney stations (including Central, Town Hall, Wynyard, Circular Quay, St James, Museum, Martin Place and Milsons Point stations).

Concession Fare means the fare payable in respect of a particular ticket by an Adult who is the holder of a valid concession card of a type that has been approved by CityRail.

Commencement Date means the Commencement Date as defined in clause 2(b) of the *Preliminary* section of this determination.

Fourteen Day RailPass Ticket means a ticket permitting unlimited journeys between the CityRail stations specified on the ticket over a period of fourteen consecutive days (including the day of purchase) if purchased prior to 3.00pm, or fifteen consecutive days (including the day of purchase) if purchased after 3.00pm.

FlexiPass Ticket means a ticket permitting unlimited journeys over a route and a period of time that are specified on the ticket.

Greater CityRail Network Area means the area (outside the Outer Metropolitan Area and the Newcastle Suburban Area) bounded by CityRail's Scone, Goulburn and Bathurst stations.

Greater CityRail Network Area Child Off-Peak Return Ticket means a Child Off-Peak Return Ticket permitting travel within the Greater CityRail Network Area.

Half Rounding Rule means the rule for rounding of ticket prices set out in clause 2 of Schedule 2 of this determination.

IPART means the Independent Pricing and Regulatory Tribunal of New South Wales established under the IPART Act.

IPART Act means the *Independent Pricing and Regulatory Tribunal Act 1992*.

Metro Light Rail Service means the privately operated light rail service that extends from CityRail's Central Station to the Metro Light Rail station at Lilyfield.

Monopoly Services means the Monopoly Services defined in clause 1(b) of the *Preliminary* section of this determination.

Newcastle Suburban Area means the area bounded by CityRail's Newcastle, Gosford, Dungog, Muswellbrook, Karuah stations and CityRail's road coach route between Fassifern and Toronto stations.

Newcastle Suburban Area Child Off-Peak Return Ticket means a Child Off-Peak Return Ticket permitting travel within the Newcastle Suburban Area.

Manly Ticket means a ticket that includes the entitlements of a Single Ticket or a Return Ticket for rail travel between a specified CityRail station and Circular Quay station, plus ferry travel to and/or from Manly.

Moore Park Ticket means a ticket that includes the entitlements of a Single Ticket or a Return Ticket for rail travel between a specified CityRail station and Central station, plus bus travel to and/or from Moore Park.

Off-Peak Return Ticket means a Return Ticket that does not permit rail travel to be undertaken on Peak Services.

Olympic Park Ticket means a ticket that includes the entitlements of a Single Ticket or a Return Ticket permitting rail travel between a specified CityRail station and Olympic Park station (or Strathfield or Lidcombe stations if no direct service to Olympic Park is available).

Outer Metropolitan Area means the area (outside the Sydney Suburban Area) bounded by CityRail's Moss Vale, Morisset, Lithgow and Nowra stations, including CityRail's Picton-Mittagong Loop line, Unanderra-Moss Vale line, Coniston-Port Kembla line and CityRail's road coach route between Albion Park and Moss Vale.

Outer Metropolitan Area Child Off-Peak Return Ticket means a Child Off-Peak Return Ticket permitting travel within the Outer Metropolitan Area.

Peak Services means CityRail rail services that are scheduled to arrive at CityRail's Central station between 7:00 am and 9:30 am or scheduled to depart from Central station between 4:00 pm and 6:30 pm on any Business Day.

Period means the Commencement Date to 31 December 2009, 1 January to 31 December 2010, 1 January 2011 to 31 December 2011, or 1 January 2012 to 31 December 2012 (as the case may be).

Public Holiday means a public holiday proclaimed in the State of New South Wales.

RailCorp means the Rail Corporation New South Wales defined in clause 1(b) of the *Preliminary* section of this determination, constituted under the *Transport Administration Act 1988*.

Return Ticket means a ticket permitting one journey from one CityRail station of origin to a CityRail destination station, and one journey returning to the CityRail station of origin. Both journeys must be completed on the day that the ticket is purchased or up to 4.00 am on the following day.

Rounding Rule means the rule for rounding of ticket prices set out in clause 1 of Schedule 2 of this determination.

Seven Day RailPass Ticket means a ticket permitting unlimited journeys between the CityRail stations specified on the ticket over a period of seven consecutive days (including the day of purchase) if purchased prior to 3.00pm, or eight consecutive days (including the day of purchase) if purchased after 3.00pm.

Single Ticket means a ticket that permits one journey from one CityRail station to another CityRail station. The journey is to be completed on the day that the ticket is purchased or up to 4.00 am on the following day.

Sydney Suburban Area means the area bounded by CityRail's Cowan, Emu Plains, Macarthur and Otford stations. It includes CityRail's City, Sydnenham-Regents Park, East Hills, Cronulla, Carlingford, Granville-Cabramatta, Blacktown-Richmond, Olympic Park, Airport, Eastern Suburbs and Wynyard-Hornsby lines.

Sydney Suburban Area Child Off-Peak Return Ticket means a Child Off-Peak Return Ticket permitting travel within the Sydney Suburban Area.

Tramlink - Zone 1 Ticket means a ticket that includes the entitlements of a Single Ticket, Return Ticket or Seven Day RailPass Ticket, permitting rail travel between one CityRail station and Central station, plus travel on the Metro Light Rail Service to and/or from the Capitol Square, Haymarket, Exhibition Centre or Convention stations.

Tramlink - Zone 2 Ticket means a ticket that includes the entitlements of a Single Ticket, Return Ticket or Seven Day RailPass Ticket, permitting rail travel between one CityRail station and Central station, plus travel on the Metro Light Rail Service to and/or from the Pyrmont Bay, Star City, John St Square, Fishmarket, Wentworth Park, Glebe, Jublilee Park, Rozelle Bay or Lilyfield stations.

T-way BusPlus Ticket means a ticket that includes the entitlements of a Seven Day RailPass Ticket, plus an entitlement to travel on bus services operating to and from CityRail's Blacktown, Rooty Hill, Mt Druitt, Quakers Hill, Campbelltown, Minto, Gosford, Woy Woy and Wyong stations.

1.2 Consumer Price Index

"CPI" means the consumer price index All Groups index number for Sydney, published by the Australian Bureau of Statistics, or if the Australian Bureau of Statistics does not or ceases to publish the index, then CPI will mean an index to be determined by IPART.

$$\mathbf{\Delta CPI}_1 = \left(\frac{CPI_{Dec2008} + CPI_{Mar2009} + CPI_{Jun2009} + CPI_{Sep2009}}{CPI_{Dec2007} + CPI_{Mar2008} + CPI_{Jun2008} + CPI_{Sep2008}} \right) - 1$$

$$\mathbf{\Delta CPI}_2 = \left(\frac{CPI_{Dec2009} + CPI_{Mar2010} + CPI_{Jun2010} + CPI_{Sep2010}}{CPI_{Dec2007} + CPI_{Mar2008} + CPI_{Jun2008} + CPI_{Sep2008}} \right) - 1$$

$$\mathbf{\Delta CPI}_3 = \left(\frac{CPI_{Dec2010} + CPI_{Mar2011} + CPI_{Jun2011} + CPI_{Sep2011}}{CPI_{Dec2007} + CPI_{Mar2008} + CPI_{Jun2008} + CPI_{Sep2008}} \right) - 1$$

each as calculated by IPART and notified in writing by IPART to RailCorp.

2 Interpretation

2.1 General provisions

In this determination:

(a) headings are for convenience only and do not affect the interpretation of this determination;

(b) a reference to a schedule, annexure, clause or table is a reference to a schedule, annexure, clause or table to this determination;

(c) words importing the singular include the plural and vice versa;

(d) a reference to a law or statute includes all amendments or replacements of that law or statute;

(e) a reference to a person includes any company, partnership, joint venture, association, corporation, other body corporate or government agency;

(f) a reference to an officer includes a reference to the officer who replaces him or her, or who substantially succeeds to his or her powers or functions; and

(g) a reference to a body, whether statutory or not:

(1) which ceases to exist; or

(2) whose powers or functions are transferred to another body,

is a reference to the body which replaces it or which substantially succeeds to its powers or functions.

2.2 Clarification

IPART may publish a clarification notice in the NSW Government Gazette to correct any manifest error or to clarify any part of this determination as if that clarification notice formed part of this determination.

3 Prices inclusive of GST

Prices specified in this determination include GST.

IPART
New South Wales

Independent Pricing and Regulatory Tribunal

TravelPass and DayTripper

Draft Determination No. 5, 2008

Contents

Preliminary

1 Background

1.1 RailCorp, Sydney Ferries & STA Newcastle Services under the IPART Act

(a) Section 11 of the *Independent Pricing and Regulatory Tribunal Act 1992* (**IPART Act**) provides IPART with a standing reference to conduct investigations and make reports to the Minister on the determination of the pricing for a government monopoly service supplied by a government agency specified in Schedule 1 of the IPART Act.

(b) In making this determination, IPART has had regard to a broad range of matters, including the criteria set out in section 15(1) of the IPART Act.

(c) Rail Corporation New South Wales (**RailCorp**) is listed as a government agency for the purposes of Schedule 1 of the IPART Act. The services of RailCorp declared as monopoly services under the *Independent Pricing and Regulatory Tribunal (Passenger Transport Services) Order 1998* (**Order**) are the railway passenger services supplied under the name of "CityRail" by RailCorp excluding the services supplied in accordance with the ticket known as the "SydneyPass" (**RailCorp Monopoly Services**). Accordingly, IPART may determine the prices for RailCorp's Monopoly Services.

[Note: The Order applies to RailCorp by operation of clause 122, Schedule 7 of the *Transport Administration Act 1988*]

(d) Sydney Ferries (**Sydney Ferries**) is listed as a government agency for the purposes of Schedule 1 of the IPART Act. The services of Sydney Ferries declared as monopoly services under the Order are regular passenger services (within the meaning of the *Passenger Transport Act 1990* (**Passenger Transport Act**)) excluding the services supplied in accordance with the ticket known as the "SydneyPass" (**Sydney Ferries Monopoly Services**). Accordingly, IPART may determine the prices for the Sydney Ferries Monopoly Services.

[Note: The Order applies to Sydney Ferries by operation of clause 135, Schedule 7 of the *Transport Administration Act 1988*]

(e) State Transit Authority (the **STA**) is listed as a government agency for the purposes of Schedule 1 of the IPART Act. The services of the STA declared as monopoly services under the Order are the regular passenger services (within the meaning of the Passenger Transport Act) supplied by the STA but excluding the following:

(1) services supplied in accordance with the ticket known as the "SydneyPass";

(2) the bus service known as the "Airport Express";

(3) the bus service known as the "Sydney Explorer", the bus services known as the "Bondi and Bay Explorer" and any other similar bus services operating in any other areas.

(f) The declared monopoly services of the STA under clause 1.1(e) (above) include the services provided by the STA in the Newcastle area to which this determination applies (**STA Newcastle Monopoly Services**). Accordingly, IPART may determine the prices for the STA Newcastle Monopoly Services.

(g) In accordance with section 13A of the IPART Act, under this determination IPART has fixed a maximum price for certain passenger services which form part of the RailCorp Monopoly Services, the Sydney Ferries Monopoly Services and the STA Newcastle Monopoly Services.

(h) By section 18(2) of the IPART Act, none of RailCorp, Sydney Ferries or the STA may fix a price below that determined by IPART without the approval of the Treasurer.

1.2 STA Sydney Buses under the Passenger Transport Act

(a) Section 28J(2) of the Passenger Transport Act permits IPART to conduct investigations and make reports to the Minister on the determination of the maximum fares for Regular Bus Services supplied under a Service Contract. This includes the maximum fares for Regular Bus Services provided by STA Sydney Buses (**STA Sydney Monopoly Services**).

(b) In making this determination, IPART has had regard to a broad range of matters, including the criteria set out in section 28J(5) of the Passenger Transport Act.

2 Application of this determination

(a) This determination fixes the maximum prices that RailCorp, Sydney Ferries and the STA may charge for the applicable ticket types described in Schedules 1 and 2.

(b) This determination commences on the later of 1 January 2009 and the date that it is published in the NSW Government Gazette (**Commencement Date**).

(c) The maximum prices and maximum fares in this determination apply from the Commencement Date until this determination is replaced.

3 Replacement of Previous Determinations

(a) From the Commencement Date this determination replaces:

(1) the maximum prices for the five Sydney Bus, Ferry and Train TravelPass Tickets (Red, Green Yellow, Pink and Purple) and the two Newcastle Bus, Ferry and Train TravelPass Tickets (Yellow and Pink) set out in Schedule 1 of Determination No. 2 of 2007;

(2) the maximum prices for the five Bus, Ferry and Train TravelPass Tickets (Red, Green, Yellow, Pink and Purple) and the DayTripper Tickets set out in Schedule 1 of Determination No. 3 of 2007;

(3) the maximum prices for the Newcastle TravelPass Yellow and the Newcastle TravelPass Pink Tickets set out in Schedule 2 of Determination No. 3 of 2007;

(4) the maximum fares for the five Bus, Ferry and Train TravelPass Tickets (Red, Green, Yellow, Pink and Purple) and the DayTripper Tickets set out in Schedule 3 of Determination No. 3 of 2007; and

(5) the maximum prices for the DayTripper Tickets set out in Schedule 1 of Determination No. 2 of 2007.

(b) The replacement described in this clause 3 does not affect anything done or omitted to be done, or rights or obligations accrued, under Determinations No 2 and 3 of 2007 prior to the replacement of those items described in clause 3(a) above.

4 Monitoring

IPART may monitor the performance of any of RailCorp, Sydney Ferries or the STA for the purposes of:

(a) establishing, and reporting annually on, the level of compliance by the relevant agency with this determination; and

(b) preparing an annual review of pricing policies in respect of the RailCorp Monopoly Services, the Sydney Ferries Monopoly Services, the STA Newcastle Monopoly Services and/or the STA Sydney Monopoly Services.

5 Schedules

(a) Schedule 1 and the Tables in that schedule set out the maximum prices that may be charged for TravelPass Tickets.

(b) Schedule 2 and the Tables in that schedule sets out the maximum prices that may be charged for DayTripper Tickets.

(c) Schedule 3 sets out the Rounding Rule.

(d) Schedule 4 sets out definitions and interpretation provisions used in this determination.

Schedule 1 Maximum prices for Bus, Ferry and Train TravelPass Tickets

1 Application

This schedule sets the maximum prices for TravelPass Tickets.

2 Bus, Ferry and Train TravelPass Tickets

2.1 The maximum price that may be charged by RailCorp, Sydney Ferries or the STA for a Sydney TravelPass Red Ticket is:

(a) in the case of a Weekly Ticket, the price in Table 1 that corresponds to the relevant Period rounded in accordance with the Rounding Rule (if applicable); or

(b) in the case of a Quarterly Ticket, eleven times the price of a Weekly Ticket calculated in accordance with clause 2.1(a); or

(c) in the case of a Yearly Ticket, forty times the price of a Weekly Ticket calculated in accordance with clause 2.1(a).

2.2 The maximum price that may be charged by RailCorp, Sydney Ferries or the STA for a Sydney TravelPass Green Ticket is:

(a) in the case of a Weekly Ticket, the price in Table 2 that corresponds to the relevant Period rounded in accordance with the Rounding Rule (if applicable); or

(b) in the case of a Quarterly Ticket, eleven times the price of a Weekly Ticket calculated in accordance with clause 2.2(a); or

(c) in the case of a Yearly Ticket, forty times the price of a Weekly Ticket calculated in accordance with clause 2.2(a).

2.3 The maximum price that may be charged by RailCorp, Sydney Ferries or the STA for a Sydney TravelPass Yellow Ticket is:

(a) in the case of a Weekly Ticket, the price in Table 3 that corresponds to the relevant Period rounded in accordance with the Rounding Rule (if applicable); or

(b) in the case of a Quarterly Ticket, eleven times the price of a Weekly Ticket calculated in accordance with clause 2.3(a); or

(c) in the case of a Yearly Ticket, forty times the price of a Weekly Ticket calculated in accordance with clause 2.3(a).

2.4 The maximum price that may be charged by RailCorp, Sydney Ferries or the STA for a Sydney TravelPass Pink Ticket is:

(a) in the case of a Weekly Ticket, the price in Table 4 that corresponds to the relevant Period rounded in accordance with the Rounding Rule (if applicable); or

(b) in the case of a Quarterly Ticket, eleven times the price of a Weekly Ticket calculated in accordance with clause 2.4(a); or

(c) in the case of a Yearly Ticket, forty times the price of a Weekly Ticket calculated in accordance with clause 2.4(a).

2.5 The maximum price that may be charged by RailCorp, Sydney Ferries or the STA for a Sydney TravelPass Purple Ticket is:

(a) in the case of a Weekly Ticket, the price in Table 5 that corresponds to the relevant Period rounded in accordance with the Rounding Rule (if applicable); or

(b) in the case of a Quarterly Ticket, eleven times price of a Weekly Ticket calculated in accordance with clause 2.5(a); or

(c) in the case of a Yearly Ticket, forty times the price of a Weekly Ticket calculated in accordance with clause 2.5(a).

2.6 The maximum price that may be charged by RailCorp or the STA for a Newcastle TravelPass Green Ticket is:

(a) in the case of a Weekly Ticket, the price in Table 2 that corresponds to the relevant Period rounded in accordance with the Rounding Rule (if applicable); or

(b) in the case of a Quarterly Ticket, eleven times the price of a Weekly Ticket calculated in accordance with clause 2.6(a); or

(c) in the case of a Yearly Ticket, forty times the price of a Weekly Ticket calculated in accordance with clause 2.6(a).

2.7 The maximum price that may be charged by RailCorp, Sydney Ferries or the STA for a Concession Fare for any WeeklyTravelPass Ticket is 50% of the relevant Full Fare for the same Weekly TravelPass calculated in accordance with clauses 2.1 to 2.6 as applicable.

2.8 The maximum price that may be charged by RailCorp, Sydney Ferries or the STA for a Child Fare for any WeeklyTravelPass Ticket is 50% of the relevant Full Fare for the same Weekly TravelPass calculated in accordance with clauses 2.1 to 2.6 as applicable.

Tables 1-5

Table 1 Maximum prices for Weekly Sydney TravelPass – Red Tickets

Commencement Date to 31 December 2009 ($)	1 January 2010 to 31 December 2010 ($)	1 January 2011 to 31 December 2011 ($)	1 January 2012 to 31 December 2012 ($)
38.00	39.93 x (1+ΔCPI_1)	41.89 x (1+ΔCPI_2)	43.94 x (1+ΔCPI_3)

Table 2 Maximum prices for Weekly Sydney TravelPass - Green Tickets and Newcastle TravelPass - Green Tickets

Commencement Date to 31 December 2009 ($)	1 January 2010 to 31 December 2010 ($)	1 January 2011 to 31 December 2011 ($)	1 January 2012 to 31 December 2012 ($)
46.00	48.18 x (1+ΔCPI_1)	50.08 x (1+ΔCPI_2)	52.06 x (1+ΔCPI_3)

Table 3 Maximum prices for Weekly Sydney TravelPass - Yellow Tickets

Commencement Date to 31 December 2009 ($)	1 January 2010 to 31 December 2010 ($)	1 January 2011 to 31 December 2011 ($)	1 January 2012 to 31 December 2012 ($)
50.00	52.27 x (1+ΔCPI_1)	54.13 x (1+ΔCPI_2)	56.05 x (1+ΔCPI_3)

Table 4 Maximum prices for Weekly Sydney TravelPass - Pink Tickets

Commencement Date to 31 December 2009 ($)	1 January 2010 to 31 December 2010 ($)	1 January 2011 to 31 December 2011 ($)	1 January 2012 to 31 December 2012 ($)
55.00	57.46 x (1+ΔCPI_1)	60.48 x (1+ΔCPI_2)	63.67 x (1+ΔCPI_3)

Table 5 Maximum prices for Weekly Sydney TravelPass - Purple Tickets

Commencement Date to 31 December 2009 ($)	1 January 2010 to 31 December 2010 ($)	1 January 2011 to 31 December 2011 ($)	1 January 2012 to 31 December 2012 ($)
62.00	65.50 x (1+ΔCPI_1)	68.95 x (1+ΔCPI_2)	72.58 x (1+ΔCPI_3)

Schedule 2 Maximum prices for DayTripper Tickets

1 Application

This schedule sets the maximum prices for DayTripper Tickets.

2 DayTripper Tickets

2.1 The maximum price that may be charged by RailCorp, Sydney Ferries or the STA for a DayTripper Ticket is the price in Table 6 that corresponds to the relevant Period rounded in accordance with the Rounding Rule (if applicable).

2.2 The maximum price that may be charged by RailCorp, Sydney Ferries or the STA for a DayTripper Child Ticket is the price in Table 7 that corresponds to the relevant Period rounded in accordance with the Rounding Rule (if applicable).

Tables 6 and 7

Table 6 Maximum prices for DayTripper Tickets

Commencement Date to 31 December 2009 ($)	1 January 2010 to 31 December 2010 ($)	1 January 2011 to 31 December 2011 ($)	1 January 2012 to 31 December 2012 ($)
17.00	17.59 x $(1+\Delta CPI_1)$	18.11 x $(1+\Delta CPI_2)$	18.65 x $(1+\Delta CPI_3)$

Table 7 Maximum prices for DayTripper Child Tickets

Commencement Date to 31 December 2009 ($)	1 January 2010 to 31 December 2010 ($)	1 January 2011 to 31 December 2011 ($)	1 January 2012 to 31 December 2012 ($)
8.60	8.80 x $(1+\Delta CPI_1)$	9.06 x $(1+\Delta CPI_2)$	9.33 x $(1+\Delta CPI_3)$

Schedule 3 Rounding Rule

Rounding Rule

(a) For any ticket sold on or after 1 January 2010:

(1) if the price is greater than or equal to $20.00 it is to be rounded to the nearest dollar;

(2) if the price is less than $20.00, it is to be rounded to the nearest 20 cents.

(b) For the avoidance of doubt, the Rounding Rule should be applied as follows:

(1) if an unrounded ticket price is equal to $X and 50 cents (where X is greater than 20), then the rounded price for that ticket will be $(X+1).

(2) if an unrounded ticket price is equal to $Y and 10*Z cents (where Y is less than or equal to 20 and Z is equal to 1, 3, 5, 7 or 9), then the rounded ticket price for that ticket will be $Y and 10*(Z+1) cents.

Schedule 4 Definitions and Interpretations

1 Definitions

1.1 General definitions

In this determination:

Adult means a person who is aged 16 years or over.

Child means a person who is 4 years or over, but less than 16 years of age.

Child Fare means the fare payable by a Child in respect of a particular ticket.

CityRail TravelPass Map means the map attached as Appendix A to this determination.

Commencement Date means the Commencement Date as defined in clause 2(b) of the *Preliminary* section of this determination.

Concession Fare means the fare payable in respect of a particular ticket by an Adult who is the holder of a valid concession card of a type that has been approved by CityRail.

DayTripper Child Ticket means a ticket that permits a Child to undertake unlimited rail, bus and ferry journeys on the services and within the area applicable to Sydney Travel Pass Purple Tickets. All journeys must be made on the day of purchase or until 4am on the next day.

DayTripper Ticket means a ticket that permits an Adult to undertake unlimited rail, bus and ferry journeys on the services and within the area applicable to Sydney Travel Pass Purple Tickets. All journeys must be made on the day of purchase or until 4am on the next day.

Full Fare means the fare payable by an Adult in respect of a particular ticket.

IPART means the Independent Pricing and Regulatory Tribunal of New South Wales established under the IPART Act.

IPART Act means the *Independent Pricing and Regulatory Tribunal Act 1992*.

Newcastle Suburban Area means the area bounded by CityRail's Newcastle, Gosford, Dungog, Muswellbrook, Karuah stations and the road coach route between Fassifern and Toronto.

Newcastle TravelPass Green Ticket means a TravelPass that permits for the period specified on the ticket:

(a) rail travel by CityRail services between the area bounded by CityRail's Telarah, Newcastle, Toronto and Awaba stations; and

(b) bus travel by STA bus services within the Newcastle Suburban Area (except sporting bus services); and

(c) ferry travel by STA's Stockton ferry service.

Passenger Transport Act means the *Passenger Transport Act 1990*.

Period means the Commencement Date to 31 December 2009, 1 January 2010 to 31 December 2010, 1 January 2011 to 31 December 2011 or 1 January 2012 to 31 December 2012 (as the case may be).

Quarterly Ticket means a TravelPass that permits travel on specified services in a specified area over a period of three months.

RailCorp means the Rail Corporation New South Wales defined in clause 2 of section 1.1 of the *Preliminary* section of this determination, constituted under the *Transport Administration Act 1988*.

RailCorp Monopoly Services is defined in clause 2 of section 1.1 of the *Preliminary* section of this determination.

Regular Bus Service has the meaning given to that term in the Passenger Transport Act.

Rounding Rule means the rule for rounding of ticket prices set out in Schedule 3 of this determination.

Service Contract has the meaning given to that expression in section 16 of the Passenger Transport Act and entered into by STA Sydney Buses for the provision of a Regular Bus Service.

STA means the State Transit Authority defined in clause 4 of section 1.1 of the *Preliminary* section of this determination, constituted under the Transport Administration Act 1988.

STA Newcastle Monopoly Services is defined in clause 6 of section 1.1 of the *Preliminary* section of this determination.

STA Sydney Buses means the Sydney Buses business owned and operated by the STA.

STA Sydney Monopoly Services is defined in clause 1 of section 1.2 of the *Preliminary* section of this determination.

Sydney Buses TravelPass Map means the map attached as Appendix C to this determination.

Sydney Ferries means Sydney Ferries defined in clause 3 of section 1.1 of the *Preliminary* section of this determination, constituted under the *Transport Administration Act 1988*.

Sydney Ferries Monopoly Services is defined in clause 3 of section 1.1 of the *Preliminary* section of this determination.

Sydney Ferries TravelPass Map means the map attached as Appendix B to this determination.

Sydney TravelPass Red Ticket means a TravelPass that permits for the period specified on the ticket:

(a) rail travel by CityRail services between any stations within the area highlighted in red in the CityRail TravelPass Map (but excluding the access fee for the International, Domestic, Mascot and Green Square stations);

(b) bus travel by STA bus services (excluding the bus services known as the Sydney Explorer and the Bondi and Bay Explorer and special sporting bus services) in the area highlighted in red in the Sydney Buses TravelPass Map; and

(c) ferry travel by Sydney Ferries services highlighted in red in the Sydney Ferries TravelPass Map.

Sydney TravelPass Green Ticket means a TravelPass that permits for the period specified on the ticket:

(a) rail travel by CityRail services between any stations within the areas highlighted in red or green in the CityRail TravelPass Map (but excluding the access fee for the International, Domestic, Mascot and Green Square stations);

(b) bus travel by STA bus services (excluding the bus services known as the Sydney Explorer and the Bondi and Bay Explorer and special sporting bus services) in the areas highlighted in red or green in the Sydney Buses TravelPass Map; and

(c) ferry travel by Sydney Ferries services (excluding the Manly JetCat, harbour cruises or special event services) highlighted in red or green in the Sydney Ferries TravelPass Map.

Sydney TravelPass Yellow Ticket means a TravelPass that permits for the period specified on the ticket:

(a) rail travel by CityRail services between any stations within the areas highlighted in red, green or yellow in the CityRail TravelPass Map (but

excluding the access fee for the International, Domestic, Mascot and Green Square stations);

(b) bus travel by STA bus services (excluding the bus services known as the Sydney Explorer and the Bondi and Bay Explorer and special sporting bus services) in the areas highlighted in red or green in the Sydney Buses TravelPass Map; and

(c) ferry travel by Sydney Ferries services (excluding the Manly JetCat, harbour cruises or special event services) highlighted in red or green in the Sydney Ferries TravelPass Map.

Sydney TravelPass Pink Ticket means a TravelPass that permits for the period specified on the ticket:

(a) rail travel by CityRail services between any stations within the areas highlighted in red, green, yellow or pink in the CityRail TravelPass Map (but excluding the access fee for the International, Domestic, Mascot and Green Square stations);

(b) bus travel by STA bus services (excluding the bus services known as the Sydney Explorer and the Bondi and Bay Explorer and special sporting bus services) in the areas highlighted in red or green in the Sydney Buses TravelPass Map; and

(c) ferry travel by Sydney Ferries services (excluding the Manly JetCat, harbour cruises or special event services) highlighted in red or green in the Sydney Ferries TravelPass Map.

Sydney TravelPass Purple Ticket means a TravelPass that permits for the period specified on the ticket:

(a) rail travel by CityRail services between any stations within the areas highlighted in red, green, yellow, pink or purple in the CityRail TravelPass Map (but excluding the access fee for the International, Domestic, Mascot and Green Square stations);

(b) bus travel by STA bus services (excluding the bus services known as the Sydney Explorer and the Bondi and Bay Explorer and special sporting bus services) in the areas highlighted in red, green or purple in the Sydney Buses TravelPass Map; and

(c) ferry travel by Sydney Ferries services (excluding the Manly JetCat, harbour cruises or special event services) highlighted in red or green in the Sydney Ferries TravelPass Map.

TravelPass Ticket means a ticket that permits unlimited travel on certain rail, bus and ferry services for a Weekly, Quarterly or Yearly period and within the area applicable to the relevant TravelPass type (Red, Green, Yellow, Pink or Purple).

Weekly Ticket means a TravelPass that permits travel on specified services in a specified area over a period of seven consecutive days (including the day of purchase) if purchased prior to 3.00pm, or eight consecutive days (including the day of purchase) if purchased after 3.00pm.

Yearly Ticket means a TravelPass that permits travel on specified services in a specified area over a period of one year.

1.2 Consumer Price Index

"CPI" means the consumer price index All Groups index number for Sydney, published by the Australian Bureau of Statistics, or if the Australian Bureau of Statistics does not or ceases to publish the index, then CPI will mean an index to be determined by IPART.

$$\mathbf{\Delta CPI}_1 = \left(\frac{CPI_{Dec2008} + CPI_{Mar2009} + CPI_{Jun2009} + CPI_{Sep2009}}{CPI_{Dec2007} + CPI_{Mar2008} + CPI_{Jun2008} + CPI_{Sep2008}} \right) - 1$$

$$\mathbf{\Delta CPI}_2 = \left(\frac{CPI_{Dec2009} + CPI_{Mar2010} + CPI_{Jun2010} + CPI_{Sep2010}}{CPI_{Dec2007} + CPI_{Mar2008} + CPI_{Jun2008} + CPI_{Sep2008}} \right) - 1$$

$$\mathbf{\Delta CPI}_3 = \left(\frac{CPI_{Dec2010} + CPI_{Mar2011} + CPI_{Jun2011} + CPI_{Sep2011}}{CPI_{Dec2007} + CPI_{Mar2008} + CPI_{Jun2008} + CPI_{Sep2008}} \right) - 1$$

each as calculated by IPART and notified in writing by IPART to RailCorp, Sydney Ferries and the STA.

2 Interpretation

2.1 General provisions

In this determination:

(a) headings are for convenience only and do not affect the interpretation of this determination;

(b) a reference to a schedule, annexure, clause or table is a reference to a schedule, annexure, clause or table to this determination;

(c) words importing the singular include the plural and vice versa;

(d) a reference to a law or statute includes all amendments or replacements of that law or statute;

(e) a reference to a person includes any company, partnership, joint venture, association, corporation, other body corporate or government agency; and

(f) a reference to an officer includes a reference to the officer which replaces it or which substantially succeeds to its powers or functions;

(g) a reference to a body, whether statutory or not:

(1) which ceases to exist; or

(2) whose powers or functions are transferred to another body,

is a reference to the body which replaces it or which substantially succeeds to its powers or functions.

2.2 Explanatory Notes

Explanatory notes do not form part of this determination, but in the case of uncertainty may be relied upon for interpretation purposes.

2.3 Clarification

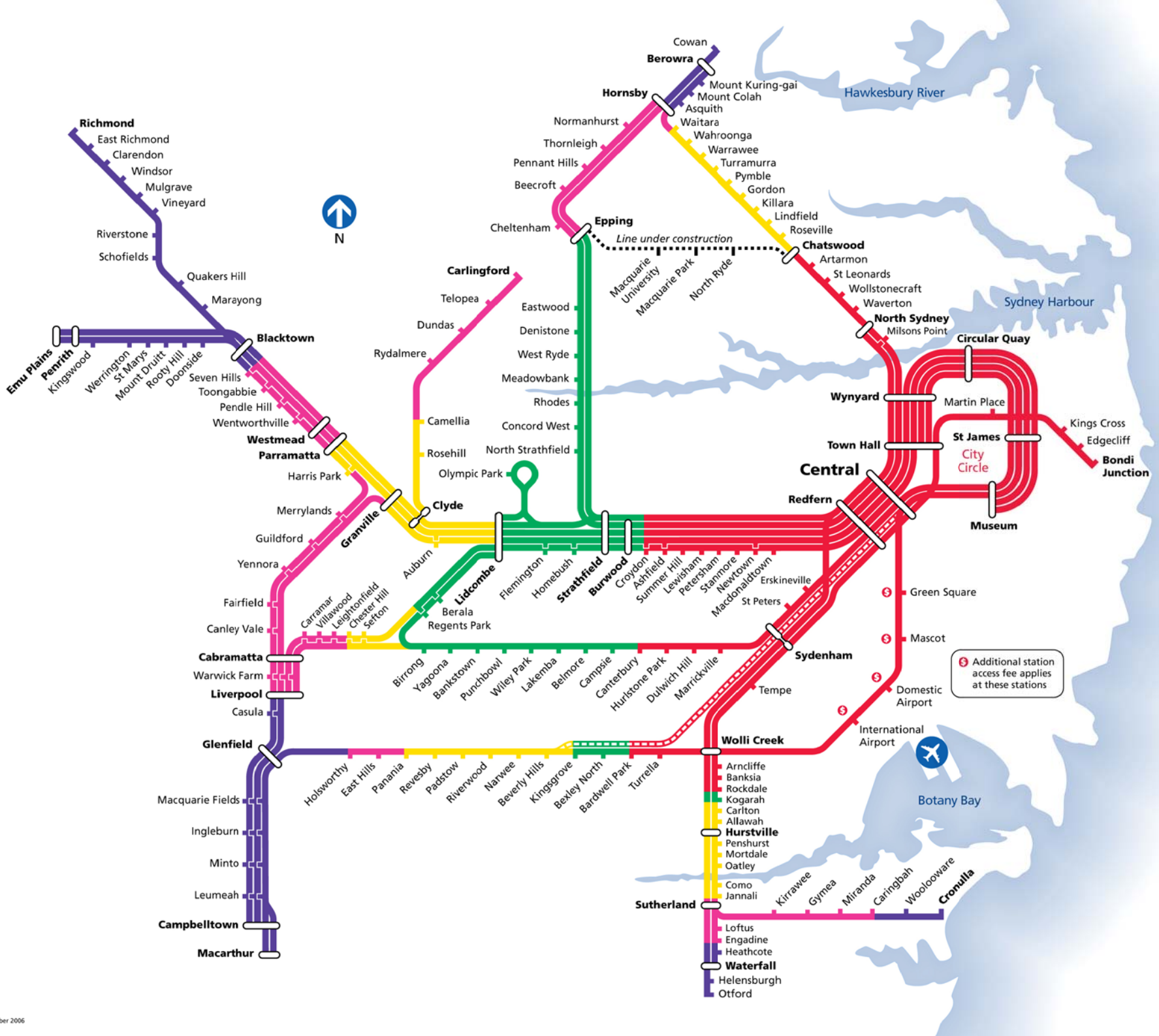
IPART may publish a clarification notice in the NSW Government Gazette to correct any manifest error or to clarify any part of this determination as if that clarification notice formed part of this determination.

2.4 Prices inclusive of GST

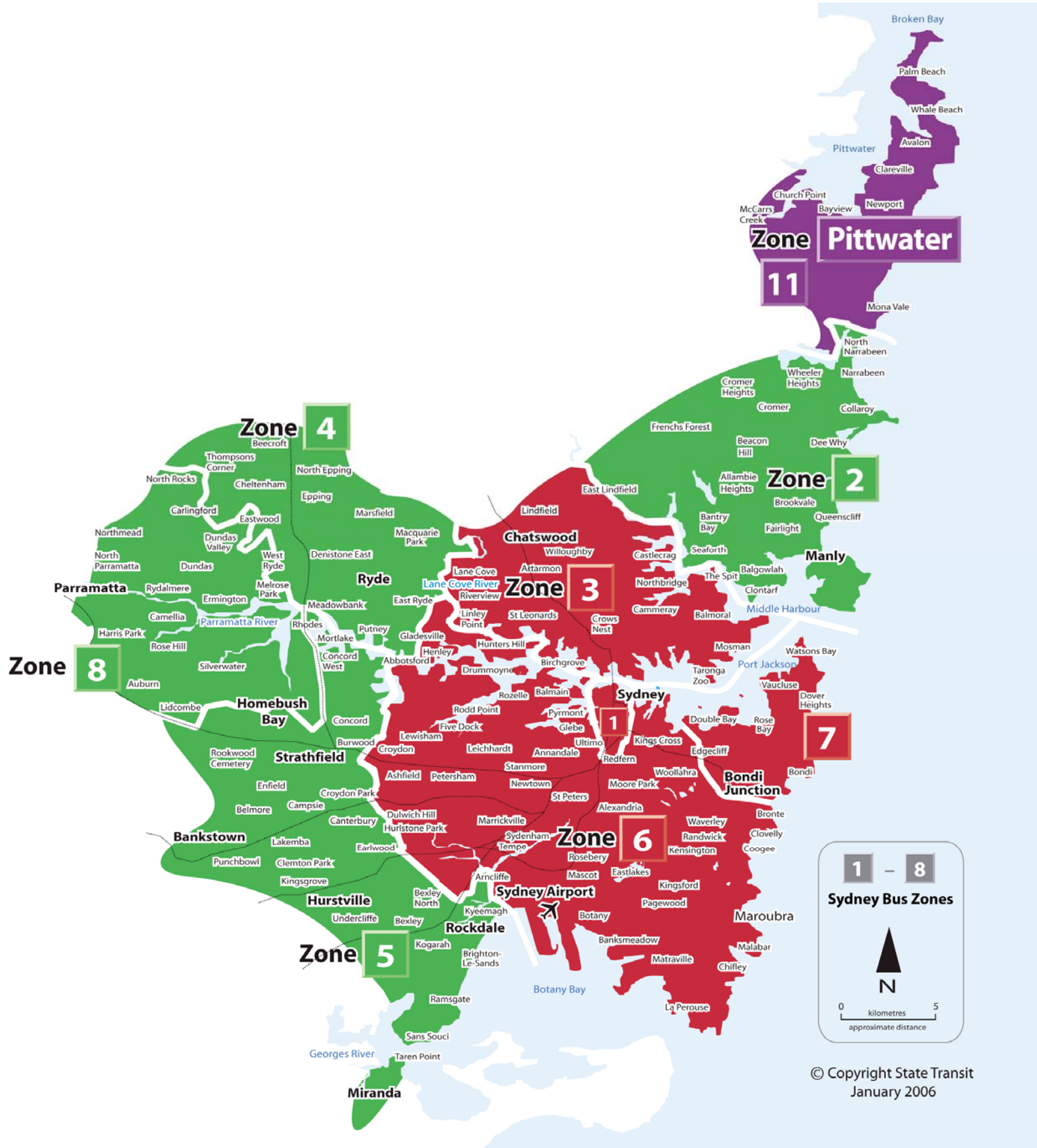
Prices specified in this determination include GST.

Appendices

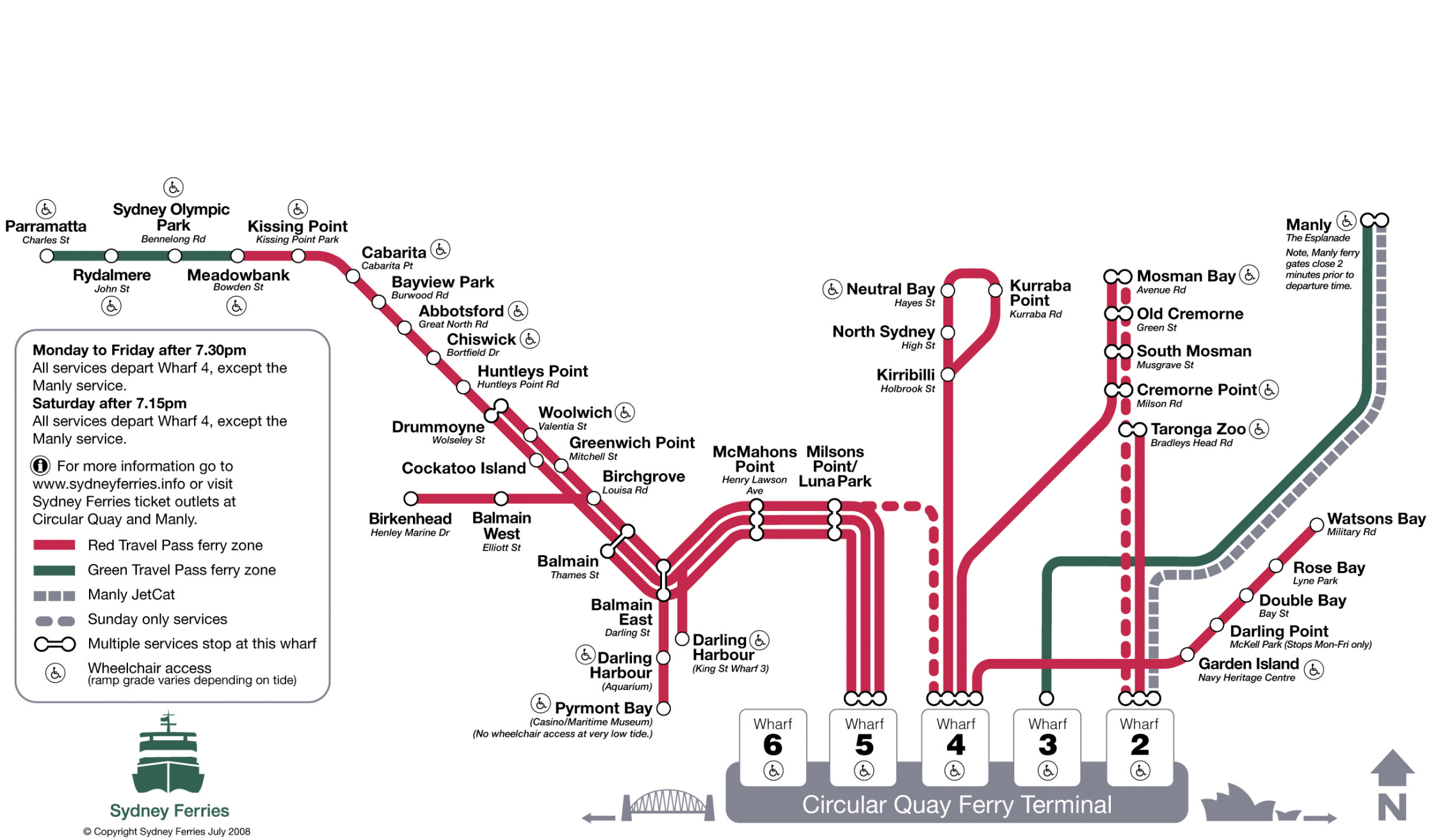
A CityRail TravelPass Map



B Sydney Buses TravelPass Map



C Sydney Ferries TravelPass Map



Monday to Friday after 7.30pm
All services depart Wharf 4, except the Manly service.

Saturday after 7.15pm
All services depart Wharf 4, except the Manly service.

For more information go to www.sydneyferries.info or visit Sydney Ferries ticket outlets at Circular Quay and Manly.

- Red Travel Pass ferry zone
- Green Travel Pass ferry zone
- Manly JetCat
- Sunday only services
- Multiple services stop at this wharf
- Wheelchair access (ramp grade varies depending on tide)

Sydney Ferries