

Fare Setting Approaches for Private Bus Services

**Prepared for IPART by
Booz Allen Hamilton**

**INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES**

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FINAL REPORT

FARE SETTING APPROACHES FOR PRIVATE BUS SERVICES

NSW Independent Pricing and Regulatory
Tribunal

July 2003

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1 INTRODUCTION

This report has been prepared for the NSW Independent Pricing and Regulatory Tribunal (IPART) by Booz Allen Hamilton. It reports on an appraisal of Fare-setting Procedures for Private Bus Services, prepared as an input to IPART's 2003 review of private bus fares in NSW.

The report is structured as follows:

- ▶ Chapter 2 - outlines alternative broad approaches to fare-setting for metropolitan bus services.
- ▶ Chapter 3 - sets out current interstate fare adjustment procedures and practices for metropolitan bus services.
- ▶ Chapter 4 - details current interstate procedures and practices in the indexation of bus operator costs, which are used as a basis for adjustments of fares and/or operator contract payments.
- ▶ Chapter 5 - presents our appraisal of current cost indexation procedures for NSW commercial bus contracts and sets out our proposals for enhancements of these procedures.

More detailed material is presented in Appendix A (General Indexation Issues and Approaches) and Appendix B (Item-by-Item Appraisal of Current NSW Bus Industry Cost Index).

2 OUTLINE OF ALTERNATIVE FARE-SETTING APPROACHES

This chapter provides an outline and commentary on alternative approaches to setting fares for bus service in metropolitan areas. It does not attempt a detailed appraisal of the relative merits of alternative approaches: these will be heavily influenced by the nature of the regulatory regime adopted and the contractual relationships between the purchasers and providers of the bus services.

It should be noted that, in some cases in Australia (including NSW), operator funding is entirely through fare revenues, or through payments directly related to fare scales and passengers carried; however in other cases, operator funding is not linked to fare payments and hence not dependent on fare-setting procedures. Operator funding procedures based on cost indexation methods are described in more detail in Chapter 4.

2.1 Approaches to Fare Setting

We consider possible approaches under two main groups:

- (A) Approaches based on indexation from the present fare levels:
 - (A1) Based on industry cost indexation
 - (A2) Based on CPI-related adjustments.
- (B) Approaches based on 'fundamental review' to establish new fare levels, with indexation subsequently.

We now outline each of these approaches in turn.

(A1) Industry Cost Indexation

- (a) Fares could be increased in line with increases in the bus operator's unit costs. The advantage of this approach is that the index would be more closely aligned with the changes in costs which drive the resultant cost recovery outcome. It also guarantees some level of certainty for the operators. The disadvantage of this approach is that it endorses operators' cost profiles and does not provide any incentive to produce further operating efficiencies. It largely assumes that existing operations are conducted at "efficient" costs and that future increases in costs are a consequence of factors outside the operators' control. It also does nothing to encourage bus patronage.
- (b) A sub-set of this approach might be to index fares to one or more of the cost components rather than all costs. The advantage of this is that it would attempt to specify those cost items which are more subject to increase. The disadvantage of this is that it would not take into account that some cost items might actually fall, although the items chosen for potential indexation may themselves actually fall.

(A2) CPI - Related Adjustments

- (a) Fares could be increased in line with the CPI. This would seek to maintain fares at real levels and might even contribute to a very modest increase in farebox cost recovery, if cost increases were constrained. The major advantage of this option is that it would be consistent with the treatment of price increases in other regulated industries. The disadvantage of this option is that it essentially endorses the status

quo and does not represent a proactive signal to encourage bus patronage or to increase operating efficiency.

- (b) Fares could be increased on a CPI minus X basis, which seeks to encourage further efficiency improvements. However, such a mechanism would not, of itself, provide an incentive to rein in costs as it would depend on agreed funding arrangements between operators and purchasers and what the risks are for how operating deficits would be avoided.
- (c) Fare could be increased on a CPI plus X, where X represents explicit compensation for cost increases outside operators' control which are in excess of CPI. As with (a) above, changes in those cost components would need to be separately determined. This approach again would appear to provide little incentive to pursue efficiency improvements.

(B) 'Fundamental Review' Approaches

This approach would involve a 'fundamental review' of current fare levels, on the basis that fares should be set (maybe by individual contract) so as to provide a reasonable market return for an efficient operator providing the required levels of service (and allowing for any other sources of operator funding).

This approach is more radical and likely to be more contentious, and would take substantial analysis work to put into practice.

If applied in the Sydney metropolitan context, it is likely to involve:

- ▶ Analysis of operations and cost structures for a sample of operators, and derivation therefrom of a set of 'best practice' efficient unit costs.
- ▶ Developing a profit margin/rate of return model.
- ▶ Analysis of patronage and revenues (based on the existing fare system) for a sample of operators, and derivation of a patronage and revenue model (per bus hour etc).
- ▶ Assessing fare elasticities likely to be relevant to the various operator groups and their markets (which include a large proportion of 'free' SSTS travel).
- ▶ Bringing these various components together to estimate the fare adjustment appropriate, for each group of operators, for revenues to match 'efficient' unit costs plus an 'efficient' profit margin.

Once this approach had been applied to set new fare levels, we assume these would be indexed on an agreed basis (as per (A) above) for some time, typically around 5 years. A further 'fundamental review' may then be appropriate.

We note that such an approach was recently taken by IPART/ICRC in relation to Canberra's taxi fares.

2.2 Alternative Application of Fare-Setting Approaches

For each of the above approaches, there are alternative mechanisms by which fare increases could be applied:

- ▶ an average annual fare cap approach, or
- ▶ a fare cap for each type of fare charged, or
- ▶ a revenue cap for the total farebox recovery.

An average annual fare cap would allow operators greater flexibility in the fares that they charge for different services and customer groups. This approach does not preclude

operators from adjusting *individual* fares, so long as the average annual fare level remains within the specified cap. The average annual fare represents the average of individual fares, weighted by passenger boardings for each fare type. Thus, an operator may, for example, increase fares for some fare types, so long as it offsets this by fare reductions for other fare types *and* ensures that the *weighted average* of all fares (as measured by passenger boardings) remains within the cap. Alternatively, operators may simply leave all individual fares at their current levels in order to achieve the same weighted average fare result.

A fare cap on each individual type of fare category removes this flexibility. Any changes to fares are constant across all fare types. Of course, in practice this may be difficult because of the desirability of rounding up or down fares to, say, the nearest 10 cents. It may also reduce the incentive to introduce new fare structures or ticket types.

A farebox revenue cap would provide a greater degree of certainty as to the level of revenue that operators could expect to recover from passengers, but would do so in a way that would potentially require further fare increases should the revenue cap not be achieved because, for example, the number of forecast passengers did not occur.

3 FARE ADJUSTMENT PROCEDURES – INTERSTATE PRACTICES

Table 3.1 outlines the procedures used interstate for the periodic adjustment of fares on metropolitan bus services. It covers NSW, Victorian, Queensland, Tasmania, SA, WA and ACT. For each state it outlines principles, processes and responsibilities.

Table 3.2 provides a summary of the Table 3.1 information in relation to broad policy approaches adopted and agency responsibilities.

There are clearly many differences between policies and practices in the different states. No attempt is made here at a comprehensive comparison or critical appraisal.

However, it should be noted that, in most states, operator funding procedures are largely or completely separate from fare-setting procedures. NSW is the main exception, in that operator funding (for private operators of commercial contracts) is entirely related to standard fare scales and passengers carried.

**TABLE 3.1: METROPOLITAN BUS FARE ADJUSTMENT PROCEDURES
– INTERSTATE PRACTICES**

State	Procedures
NSW	<p>Government Bus (State Transit)</p> <ul style="list-style-type: none"> ▶ The NSW Independent Pricing and Regulatory Tribunal (IPART) was established under the Independent Pricing and Regulatory Tribunal Act 1992 (as amended). Its responsibilities include review of the pricing policies of government monopoly public transport services, including those of State Transit. ▶ Reviews are undertaken within terms of reference outlined in Section 15 of the IPART Act 1992 and consistent with the legislative requirements. ▶ Following the introduction of the 1992 Act, reviews have taken place annually. A 'major review' was initiated in 1995 and reported in late 1996. ▶ Apart from the case of the major review, the Tribunal's recommendations for fare increases have been based primarily on appraisals of: <ul style="list-style-type: none"> - STA's current and projected financial position - STA's cost trends - Assessed scope for cost efficiency improvements - Any proposals put forward for fare restructuring and changes in ticketing products. <p>Private Bus (Commercial Contracts)</p> <ul style="list-style-type: none"> ▶ Until 2001, fares for private bus services in commercial contract areas were set by the NSW Department of Transport (TNSW), through a (generally annually) review process. ▶ Since 1997, the process has focused on review of movements in a composite cost index developed by TNSW and the NSW Bus & Coach Association (BCA). The cost index contains 14 cost components, which represent a typical cost structure for a private bus operation. Prior to this, a cost index developed by the industry was used. ▶ Each year since 2001, the NSW Premier has requested IPART to investigate and report to the Minister for Transport on a private bus fares (for regular services regulated under the Passenger Transport Act 1990) and remuneration rates (for school services).
Victoria	<p>Bus/Tram/Train</p> <ul style="list-style-type: none"> ▶ Melbourne has an integrated, multi-modal fare system. ▶ Fare increases are required not to exceed the movement in the Melbourne CPI rounded to the nearest 5 cents. ▶ Fare adjustment applications are developed by the Franchisees who go direct to DoI with a proposal for approval by Government.
Queensland	<p>Private Bus</p> <ul style="list-style-type: none"> ▶ Policy is to adjust the maximum fare schedule annually according to movements in a weighted industry cost index (refer Table 3). ▶ The cost index is updated annually, and the movement in the weighted cost index calculated. ▶ The % cost change is then applied to the maximum fare schedule to derive an updated schedule. ▶ Operators are allowed to set their own fares as long as these do not exceed the maximum schedule. <p>Government Bus (Brisbane City Council)</p> <ul style="list-style-type: none"> ▶ Previous policy was for fare adjustments to be determined by BCC, usually on an annual basis. ▶ This policy is currently in transition to a new policy, with the establishment of an integrated fare/ticketing system in SE Queensland from July 2004. ▶ Under this policy, all fare revenue will be returned to the State Government (QT) and operators will be paid on a gross cost basis. ▶ Hence QT will take responsibility for fare setting on BCC services. In the short-term, efforts are focusing on aligning bus and train fares. The fare adjustment procedures to be used thereafter are not yet clear.

**TABLE 3.1: METROPOLITAN BUS FARE ADJUSTMENT PROCEDURES
– INTERSTATE PRACTICES**

State	Procedures
Tasmania	<p>Government Bus (Metro)</p> <ul style="list-style-type: none"> ▶ The Government Prices Oversight Commission (GPOC) was established under the Tasmanian Government Prices Oversight Act 1995. ▶ GPOC is responsible for investigating and reporting on the pricing policies of Government Business Enterprises (GBEs) and State Owned Companies (SOCs) that are monopoly or near-monopoly suppliers of goods and services. The Act specifies the matters that GPOC must take into account in any investigation. ▶ GPOC has undertaken three investigations into the pricing policies of Metro Tasmania Pty Ltd (Metro) for its bus service in Hobart, Launceston, Burnie and Ulverston: the first was in 1996, the second in 2000 and the third is currently in progress. ▶ The 2000 investigation resulted in an Order that defined: a starting set of adult fares; a set of 'ceiling' fares; and a basket of adult tickets with a resultant weighted average fare. ▶ Within this Order, Metro is able to set adult fares subject to: <ul style="list-style-type: none"> - Any individual fare being less than the 'ceiling fare' adjusted by the Metro index - The weighted average fare being less than the initial weighted average fare adjusted by the Metro index. ▶ However, all fares can only be varied through a "deed of variation" to the CSA Agreement, which requires the Minister's approval. ▶ For the current investigation, the major issues on which GPOC is seeking views are: <ul style="list-style-type: none"> - Effectiveness of Metro's services in meeting the Government's objectives, and effectiveness and appropriateness of the Metro CSA Agreement in achieving this outcome - Effectiveness of the incentive mechanisms in the current CSA Agreement in achieving the Government's objectives - Whether the CSA payments to Metro should allow for a commercial return rather than be set on a break-even basis - Issue of integrating Metro's services with other public transport services - Metro student concession fares in the context of student fares on other bus services - Metro Index and related issues. ▶ In its submission to the current investigation, Metro questions GPOC's role in relation to overseeing public transport fares, in two respects: <ul style="list-style-type: none"> - The fares policy of Metro (as with other bus operators) is effectively controlled through the purchaser-provider service contract system operated by the Department of Infrastructure Energy and Resources (DIER). - There appears no rationale for Metro being treated differently in regard to review of fare policies than other (private) operators contracted by DIER, who are not currently subject to review by GPOC. <p>Private Bus</p> <ul style="list-style-type: none"> ▶ Fares for the private bus sector are defined by the Transport Commission. ▶ The initial fares are set at a level considered appropriate at the time to make the service viable (normally by reviewing the reasonableness of proposals by the operator). ▶ Fares are generally then indexed on a regular basis, by applying the Tasmanian School Bus Index.

**TABLE 3.1: METROPOLITAN BUS FARE ADJUSTMENT PROCEDURES
– INTERSTATE PRACTICES**

State	Procedures
South Australia	<ul style="list-style-type: none"> ▶ Metro ticket (bus/train/tram) fares are reviewed annually, with any changes taking place from first Sunday in July. ▶ The fare review is part of a wider annual review by state Treasury of all Government fees and charges. These are normally indexed annually, based on movements in public sector wage rates and the CPI. ▶ By exception, the fare adjustments may differ from the general indexation of fees/charges, if the particular case is made, by the Passenger Transport Board and relevant Minister.
Western Australia	<ul style="list-style-type: none"> ▶ Fare adjustments are decided by the State Government, with advice from the Department of Planning and Infrastructure. ▶ The previous (Coalition) State Government was focused on pursuing improved cost recovery through fare increases. The current (Labour) State Government is focused more on social equity considerations and thus restraining fares for concession passengers in particular.
Australian Capital Territory	<ul style="list-style-type: none"> ▶ Fare reviews are the responsibility of the Independent Competition and Regulatory Commission (ICRC), which advises the ACT Minister for Urban Services. ▶ ICRC determines maximum fares, or fare increases, either overall and/or for individual tickets. The setting of actual fares consistent with the ICRC determination is then left to the operator (ACTION). ▶ ICRC's first price determination (April 1999) was for average fare increases in 1999/00 not to exceed the Canberra CPI movement over the 12 months to March 1999. (In response, ACTION did not adjust its fares at all). ▶ The second ICRC determination (March 2000) was for the average fare increase in 2000/01 not to exceed the Canberra CPI movement over the 21 months to December 1999 (excl GST) plus 1%. This resulted in an average 3.6% increase, plus a further 8% for the GST impact. ▶ The third ICRC determination (May 2001) was for a real 2% fare increase from July 2001 plus a CPI-based increase from July 2002. (In response, ACTION implemented different increases for cash and non-cash fares in July 2001, and fare restructuring to a single zonal system in July 2002). ▶ The fourth ICRC determination (currently issued as a draft) proposes no fare increases for 2 years, followed by an adjustment of the weighted average fare for 2005/06 based on the increase in the Canberra CPI in the 12 months ending March 2005 relative to the preceding 12 month period. ▶ The general policy of ICRC has been to work towards 3-yearly price reviews (as on the most recent occasion) rather than annual reviews.

**TABLE 3.2: METROPOLITAN BUS FARE ADJUSTMENT PROCEDURES
– SUMMARY OF INTERSTATE POLICIES AND RESPONSIBILITIES**

State	Sector	Summary of Policies and Responsibilities
NSW	Government (State Transit)	<ul style="list-style-type: none"> ▶ Pricing tribunal (IPART). ▶ Annual review.
	Private	<ul style="list-style-type: none"> ▶ Pricing Tribunal (IPART). ▶ Annual review.
Vic	Private	<ul style="list-style-type: none"> ▶ General policy is for increases not to exceed changes in CPI, rounded to nearest 5 cents. ▶ Increased proposed by franchisees and reviewed by DoI.
Qld	Private	<ul style="list-style-type: none"> ▶ Policy of annual adjustments according to movements in cost index. ▶ Administration by QT.
	Government (Brisbane Transport)	<ul style="list-style-type: none"> ▶ Previously decision of Brisbane CC. ▶ Currently in transition (integrated fares/ticketing system).
Tas	Government (Metro)	<ul style="list-style-type: none"> ▶ Pricing tribunal (GPOC). ▶ Periodic review (every 3-4 years).
	Private	<ul style="list-style-type: none"> ▶ Transport Commission. ▶ Annual review, based on movements in cost index.
SA	Private	<ul style="list-style-type: none"> ▶ State Government (PTB/Treasury/DTUP). ▶ Annual review, as part of and consistent with Treasury review of all government fees and charges.
WA	Private	<ul style="list-style-type: none"> ▶ State Government (DPI). ▶ Ad hoc review process.
ACT	Government (ACTION)	<ul style="list-style-type: none"> ▶ Pricing tribunal (ICRC). ▶ Policy to set 'pricing path' for 3 year periods.

4 OPERATOR COST INDEXATION PROCEDURES – INTERSTATE PRACTICES

Table 4.1 sets out the cost indexation procedures currently used by interstate authorities for periodic adjustment of the funding and/or fares charged under metropolitan bus service contracts. It covers NSW, Victoria, Queensland, Tasmania, South Australia and Western Australia.

For each state, the table provides:

- ▶ An overview of principles, methods and application of the procedures.
- ▶ A detailed item-by-item description of the basis on which each cost component is indexed.

It might be noted that:

- ▶ The table does not attempt to show the proportions of total costs represented by each cost component.
- ▶ The table reports on the current situation. It makes no attempt at a critical appraisal or comparison of the various practices adopted.

It is evident from the table that there are a lot of similarities in practice between the states, although also many areas of difference.

The table should provide a good starting-point for developing a 'best practice' basis for indexation, if required. Perhaps the two greatest areas of difficulty in this regard relate to:

- ▶ Labour (wage/salary) rates. One issue is the use of bus sector award rates versus the use of more 'generic' indices (ABS etc). If the more generic approach is taken, a second issue is the relative merits of different indices (eg. average weekly earnings, wage cost index etc).
- ▶ Bus maintenance-parts. A wide variety of index bases are currently used in the different states, but none appears completely satisfactory. Victorian attempts to develop and apply a 'basket of parts' approach specific to the bus industry appear to have been unsuccessful to date.

**TABLE 4.1: METROPOLITAN BUS OPERATOR COST INDEXATION PROCEDURES
- INTERSTATE PRACTICES**

Item	NSW
Principles	<ul style="list-style-type: none"> ▶ Industry weighted average cost index, based on industry 'standard' cost model agreed between TNSW and BCA ▶ Index cost inputs assembled by BCA, reviewed by TNSW/IPART. ▶ Single weighted index applied to all contracts.
Method of Application	<ul style="list-style-type: none"> ▶ Movements in weighted index used as key input into annual fare determinations (IPART). ▶ Agreed index applied to all fares, concession reimbursement and SSTS passenger-related payment rates.
Frequency of Application	▶ Annual, from July, based on latest cost information available (June).
Indexation Basis by Cost Item	
Wages/Salaries - Drivers	▶ 'Motor Bus Drivers and Conductors State Award' – weekly wage rate plus driver/conductor allowance.
Wages/Salaries – Bus Mtce	▶ As for Drivers.
Wages/Salaries – Admin/Other	▶ As for Drivers.
Labour on-costs - Superannuation	▶ Legislated minimum rate (currently 9%) * weekly award rate
Labour on-costs – Payroll tax	▶ Prescribed PRT rate (6.02% from July 2002) * (weekly award rate) * (1+ superannuation %).
Labour on-cost – Workers comp	▶ Legislated rate (6.0% in 2002) * weekly award rate.
Fuel & Lubricants	▶ Average fuel price over previous 12 months (to end June). Applied as Mobil Pick Up Prices (Bulk) Diesel, Sydney, including subsidies/surcharges, average of prices (Mondays) over 52 weeks.
Bus Mtce – Parts etc	▶ Major service cost based on Mercedes quotation.
Tyres	▶ Michelin 11R 22.5 XZU radial bus tyre (new) – list price (incl fitting).
CTP Insurance	▶ CTP Greenslip premium (Zurich), vehicle class 6a (Omnibus> 16 passengers), Metro area.
Registration	▶ Standard registration charge for buses, as levied by RTA. Includes road-use charge and HVIS inspection fees.
Comprehensive Bus Insurance	▶ Total premiums paid by operators expressed as proportion of asset values insured – figures supplied by AEI Insurance Brokers.
General (non-labour) Overheads, Other Costs	▶ Sydney CPI, All Groups (ABS Cat 6401.0), adjusted for estimated ANTS impact.
Bus Capital Charges	<ul style="list-style-type: none"> ▶ Capital value: Mercedes 0405NH chassis with Custom Coach body ▶ Rate: 5 year finance lease rate (to zero residual), based on interest at 10 year Commonwealth Government bond rate.
Operating Return	▶ Not included specifically.
Other Aspects, Comments	▶

**TABLE 4.1: METROPOLITAN BUS OPERATOR COST INDEXATION PROCEDURES
- INTERSTATE PRACTICES**

Item	VICTORIA
Principles	<ul style="list-style-type: none"> ▶ 'Standard' industry cost model, but with weightings between different cost groups specific to each operator. ▶ Applied to index gross cost payments to operators.
Method of Application	<ul style="list-style-type: none"> ▶ Costs divided into 4 main groups (relating to bus hours, bus kms, bus overheads, bus capital): index factors calculated for each group, and then applied separately to relevant base costs for each individual operator. ▶ Indices updated by DoI (spreadsheet) with informal review by BAV.
Frequency of Application	<ul style="list-style-type: none"> ▶ 6 monthly, from 1 January and 1 July (based on latest information available at preceding 30 September and 31 March).
Indexation Basis by Cost Item	
Wages/Salaries - Drivers	<ul style="list-style-type: none"> ▶ AWE, ordinary time earnings, all sectors, trend series, full-time adults, Vic (ABS Cat 6302.0).
Wages/Salaries – Bus Mtce	<ul style="list-style-type: none"> ▶ As for Drivers.
Wages/Salaries – Admin/Other	<ul style="list-style-type: none"> ▶ As for Drivers.
Labour on-costs - Superannuation	<ul style="list-style-type: none"> ▶ Commonwealth Superannuation Guarantee Levy rates.
Labour on-costs – Payroll tax	<ul style="list-style-type: none"> ▶ Vic State Government Revenue Office rates.
Labour on-costs – Workers comp	<ul style="list-style-type: none"> ▶ Industry rate for Short Distance Bus Transport (G5133W).
Fuel & Lubricants	<ul style="list-style-type: none"> ▶ Fuel: Ampol wholesale diesel prices – daily weighted average price.
Bus Mtce – Parts etc	<ul style="list-style-type: none"> ▶ Index of movements in prices of basket of parts (Pitcher Partners)
Tyres	
Insurance, Registration	
Government Charges	
General/non-labour/Overheads	<ul style="list-style-type: none"> ▶ CPI, Melbourne, All Groups
Bus Capital Charges	<ul style="list-style-type: none"> ▶ Average vehicle value (new vehicles) ▶ Fleet value as a proportion of new vehicle value, based on 12.5% pa (real) D V depreciation.
Operating Return	<ul style="list-style-type: none"> ▶ Fixed percentage on all operating costs.
Other Aspects, Comments	<ul style="list-style-type: none"> ▶ Above standard cost structure also used as basis for changes in payments when extent of services change.

TABLE 4.1: METROPOLITAN BUS OPERATOR COST INDEXATION PROCEDURES - INTERSTATE PRACTICES

Item	QUEENSLAND
Principles	<ul style="list-style-type: none"> ▶ Industry weighted average cost index, based on cost model developed by QT (maintained by BAH). ▶ Weightings of each cost item set by QT for 'typical' operation (with industry consultation). ▶ Policy is to apply indexation to maximum fare scales for all route operators throughout Queensland.
Method of Application	<ul style="list-style-type: none"> ▶ Movement in weighted index applied to 'exact' fare schedules maintained by QT to derive new maximum fares chargeable: operators have discretion to charge less. ▶ By exception, QT/Minister may vary this policy (but would then compensate operators if appropriate).
Frequency of Application	<ul style="list-style-type: none"> ▶ Annually, from January (based on cost information available at preceding 30 September).
Indexation Basis by Cost Item	
Wages/Salaries - Drivers	<ul style="list-style-type: none"> ▶ AWE, ordinary time earnings, all sectors, seasonally adjusted, full-time adults, Qld (ABS Cat 6302.0) – August date.
Wages/Salaries – Bus Mtce	<ul style="list-style-type: none"> ▶ (With Bus Mtce – Parts)
Wages/Salaries – Admin/Other	<ul style="list-style-type: none"> ▶ As for Drivers
Labour on-costs - Superannuation	<ul style="list-style-type: none"> ▶ Commonwealth Superannuation Guarantee Levy rates
Labour on-costs – Payroll tax	<ul style="list-style-type: none"> ▶ Queensland State Government standard rate
Labour on-costs – Workers comp	<ul style="list-style-type: none"> ▶ Workcover 'Bus and Monorail' industry rate.
Fuel & Lubricants	<ul style="list-style-type: none"> ▶ Shell wholesale list price, distillate, Brisbane – daily weighted average price over 12 months to 30 Sept
Bus Mtce – Parts etc	<ul style="list-style-type: none"> ▶ CPI Transportation Group –private motoring: average of sub-categories MV repairs/servicing and MV parts/accessories (ABS, unpublished statistics).
Tyres	<ul style="list-style-type: none"> ▶ Michelin 11R22.5 XZU2 steer tyres (tubeless) – retail prices.
CTP Insurance, Registration	<ul style="list-style-type: none"> ▶ CTP standard premiums (Suncorp-Metway) for Class 10 vehicles (49 adult seat capacity buses).
Comprehensive Bus Insurance	<ul style="list-style-type: none"> ▶ Current new vehicle price (see below). ▶ Suncorp-Metway typical premium as % insured value, urban bus, 42-53 seats, 150 kms radius of BNE.
General (non-labour) Overheads	<ul style="list-style-type: none"> ▶ CPI, All Groups, BNE (ABS Cat 6401.0) – September quarter.
Bus Capital Charges	<ul style="list-style-type: none"> ▶ Depreciation: current new vehicle price – Mercedes 0405 with BusTech body, 49 seats, low floor, air con. ▶ Cost of capital: <ul style="list-style-type: none"> (i) Current new vehicle price (above), (ii) 10 year Commonwealth Government Bond Rate (par stock) +2.5%.
Operating Return	<ul style="list-style-type: none"> ▶ Non specifically included.
Other Aspects, Comments	<ul style="list-style-type: none"> ▶ Fuel indexation calculated separately with/without Diesel Grant (DAFGS) deduction.

**TABLE 4.1: METROPOLITAN BUS OPERATOR COST INDEXATION PROCEDURES
- INTERSTATE PRACTICES**

Item	TASMANIA
Principles	<ul style="list-style-type: none"> ▶ 'Metro Index', developed as basis for allowing adjustments to Metro's adult fares (under terms of GPOC Pricing Order) and for adjustment of Metro's CSA payments by DIER. ▶ Index is "designed to reflect Metro's cost structure but still provide incentive to achieve productivity in areas where Metro has significant control".
Method of Application	<ul style="list-style-type: none"> ▶ Weighted average of four separate indices, with weightings reflecting Metro's cost composition.
Frequency of Application	<ul style="list-style-type: none"> ▶ Typically annually in terms of fare changes. ▶ Quarterly in terms of adjustments to contract payments.
Indexation Basis by Cost Item	
Wages/Salaries - Drivers	<ul style="list-style-type: none"> ▶ Wage Cost Index, ordinary time hourly rates (excl bonuses), Transport and Storage Industry (public and private), Australia (ABS Cat 6345).
Wages/Salaries – Bus Mtce	<ul style="list-style-type: none"> ▶ As for Drivers.
Wages/Salaries – Admin/Other	<ul style="list-style-type: none"> ▶ As for Drivers.
Labour on-costs - Superannuation	<ul style="list-style-type: none"> ▶ No separate consideration (covered in wage/salary items)
Labour on-costs – Payroll tax	
Labour on-costs – Workers comp	
Fuel & Lubricants	<ul style="list-style-type: none"> ▶ Average delivered price of fuel to Metro under the Government supply contract, net of DAFGS – average over previous 3 months.
Bus Mtce – Parts etc	<ul style="list-style-type: none"> ▶ ABS Price Index of materials used in the transport equipment and parts industry (ANZSIC subdivisions 281, 282).
Tyres	
CTP Insurance, Registration	<ul style="list-style-type: none"> ▶ Hobart CPI, All Groups
Comprehensive Bus Insurance	<ul style="list-style-type: none"> ▶ With Bus Mtce - Parts
General (non-labour) Overheads, Other Costs	<ul style="list-style-type: none"> ▶ Hobart CPI, All Groups.
Bus Capital Charges	<ul style="list-style-type: none"> ▶ With Bus Mtce-Parts
Operating Return	<ul style="list-style-type: none"> ▶ No explicit consideration.
Other Aspects, Comments	<ul style="list-style-type: none"> ▶ Metro Index developed in year 2000 on recommendation of GPOC. It is designed to be a better reflection of costs than the CPI method, which was previously used for fare adjustment. ▶ A detailed appraisal of the experience with the Metro Index is contained in Metro's Preliminary Submission to the GPOC 2003 Review (January 2003).

**TABLE 4.1: METROPOLITAN BUS OPERATOR COST INDEXATION PROCEDURES
- INTERSTATE PRACTICES**

Item	SOUTH AUSTRALIA
Principles	<ul style="list-style-type: none"> ▶ Standard industry cost model, but with weightings between different cost items specific to each contract (based on bid details). ▶ Applied to index all main components of payments to operators (fixed component, service rates and patronage-related payments).
Method of Application	▶ Index factors for each cost item applied to proportionate breakdown of costs for each contract to derive weighted average index for that contract.
Frequency of Application	▶ Annually, from 1 December, for most items. Fuel adjusted monthly; Government charges adjusted as they vary (usually 1 July).
Indexation Basis by Cost Item Wages/Salaries - Drivers Wages/Salaries – Bus Mtce Wages/Salaries – Admin/Other Labour on-costs - Superannuation Labour on-costs – Payroll tax Labour on-costs – Workers comp Fuel & Lubricants Bus Mtce – Parts etc Tyres CTP Insurance, Registration Comprehensive Bus Insurance General (non-labour) Overheads, Other Costs Bus Capital Charges Operating Return	<ul style="list-style-type: none"> ▶ Wage Cost Index, total hourly rates of pay (excl bonuses), Transport and Storage Industry (incl private). (ABS Cat 6345) – September quarter value. ▶ As for Drivers. ▶ As for Drivers. ▶ Commonwealth Superannuation Guarantee Levy rate. ▶ SA State Government standard rate. ▶ Bus industry rate (?). ▶ Standard distillate wholesale price, including excise duty – average of prices at start of each month (details under review – likely to use terminal gate/pick-up prices). ▶ GDP implicit price deflator, seasonally adjusted (ABS). ▶ Michelin: 11R 22.5 XZU2 tyres – retail price. ▶ Standard Government rates. ▶ With General Overheads. ▶ CPI, Adelaide, All Groups. ▶ N/a (operators are provided with government-owned buses, at no charge). ▶ Not specifically included.
Other Aspects, Comments	▶

**TABLE 4.1 : METROPOLITAN BUS OPERATOR COST INDEXATION PROCEDURES
- INTERSTATE PRACTICES**

Item	WESTERN AUSTRALIA
Principles	<ul style="list-style-type: none"> ▶ Overall objective of process is for bus service contractors to recover from Transperth genuine cost increases which affect their operations.
Method of Application	<ul style="list-style-type: none"> ▶ Uses standard cost model basis for each cost group (line items), applied to individual contracts according to their line item breakdown of bid price.
Frequency of Application	<ul style="list-style-type: none"> ▶ Driver award increases, statutory charges: payable within 1 month of actual increases. ▶ All other increases – addressed in the annual review, with increases payable 12 months from close of tender.
Indexation Basis by Cost Item Wages/Salaries - Drivers Wages/Salaries – Bus Mtce Wages/Salaries – Admin/Other Labour on-costs - Superannuation Labour on-costs – Payroll tax Labour on-costs – Workers comp Fuel & Lubricants Bus Mtce – Parts etc Tyres CTP Insurance, Registration Comprehensive Bus Insurance General (non-labour) Overheads, Other Costs Bus Capital Charges Operating Return	<ul style="list-style-type: none"> ▶ AWE, ordinary time earnings, Australia (private sector). ▶ Wage Cost Index, 'Trades persons and related workers'. ▶ Wage Cost Index, 'Managers and Administrators' (ABS). ▶ Commonwealth Superannuation Guarantee Levy rate. ▶ WA State Government standard rate. ▶ Work cover base rate for 'Short distance Bus Transport'. ▶ (i) Base fuel price – Singapore Gas Oil price (\$\$US) converted to \$AU ▶ (ii) Government taxes/charges – as incurred.. ▶ Perth CPI, all groups. ▶ Paid directly by Government. ▶ Paid directly by Government (?) ▶ Perth CPI, All groups. ▶ Includes 'Management Fees'. ▶ N/a (operators are provided with government-owned buses, at no charge). ▶ Interest on working capital: RBA 'Cash Rate'.
Other Aspects, Comments	<ul style="list-style-type: none"> ▶ For wage/salary items, the relevant indices define maximum increases payable: actual increases within this maximum are dependent on operators demonstrating that the additional costs have been incurred. ▶ Provision in contracts to negotiate "an adjustment in maintenance costs" to reflect progressive introduction of new buses into fleet.

5 NSW BUS COST INDEXATION PROCEDURES – APPRAISAL AND PROPOSED ENHANCEMENTS

5.1 Overview of Current Indexation Procedures

The NSW Bus Industry Cost Index (BICI) model has been used since the mid-1990s as a key input to annual fare reviews for private bus commercial contract services in NSW.

The model was developed by Deloitte's on behalf of TNSW (with participation by BCA). The weights of each cost component in the model were established from a survey of 41 operators (with 32 responses) in early 1997. The weights established initially have been adjusted over time to reflect the different rates of change in each cost component.

For years prior to 2001, a joint BCA/TNSW working party updated the BICI figures on an annual basis; and these were then submitted to the Director-General as the basis for fare increases, to apply annually from July.

Since 2001, IPART has taken over TNSW's previous role in considering fare increase applications for private bus services. Movements in the BICI figures remain a key input, but not the sole input, to IPART's considerations.

When the BICI model was originally developed (1996-97), it was expected that the cost components might need to be modified over time, and it was envisaged that a major structural review would be undertaken about every five years (BCA, May 2003). BCA has been requesting such a review (including a new survey) over recent years, but this has not yet eventuated.

The BICI model is designed to reflect percentage **changes** in operator costs over time for typical commercial bus contracts: it does not attempt to reflect the absolute costs of operating bus services. It is a 'weighted index' model, comprising a number of individual cost components each indexed through defined procedures, and with each component having a defined weighting (with weights summing to 100%). Table 5.1 (first 2 columns) set out its individual components, their 'base' weights and their basis for indexation. The BICI model is also discussed further elsewhere (eg. IPART, June 2002).

5.2 Cost Indexation Models – Desirable Features

To provide a sound foundation for appraisal of the existing BICI model, it is necessary to determine the guidelines/criteria that such models should meet in order to fulfil their functions effectively and efficiently. Appendix A therefore provides a review of general indexation issues, approaches and desirable features, under the following headings:

- ▶ Overview of requirements and issues
- ▶ Type of indices
- ▶ Aggregation and weighting of index components
- ▶ Frequency of index adjustment
- ▶ Index dates and 'lag' issues
- ▶ Guidelines for definition and selection of index components
- ▶ Conclusions on preferred indexation approach.

The findings from this review are then applied in our appraisal of the current BICI model in the following sections.

5.3 Appraisal of Current BICI Model – Indexation Procedures

Appendix B presents a detailed item-by-item appraisal of the cost indexation procedures incorporated in the current BICI model. For each cost component, it involves:

- ▶ Definition of existing procedures
- ▶ Summary of interstate practices
- ▶ Critique of existing BICI procedures
- ▶ Conclusions, including any proposals for changes to the current procedures.

Table 5.1 (RH column) summarises the conclusions and proposals for changes to current procedures.

The most significant proposed changes relate to the following:

- ▶ Bus capital charges – changes to lease terms and interest rate formula.
- ▶ Labour costs – wage/salary cost changes to be based on an ‘external’ cost index (ABS Wage Cost Index) in place of an ‘internal’ cost index (bus driver award rates).
- ▶ Bus (comprehensive) insurance – to be expressed per bus (rather than per \$ insured value).

In addition, a number of other suggestions to improve the indexation basis are made for further investigation (with BCA).

5.4 Appraisal of Current BICI Model – Cost Components and Weightings

The cost components used in the current BICI model are shown in the LH column of Table 5.1. These are generally very similar to the components used in the comparable interstate models designed for similar purposes (refer Table 4.1). We see no compelling reason to change the BICI components at this stage, although suggest they be reconsidered in any ‘major structural review’ of the model.

The LH column of Table 5.1 also notes the weightings (as at July 2001) of each cost component in the model. It is outside the current terms of reference to reappraise these weightings: a new survey would be desirable for this purpose. However, some relevant comments may be made, as follows:

- ▶ The annual costs implicit in each cost component cannot be readily be compared, or directly related to their relative weights in most cases. For instance:
 - capital costs are effectively per new bus (per year)
 - labour costs are effectively per driver (per year)
 - CTP insurance and vehicle registration are effectively per bus (per year)
 - fuel/lubricants are per litre
 - bus maintenance: major services are per major service
 - all other costs are expressed as a CPI index number.
- ▶ For the limited cases where component costs can be directly compared, there appear to be some inconsistencies. For example, CTP insurance (per average bus pa) was \$2,681 at June 2001, with a specified weight of 1.59%; vehicle registration was \$767 with a weight of 0.64%. These two sets of numbers are inconsistent: the first implies a total cost per bus (per year) of \$168,000 but the second a total cost per bus of \$119,800. These inconsistencies support the case for the proposed ‘major structural review’ of the model.

TABLE 5.1: NSW COMMERCIAL CONTRACT COST INDEXATION PROCEDURES – EXISTING AND PROPOSED

Cost Component ⁽¹⁾	Current Indexation Procedures	Proposed Indexation Procedures
Bus Capital Charges (14.98%)		
(i) Capital Value	▶ New price – Mercedes 0405NH chassis with Custom Coach body.	▶ No change in principle. ▶ Investigate using weighted average of several representative bus types.
(ii) Lease Terms	▶ Finance lease – 5 years to zero residual.	▶ Investigate changes to better reflect industry practice (eg. 8 years/no residual; 5 years/30% residual then 3 years on balance).
(iii) Interest Rate	▶ Commonwealth 10 year bond rate.	▶ Add risk premium reflecting typical interest rates in industry (2% to 3%).
Labour Costs (50.49%)		
(i) Wages/Salaries	▶ Motor Bus Drivers and Conductors State Award (TWU): weekly rate for drivers and driver/conductor allowance.	▶ ABS Wage Cost Index, Total Hourly Rates of Pay (excl Bonuses). Transport & Storage Industry Division 1, Private and Public Employers, Australia.
(ii) Direct Labour On-costs	▶ [(1+super %)(1+PRT%) + workers com%]: applied as factor to wages/salaries item.	▶ No change.
Insurance and Registration		
(i) CTP Insurance (1.59%)	▶ CTP green Slip premium (Zurich), vehicle class 6a (Omnibus over 16 passengers), metro area.	▶ No change.
(ii) Vehicle Registration (0.64%)	▶ Standard RTA registration charge, buses (includes road-use charge and HVIS inspection fees).	▶ No change.
(iii) Comprehensive Bus Insurance (0.97%)	▶ Operator total premiums as proportion of asset values insured (AEI Insurance Brokers).	▶ Operator total premiums averaged per bus insured.
Bus Fuel and Lubricants (11.63%)	▶ Mobil Pick-up Prices for Bulk Diesel, Sydney – average over 52 Mondays.	▶ Appropriate in principle. ▶ Investigate merits of adopting 365 day average (rather than 52 Monday average). ▶ Review whether sensibly representative of prices paid by operators.
Bus Maintenance - Parts & Services (4.22%)	▶ Costs for major service (50,000 kms) based on Mercedes quotation.	▶ Investigate adoption of weighted average of major servicing costs from several sources. ▶ Need to review precise coverage and weighting of this item.
Tyres (1.11%)	▶ Michelin IIR 22.5XZU radial bus tyres – list price including fitting.	▶ No change.
General Overheads and Other Costs (14.37%)	▶ Sydney CPI, All Groups.	▶ No change.

Source: (1) Percentage figures in brackets indicate percentage of total index accounted for by each cost component at July 2001 (IPART, April 2003, Table 4.3).

APPENDIX A

General Indexation Issues and Approaches

A.1 Overview Of Indexation Requirements And Issues

Any cost indexation approach should be designed to reflect trends over time in the various cost elements of a bus operation, thus avoiding the need for extensive new surveys of actual costs at frequent intervals. In any indexation formulation, a balance needs to be struck between simplicity and accuracy of application. The simplest formulation would be to use one index (eg CPI) applied to all services on an infrequent (say annual) basis. More complex formulations might:

- ▶ adopt a number of different indices
- ▶ apply these to different proportions of each operator's costs (according to the cost structure of the service provided by the operator)
- ▶ apply the individual indices frequently, maybe monthly, quarterly or whenever a cost input (eg wage rate) changed.

The most appropriate balance between simplicity and accuracy will depend on factors such as:

- ▶ the uses to be made of the index
- ▶ the number of years over which the indexation formulation is to be applied
- ▶ the rate at which costs are likely to change, both overall and within individual cost headings (eg wages versus fuel)
- ▶ the extent of differences in cost structure between different services and operators
- ▶ the means available for calculating and applying new indices.

In the light of these considerations, this appendix discusses the issues and options relating to the key characteristics of any indexation approach:

- ▶ type of indices
- ▶ aggregation and weighting of index components
- ▶ frequency of index adjustment
- ▶ index dates and 'lag' issues
- ▶ guidelines for definition and selection of index components.

It concludes with a set of recommended principles for indexation in the context of fares for NSW commercial bus contracts. Chapter 5 then develops detailed indexation proposals and procedures consistent with these principles.

A.2 Type Of Indices

Clearly any index which is to provide a reasonable reflection of cost trends has to involve several individual component indices.

The most common approach to selection of indices is to use measures which closely track trends in the industry's costs (eg an index of diesel fuel prices). However, in the case of cost inputs over which the industry has a significant influence, this has the disadvantage that operators may have little incentive to restrain such cost levels. One such example is driver costs: if state-wide award rates are taken as the basic index, then the industry has little incentive to restrain these rates, as any rate increases will be passed on through the index. In such a case an alternative index outside the influence of the industry might be more appropriate (eg average weekly earnings).

Our proposed approach in this regard is:

- ▶ In general, to use index measures which closely track trends in bus industry costs.
- ▶ In the case of specific cost items over which the industry has a considerable influence, to use alternative index measures which are not significantly influenced by the industry.

A.3 Aggregation And Weighting Of Index Components

Index measures may be derived for each individual component of industry costs. However, in applying these measures to derive changes in fares or payments for each service/operator, several alternative approaches may be contemplated:

- (A): Apply each individual component index to the specific cost structure of each individual service or operator. Using this approach, the payments are likely to most closely reflect the changes in costs for the individual operator.
- (B): Group services (or operators) together into groups with generally similar cost structures; derive weighted indices relevant to the costs of each group; and hence apply the same weighted index to all services (or operations) in the group. This approach is simpler to apply and requires less detail of the cost structures of each individual operator, but may not reflect changes in individual operator costs quite so closely as (A) above.
- (C): Consider all services/operators in a single group; derive weighted indices that reflect average or typical costs of all services; and hence apply a single weighted index across all services. This approach is easiest to apply, requires least knowledge of individual cost structures, but will not always closely reflect changes in individual operator costs.

In the current context, where the index is to be used as the basis for adjustments of fares (and related payments) for commercial contracts, and standard fare schedules are applied across all (or major groups of) commercial services, approach (C) is the most appropriate. Essentially four base fare scales apply to commercial services in NSW (with two additional scales where DAFGS applies). Thus it would be appropriate either to construct a separate index for each of the four base groups of services, or alternatively to use a single index model applied to all four groups. The latter is the present practice.

A.4 Frequency Of Index Adjustment

To provide a fair and timely recompense for cost changes in an inflationary situation, new index numbers need to be calculated and applied with reasonable frequency, eg every 3, 6 or 12 months.

Current practice for NSW commercial contracts is usually to review and adjust fares on an annual basis. In the situation of generally low inflation, there would not be a strong case for more frequent review.

Exceptionally, there may be justification for one-off adjustments to contract payment rates or fares outside the standard annual cycle: the introduction of GST might, for example, justify such an adjustment. Such adjustments may be addressed on an individual case basis, as they arise.

In other situations where cost indices are used to adjust cost-related payments to operators (rather than fares), more frequent adjustments of these payments may be warranted. For instance the bus contract payment model adopted in Adelaide involves adjustments of payments on the following frequencies (refer Table 4.1):

- ▶ Fuel - monthly (based on prices for the previous month)
- ▶ Government charges – as soon as changes occur (paid monthly in arrears)
- ▶ Other items – annually.

A.5 Index Dates And ‘Lag’ Issues

In an ideal world, the index numbers applied to any given period would relate directly to the costs for that period, eg the index numbers to be applied throughout financial year 2003/04 should relate to the (actual or expected) costs incurred by operators over that year. In the absence of 20:20 foresight, this is not possible.

Hence the usual practice is for all indexation to be ‘in arrears’, applying the latest index data that is available at the time the new rates are set, eg the indexation adjustment to apply from July 2003 would incorporate the latest CPI data available at (say) June 2003 (when the fare change is determined), which would be the March 2003 quarter data (relative to the March 2002 quarter data). We recommend this approach here.

In periods of rapid inflation, the ‘lags’ that occur between cost increases (or decreases) and their reflection in fares (or payments) may be a substantial concern, and some method of retrospective adjustment might be desirable. In the current low inflationary climate, any lag problems are likely to be small and can be ignored. The exception might be any one-off substantial cost adjustments, such as for the introduction of GST: these can be addressed on an individual case basis, as noted above.

A.6 Guidelines For Definition And Selection Of Index Components

To apply the typical indexation approach, it is necessary to:

- ▶ Obtain data on typical/average cost structures for the industry – usually through a sample survey of operator costs.
- ▶ Determine the breakdown of the total costs into appropriate cost components, with weightings, for use for indexation calculations.
- ▶ Select an appropriate index measure for each cost component.

The selection of the appropriate cost components needs to have regard to the following:

- ▶ Each component should account for a significant proportion of total industry costs.
- ▶ The existence of an appropriate index measure which reflects movements in that cost component.
- ▶ The level of (dis)aggregation pursued in other aspects of the indexation process: for example, if a single indexation measure is to be applied to the whole industry, it will not necessarily be highly accurate in relation to any one operator; and hence a very detailed breakdown into numerous cost components will not be warranted.

In the selection of an appropriate **index measure** for each of the chosen cost components, we suggest the following guidelines for measure selection:

- ▶ Measures should reasonably reflect movements in the component costs experienced by the industry overall, and in different areas/sub-sectors.

- ▶ Measures should be readily available from standard sources wherever possible (eg ABS published or unpublished information).
- ▶ Measures should be available at intervals corresponding to the selected frequency of indexation.
- ▶ Measures should desirably be available without undue delay.

These guidelines in regard to the selection of cost components and index measures appropriate to the selected components are taken into account in the detailed work which is presented in Chapter 5.

A.7 Conclusions On Preferred Indexation Approach

The following summarises our conclusions in regard to the preferred approach to indexation for the NSW commercial bus fares:

- ▶ A single weighted index should be adopted across all commercial contracts (consistent with standard fare policies).
- ▶ This index should reflect typical cost structures for the commercial contracts sector and should be applied as a single percentage change for all services in that sector.
- ▶ Indexation adjustments should normally occur annually. In exceptional circumstances (eg GST introduction), one-off adjustments might be considered outside this annual cycle.
- ▶ The single weighted index would comprise a set of individual indices for each significant industry cost component. Guidelines are provided for the determination of appropriate cost components.
- ▶ Guidelines are also provided for selection of the individual index measures. These measures should sensibly reflect movements in the relevant cost components, and where possible should make use of indices already available from standard sources (eg ABS).
- ▶ The most recently available index numbers should be applied in each case ('lag' issues are unlikely to be a significant issue in the current low inflationary environment).

These conclusions and recommendations are applied in the detailed review of indexation procedures in Chapter 5.

APPENDIX B

Item-by-Item Appraisal of Current NSW Bus Industry Cost Index

B.1 INTRODUCTION

This appendix provides an appraisal of the basis of indexation of each cost component in the current NSW Bus Industry Cost Index (BICI) model used for annual adjustment of fares (and related payment scales) for commercial services. For each cost component it sets out:

- ▶ Current indexation methodology
- ▶ Notes on interstate practices (where relevant)
- ▶ Critique of the current BICI indexation methodology and consideration of alternatives
- ▶ Conclusions on preferred future methodology.

This appraisal makes use of earlier work on this topic undertaken by IPART (particularly in its June 2002 report), although the conclusions sometimes differ from those of IPART.

B.2 BUS CAPITAL CHARGES

B2.1 Current BICI Methodology

The current index is effectively the product of two terms:

- ▶ Bus capital costs for a new bus, with Mercedes 0405NH chassis and Custom Coach body.
- ▶ Finance lease rate (per \$ capital value) based on:
 - 5-year lease on new bus, with zero residual value
 - Interest charge equal to 10 year Commonwealth Government bond rate.

B2.2 Interstate Practices

Most relevant interstate practices include:

- ▶ **Victoria.** Index varies with fleet value, calculated as:
 - new vehicle price; times
 - actual vehicle value as a proportion of new price, according to a standard (economic) depreciation rate.
- ▶ **Queensland.** Index varies with
 - new vehicle price; times
 - 10 year Commonwealth Bond rate +2.5%.

B2.3 BICI Critique – Bus Capital Cost Sub-component

Two issues arise in relation to this sub-component:

- i) Use of a new bus, rather than an 'average' bus in the industry.
- ii) Use of only a single bus type.

In relation to issue (i), changes in new bus prices (times lease rates) may be taken as a reasonable measure of changes in opportunity costs (rather than finance charges) for the whole fleet, as:

- used bus prices tend to move broadly with new bus prices (although there will be exceptions to this, such as when technology changes occur, eg low floor buses).
- the lease rate on new leases reasonably reflects the economic costs of any buses, including older buses not under lease.

An alternative approach would be to use a weighted average of historic bus prices and historic lease rates: this would be significantly more cumbersome to apply and would less closely reflect current opportunity costs of the fleet.

In relation to issue (ii), use of only one bus type means that the index is sensitive to movements in prices for this type, which may not be representative of new vehicles being introduced to the industry. A more appropriate method would be a weighted average for perhaps three bus types representative of those used in the industry.

B2.4 BICI Critique – Lease Terms Sub-component

Lease Period. IPART (June 2002) suggests it would be more appropriate to use a lease period longer than 5 years, better aligned with the life of buses (eg 10 years was suggested). Such a change would result in a substantial reduction in monthly lease payments, but its overall effects on index changes would be much smaller than this: for a longer lease period,

interest payments would assume greater importance relative to principal payments over the lease term. As noted by IPART for the 2001-02 assessment, the increase in lease payments under a 5 year lease assumption of 10.14% would increase to 10.65% with a 10 year lease assumption.

Residual Value. The current BICI calculation assumes a zero residual value at the end of the 5 year lease. This is unrealistic relative to the value of the bus, and also we understand relative to common leasing practice (which often involves a 5 year lease with a 30% residual, with the residual often refinanced over a further 3 years). We consider there is a good case for re-setting both the lease period and the lease residual value, to better reflect common industry practice: this will affect the balance calculated between principal repayments and interest payments, and hence the effects of interest rate changes on the index movements.

B2.5 BICI Critique – Lease Rate

The current methodology uses a finance lease rate equal to the 10 year Commonwealth Bond rate. This does not recognise the risk premium that operators pay on finance leases, which ought to be incorporated (eg Queensland uses the Commonwealth Bond rate +2.5% to represent the risk premium). Such a change would tend to reduce the effects of variations in the bond rate on index changes.

B2.6 Conclusions on Preferred Methodology

Our conclusions/recommendations regarding each of the three bus capital sub-components are as follow:

Vehicle capital cost

- ▶ Retain use of new bus prices
- ▶ Propose use of a weighted average of new prices for perhaps 3 separate bus types representative of buses being purchased by the industry (involve discussions with BCA).

Lease terms

- ▶ Pursue changes to the assumed lease term and residual value that are better reflective of industry practice (involve discussions with BCA). Options to investigate could include:
 - 5 year term, no residual (as now)
 - 8 year term, no residual
 - 5 year term with 30% residual, then refinanced over 3 years.

Lease rates

- ▶ Modify to add an appropriate risk premium to the Commonwealth Bond rate formulation. This risk premium should reflect typical leasing rates in the industry (discuss with BCA, financiers).

B3 LABOUR COSTS

B3.1 Current BICI Methodology

The current index basis for all the labour ('people') costs, which accounted for 50.49% of the total BICI weight from July 2001, is effectively:

$$\frac{\text{[Weekly driver award wage rate + driver/conductor allowance]}}{\text{times}} \\ [(1 + \text{superannuation \%})(1 + \text{payroll tax \%}) + \text{workers comp \%}]$$

The award rates are taken from the 'Motor Bus Drivers and Conductors State Award' (as agreed between the BCA and TWU). The on-cost rates (superannuation, payroll tax, workers compensation) are as prescribed by legislation/regulation.

B3.2 Interstate Practices

Table B3.1 summarises interstate practices in relation to direct labour costs (ie excluding on-cost items). Key features in the present context include:

- ▶ All states use 'standard' cost indices available from ABS.
- ▶ Except for WA, all states use the same index for all direct labour costs; WA uses different indices for drivers, bus maintenance staff and administrative/other staff.
- ▶ For two states (and WA drivers), indices are based on ABS Average Weekly Earnings (AWE) statistics, using various series. For the other two states (and WA, bus maintenance/administration), indices are based on ABS Wage Cost Index (WCI) statistics, using various series.

TABLE B3.1: INTERSTATE INDEXATION PRACTICES – WAGES/SALARIES	
State	Summary of Practice
Victoria	▶ AWE, ordinary time earnings, all sectors, trend series, full-time adults, Vic (ABS Cat 6302.0).
Queensland	▶ AWE, ordinary time earnings, all sectors, seasonally adjusted, full-time adults, Qld (ABS Cat 6302.0).
Tasmania ⁽¹⁾	▶ Wage Cost Index, ordinary time hourly rates (excl bonuses), Transport and Storage Industry (public and private), Australia (ABS Cat 6345).
South Australia	▶ Wage Cost Index, total hourly rates of pay (excl bonuses), Transport and Storage Industry (incl private). (ABS Cat 6345).
Western Australia	▶ Drivers: AWE, ordinary time earnings, Australia (private sector). ▶ Bus Maintenance: Wage Cost Index, 'Trades persons and related workers'. ▶ Admin/Other: Wage Cost Index, 'Managers and Administrators'(ABS).

Notes: ⁽¹⁾ The Tasmania indexation basis covers both wages/salaries and direct labour on-costs.

B3.3 BICI Critique – Direct Labour Costs Sub-Component

The key issues arising in relation to this sub-component (for each of the three labour groups) are:

- i) Use of award rates (as now) versus exogenous indices (eg ABS).
- ii) In the case of exogenous indices, use of AWE or WCI.
- iii) In the case of AWE or WCI, the particular series to be used.

In regard to **issue (i)**, the question is whether to use:

- ▶ An index over which the industry has significant influence but which closely tracks movements in industry costs (eg TWU award rates, as now); or
- ▶ A 'standard' index outside the influence of the industry, but which would be expected to reasonably reflect cost movements over the medium-term (eg AWE or WCI indices).

We conclude that the second of these approaches is preferable (and is the approach adopted in all the interstate cases). It overcomes the major weakness of the first approach, that operators have little incentive to restrain wage rate increases where these are largely passed on in higher fares. This argument applies equally to all other labour groups.

In regard to **issue (ii)**, we note the following:

- ▶ The AWE statistics are based on information from a quarterly sample survey of employees. They represent average gross (before tax) earnings of employees. They do not relate to average award rates of pay nor the earnings of the 'average person'. Estimates of AWE are derived by dividing estimates of weekly total earnings by estimates of employment. Changes in the averages may, as a consequence, be affected not only by changes in the level of earnings but also by changes in the overall composition of the employed wage and salary earner segment of the labour force. Various AWE series have long been used for indexation purposes across the Australian economy.
- ▶ In 1998 ABS introduced a new measure of labour costs, the "Wage Cost Index, Australia" (ABS Cat. no. 6345.0). The Wage Cost Index (WCI) measures movements in underlying wage rates resulting from enterprise, workplace and individual employee agreements, as well as changes to award rates. The methodology used to construct the components of the WCI is similar to that used for other price indexes such as the Consumer Price Index. In the WCI, index numbers are compiled from hourly wage and salary costs for a representative sample of employee jobs within a sample of employing organisations.¹

Since 1998, WCI-based indices have been increasingly used in a number of sectors in place of AWE-based indices, to overcome the deficiencies of the AWE indices. We consider the WCI approach would similarly be more appropriate in this case.

In regard to **issue (iii)**, four sets of WCI weighted indices are published quarterly:

- ▶ Ordinary time hourly pay rates or total hourly pay rates (including overtime)
- ▶ In each case, rates with or without bonuses.

The ordinary time indices reflect changes in base hourly wage/salary rates; while the total hourly indices are based on a weighted combination of ordinary time and overtime hourly rates (but do not reflect changes in amounts of overtime paid at different overtime rates). Of the two series, the total hourly rate series would be more appropriate in this context.

The 'with bonuses' series include the effects of any bonus payments (expressed as an average hourly rate) and tend to be more volatile than the 'without bonus' series. As bonuses would be relatively unusual in the private bus industry, we see advantages in adopting the 'without bonus' series.

The WCI includes separate series for different industries, on an Australia-wide (not by state) basis. The most suitable industry classification in this case is the "Transport and Storage Industry, Division 1".

¹ Full details of the methodology and procedures used are set out in the ABS Information Paper "Wage Cost Index, Australia, 1998" (ABS Cat No 6346.0).

If this index is to be applied, then we see merits in it being applied equally across all the three labour categories.

B3.4 BICI Critique – Labour On-cost Sub-Components

As noted earlier (Section B3.1), direct labour on-costs are currently calculated directly as percentage additions to direct labour costs, consistent with the rates prescribed in the regulations. We consider that this is the most appropriate approach and there is no case for changing it. (However, we note that ABS is to release new labour cost indices in 2004 which will incorporate direct on-costs, to reflect the full range of labour cost components faced by employers. Once these are introduced, it is suggested that further consideration be given to their adoption in the current context).

B3.5 Conclusions on Preferred Methodology

Our conclusions/recommendations in regard to the labour costs component are as follows:

Wages/Salaries

- ▶ The preferred indexation basis is the ABS Wage Cost Index series:
 - Total Hourly Rates of Pay (excluding bonuses)
 - Transport and Storage Industry, Division 1
 - Private and Public Employers
 - Australia

(Reference ABS Cat 6345.0, Table 4).

(Note that this is the same basis as currently used in the cost indexation for the Adelaide bus contracts.)

Direct Labour On-costs

- ▶ The preferred indexation basis is as currently, by applying the prescribed on-cost rates as a combined percentage factor on the wages/salaries index (as shown in Section B3.1).

B.4 THIRD PARTY INSURANCE AND VEHICLE REGISTRATION

B4.1 Current BICI Methodology

- i) **Third Party Insurance.** The current BICI figure is the CTP Green Slip premium as provided by Zurich Insurance Company, for vehicles class 6a (omnibus for over 16 passengers), in the metropolitan area.
- ii) **Vehicle Registration.** This uses the standard registration charge for buses as levied by RTA: it includes the road-use charge and HVIS inspection fees.

B4.2 Interstate Practices

In some interstate cases the methodology is similar to NSW. In others, these items are treated as part of 'other costs' and are typically then indexed with the CPI.

B4.3 BICI Critique and Conclusions

The current methodology for both items appears the most appropriate and we see no reason to vary it.

B5. COMPREHENSIVE BUS INSURANCE

B5.1 Current BICI Methodology

The current index is based on total insurance premiums paid by bus operators per thousand dollars of asset values insured, as supplied by AEI Insurance Brokers.

B5.2 Interstate Practices

The range of interstate practices may be summarised as:

- ▶ **Queensland.** Product of:
 - Premium per \$1,000 insured value; times
 - New bus prices.
- ▶ **Tasmania.** With Bus Maintenance – Parts (which uses an ABS price index)
- ▶ **SA, Vic** Included with ‘other costs’ and indexed with CPI.

B5.3 BICI Critique and Conclusions

The current approach is deficient: it reflects the insurance premium per \$ insured value; whereas what is required is the insurance premium per bus (or equivalent).

In practice, we suggest two alternative ways of estimating this:

- ▶ Direct from the insurance brokers, by asking them to supply figures on total premiums paid and the number of vehicles to which these premiums relate.
- ▶ By multiplying:
 - Premium per \$ insured value (as current methodology); by
 - Bus price index: could use new bus prices as a proxy for this (actual fleet average bus values are not readily obtainable, except through the insurance brokers – in which case this would be effectively the same as the first method).

B6 BUS FUEL AND LUBRICANTS

B6.1 Current BICI Methodology

This item covers bus fuel, oil and lubricants. It is indexed according to the Monday average over 52 weeks (1 July – 30 June) of Mobil Pick-up Prices for (Bulk) Diesel, in Sydney.

B6.2 Interstate Practices

Interstate practices tend to be broadly similar to current NSW practice:

- ▶ **Queensland.** As in NSW, the bus cost index is used as the basis for annual fare increases. Here the index is calculated on the **daily** average wholesale fuel prices over the previous 12 months.
- ▶ **Victoria, SA.** Here the index is used for operator payments. In Victoria, fuel prices are calculated on a daily average; in SA on the basis of averages for start-month figures.
- ▶ **WA.** Here the fuel index is based on Singapore spot prices for Gas Oil, converted to A\$, with Government taxes/charges then added.

B6.3 BICI Critique

Six specific issues have been addressed:

- i) Price source.
- ii) Frequency of data – weekly or otherwise.
- iii) Area differences.
- iv) Data period.
- v) Lag issues.
- vi) Changes in fuel consumption over time.

Issue (i) – price source. Provided that the Mobil Pick-up prices for bulk diesel are representative of fuel prices paid by operators, this would seem a reasonable price source (further discussion with Mobil and BCA on this point may be worthwhile).

Issue (ii) – data frequency. BICI currently calculates the appropriate price averaged over the price on 52 Mondays (1 July – 30 June). While movements in this price should give a good reflection of trends, there would be some advantages in calculating a daily average (as is done in Queensland and Victoria) rather than a weekly average.

Issue (iii) – area differences. The current BICI methodology uses Sydney-based fuel data; whereas it is possible (albeit not very likely) that price trends outside the metropolitan area might differ significantly from metropolitan trends. However there would be significant complications in introducing a different non-metro indexation system : as most commercial contracts are in/near the metropolitan area, we suggest it is not worthwhile to vary the present approach in this regard.

Issue (iv) – data period. For fuel the index movement is based on comparing average rates over the previous 12 month period with those over the period 12 months before that. By contrast, for other BICI components, the index movement compares rates at two single points in time. It could be argued that the fuel indexation should use a similar basis, eg comparing fuel prices on 1 July with those on 1 July 12 months earlier. This would have the disadvantage that it would not recognise the volatility of fuel prices and not compensate for price movements throughout the year: it is likely to be unpopular with operators at least one year in two. On balance, we see advantages in retaining the present approach.

Issue (v) – lag issues. An inevitable consequence of the current fuel indexation methodology is the long lag in compensating operators for price increases: eg the fare increase for year 2003/04 over 2002/03 reflects fuel price increases for the year 2002/03 relative to 2001/02 (ie fare adjustments are essentially 12 months in arrears). The only way to ameliorate this lag would be:

- ▶ To change to a 'point in time' method (as above).
- ▶ To introduce more frequent fare adjustments (eg quarterly).

Neither of these changes is recommended.

Issue (vi) – fuel consumption changes over time. In our experience any such effects will tend to be very gradual and not of significant concern over a 5 year period. The weighting of fuel in the overall cost index should be reassessed as part of any periodic (5 yearly?) review of the indexation provisions.

B6.4 Conclusions on Preferred Methodology

It is recommended that the current BICI methodology for fuel costs should be generally retained unchanged, but subject to pursuing the following two points:

- ▶ Whether the Mobil Pick-up Price for Bulk Diesel (Sydney) is reasonably representative of prices paid by commercial contract operators.
- ▶ Whether there would be merits in adopting daily average prices in place of the current weekly average prices.

B7 BUS MAINTENANCE – PARTS/SERVICES

B7.1 Current BICI Methodology

The index figure is the price quoted by Mercedes for a major service (we understand this relates to a 50,000 km service, and is split approximately 50% labour:50% parts).

Bus maintenance appears to be covered in two of the BICI cost components:

- ▶ This item – which appears to relate to costs (labour and parts) for major services.
- ▶ Labour costs – which appears to contain a sub-component relating to maintenance staff labour costs.

It is unclear from evidence available whether the weightings for these two items combined properly reflect total bus maintenance costs; whether there may be an element of double-counting (labour costs) between the two components; or whether some costs (parts etc) are not included. This would warrant further investigation, as part of any review of component weights in the overall index.

B7.2 Interstate Practices

Interstate practices on the indexation of R & M- parts vary widely:

- ▶ **Victoria** – industry ‘basket of parts’ approach.
- ▶ **Queensland** – CPI Transportation Group: Private Motoring – average of MV repairs/ servicing and MV parts/accessories categories (ABS unpublished statistics).
- ▶ **Tasmania** – Price index of materials used in the transport equipment and parts industry (ABS).
- ▶ **South Australia** – GDP implicit price deflator.
- ▶ **West Australia** – Perth CPI (all groups).

B7.3 BICI Critique

On the basis that this cost component relates only to major services, the current BICI approach seems reasonable. However, as noted earlier (in regard to bus capital), there would be advantages in using a weighted average of major servicing costs from several sources representative of major servicing work carried out for the bus industry.

As noted above, there is also a need to review the precise coverage of this cost item and its weighting in the overall index.

B8 TYRES

B8.1 Current BICI Methodology

The index price is the list price for Michelin 11 R22.5 XZU radial bus tyres (including fitting), as obtained from Western Tyre and Wheel Pty Ltd.

B8.2 Interstate Practices

Interstate practices may be summarised in three groups:

- ▶ **Queensland, SA** - very similar to NSW.
- ▶ **Victoria, Tasmania** - tyres considered as part of R & M – Parts.
- ▶ **Western Australia** – tyres included within ‘other’ category, indexed by CPI.

B8.3 BICI Critique

The current BICI approach appears reasonable, and is followed in two other states. While there could be advantages in averaging over price quotes from several suppliers, this is probably not warranted given that tyres account for only just over 1% of total costs.

B9 GENERAL OVERHEADS AND OTHER COSTS

B9.1 Current BICI Methodology

This 'residual' item covers general overheads and all cost items not included elsewhere: its weighting was 14.37% of total costs at July 2001. While a detailed specification of items covered is not available, they include telephone, office supplies, travel, FBT and other office/depot overheads.

It is indexed by Sydney CPI, All Groups (ABS Cat 6401.0).

B9.2 Interstate Practices

Interstate practice is, in all cases, to index these 'other' costs by the relevant state capital CPI. There are some differences between states in the content of this 'other' costs category.

B9.3 Critique and Conclusions

While the CPI is not a particularly appropriate basis for indexing these costs, in the absence of an obvious alternative 'standard' index it is widely accepted. Thus no change in present practice is suggested.