ACTION'S BUS FARES FOR 2000-2001

PRICE DIRECTION

MARCH 2000

INDEPENDENT PRICING AND REGULATORY COMMISSION

FOREWORD

The release of the Commission's Price Direction for ACTION's fares for 2000-01 comes at a time of continuing change in ACTION's network and operating arrangements. ACTION has embarked upon a program of reform designed to achieve efficiencies in its operations while seeking to balance the level of service offered with the overall costs of providing a network service across the ACT.

Network 99 has been an ambitious start to this reform program and the Commission in its first Prices Direction on ACTION released in April 1999 commended the initiative while expressing some concerns about the ability of ACTION achieving all the targets set. It has become clearer over 1999 that there has been a need to further fine tune aspects of Network 99 and to reassess the ability to achieve some of the targets set. Nevertheless the reform program has resulted in some significant gains being made in seeking to balance the level and quality of a public transport system across the ACT with the cost that the community is willing to pay through either direct fares or publicly funded financial support.

In the 1999 Prices Direction, the Commission took the view that with the exception of an adjustment for inflation, there was little to be gained from making significant alterations in fare levels at that time. In the current inquiry, the Commission has had the advantage of having access to further information on the response of the community to the Network 99 changes. It is apparent that there has been some positive response to the change in frequency of services and the zonal fare system. However, the growth in patronage has not been nearly as high as projected and there continues to be some concern in the community about aspects of the zonal fare system.

The Commission recognises that there are both strengths and weaknesses in the zonal fare structure adopted by ACTION. The Commission does not believe that anomalies in the system can be readily resolved simply by changing the current boundaries. Rather there is a need for more sophisticated ticketing systems which the Commission supports being acquired by ACTION as soon as they are available.

The Commission also recognises that by simply altering the fare structure for ACTION that the present patronage levels will not automatically be improved. Surveys of the travelling public, both those using and not using ACTION's services, highlight the fact that in order to lift patronage above the present low levels, there will be a need for further significant changes in the frequency and pattern of service offered by ACTION. However, this will come at a significant cost which can not be readily met from farebox collections and thus must be met from general public support through government subsidies and CSO payments. The Commission has assessed that to recover commercial best practice costs based on the present service levels would require an 82% increase in fares. With the ready availability of other forms of transport, access to free or relatively cheap parking options across most of

Canberra, and concerns with the present frequency and pattern of bus services, it is clear that a price increase of this order will not be acceptable.

Also, despite ACTION's program of increasing the frequency and pattern of services as part of Network 99, and a significant reduction in fares enjoyed by a large proportion of bus travelers as a consequence of the zonal fare structure and discounts offered on standard fares, there has been only modest gains in bus patronage during 1999. The Commission is of the view that it can not readily change this pattern of behaviour simply through a decision on fare levels. Rather, there is a more fundamental underlying issue arising out of the design and layout of Canberra, the siting of the major business centres, and the quality of the road network which works against a significant shift towards greater use of the bus network. This is an issue that needs to be considered in other fora within government. For the moment the Commission sees its role as encouraging greater efficiencies in the delivery of the mandated services required of ACTION under the government's minimum service level standards, and through a process of cost reduction and some fare rationalisation, to achieve a higher level of farebox recovery of these efficient costs.

In the context of the current inquiry, the Commission has had to consider both the need for improvements in efficiency with the desirability for some changes in the current fare structure. The Commission has acknowledged that in terms of improving its efficiency, ACTION has made some important gains over the last 12 months. There remain some areas where ACTION is clearly less efficient than other comparable publicly owned bus operators. It is expected that these areas will be the focus of attention over the next 12 months.

In terms of the overall level of fares, the Commission believes that there are grounds for an increase in the overall level of farebox revenue. Thus the Commission has recommended that an increase be allowed consistent with a revenue cap determined by the growth in the Consumer Price Index for Canberra over the last two years. The Commission has directed that rather than simply increasing fares across the Board, that ACTION bring forward a revised fare schedule which rationalises some of the discounts currently available. While still wanting to offer discounted fares for periodical ticket purchasers, the Commission believes that the discounts offered may be beyond that warranted in terms of encouraging patronage while at the same time contributing towards a more realistic farebox recovery outcome. The Commission has estimated that as a result of this Price Direction, farebox recovery will only reach 26.6% in 2000-01, up from 22.7% in 1998-99.

The Commission has also been required to incorporate in its Price Direction an adjustment in fares to reflect the net effect of the GST after allowing for expected cost savings from the withdrawal of the Wholesale Sales Tax and other indirect taxes. The Commission has allowed a net 8% rise in fares and other charges made by ACTION to account for the net GST effect. A rise of this magnitude will clearly have some significant implications for bus patronage. However, this increase must be viewed in relative terms against other cost increases expected across the economy as a result of

the introduction of the GST. The Commission notes that there have recently been significant increases in fuel costs which will influence decisions on travelling options adopted by some sections of the community.

The current Price Direction is again for a 12 month period. The Commission notes that it is the government's intention to establish an independent Board to manage the operation of ACTION. It is the Commission's desire to work with this new Board when it is established to develop a longer term price path for ACTION which provides a greater degree of pricing and cost recovery certainty, thereby allowing sensible investment and planning decisions while at the same time providing price outcomes which reflect an efficient cost structure for Canberra's public transport system.

Paul Baxter
Commissioner
10 March 2000

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1. INTRODUCTION

The Independent Pricing and Regulatory Commission (IPARC) is conducting an investigation into fares for bus services supplied by the Australian Capital Territory Internal Omnibus Network (ACTION), which should apply for the period from 1 July 2000 until 30 June 2001. The terms of reference for the investigation are included as Attachment 1.

The terms of reference establish the tasks to be undertaken by the Commission for this investigation and the various matters that are to be considered by the Commission in making the price direction. The following requirements are specified in the terms of reference in relation to the conduct of the investigation:

> *The Commission is to review and report on appropriate pricing and pricing methodology for the following:*
>
> - *the regulated bus services provided by ACTION for the period from 1 July 2000 until 30 June 2001.*

In addition, the Commission shall:

> *specifically determine a price path based on best practice "commercial price". This will be done using best practice cost benchmarks taking into account potential patronage in the Territory and the service levels specified by the Department of Urban Services as the purchaser on behalf of the Territory Government.*

All communication with the Commission in relation to this investigation should be directed to:

Independent Pricing and Regulatory Commission
GPO Box 447
CANBERRA ACT 2601

Telephone: (02) 6273 0655
Fax (02): 6273 0654

This document is the final price direction. Submissions received by the Commission and transcripts of the public hearings can be obtained by contacting the Commission at the above address.

2. SUMMARY OF FINAL PRICE DIRECTION

The principal features of the Commission's price direction for ACTION for 2000-01 are as follows:

- without reference to the impact of the goods and service tax (GST), the increase in average fare prices for the financial year 2000-01 should not exceed the sum of the increase in the ABS Consumer Price Index All Groups for Canberra for the 21 month period ending December 1999 plus one percentage point;

- given the size of the discounts available for the purchase of periodical tickets, the allowable increase in the average fare should be focused on reducing the discounts for these tickets and, to a lesser extent, FareSaver 10s. This should be addressed by raising the fares of periodical tickets rather than lowering the cash fares;

- consistent with government policy, concession tickets should be set at 50% of the full adult equivalent tickets and student tickets at 35%. Where greater discounts than these currently exist, some fare tickets may need to be increased. Should government policy change as to the definition of persons eligible for the student or concessional fares, this Direction would not prevent such a reclassification;

- without prejudice to the average fare increase allowed by this Direction, a further increase of 8.0% be applied across all fares and all other direct charges made by ACTION (excluding CSO receipts and government subsidy funding) to reflect the net impact of the GST after allowing for anticipated embedded tax cost savings;

- given the range of different fares available, ACTION is required to submit to the Commission for formal endorsement at least three weeks prior to any new fare increase being announced, a revised fare table which indicates which fares it propose to increase while ensuring that its average fare prices weighted by the expected patronage in 2000-01 do not exceed the above cap;

- despite the Commission's intention expressed in the previous determination, this direction is made for one year only.

The Commission estimates that the average fare increase permitted under this Direction, in conjunction with further proposed operating cost changes, should assist in raising ACTION's farebox cost-recovery level from 22.7% in 1998/99 to 26.6% in 2000-01.

As public transport charges are estimated to comprise only around 0.4% of an average household's weekly expenditure, the Commission believes that the effect of this price Direction on the CPI exclusive of the net GST increase will be negligible, ie. less than 0.1%. However, the Commission notes that there might be some hardships for certain bus patrons and draws the government's attention to the possible need to consider use of other wider social safety net policies.

The implementation of the new enterprise bargaining agreement in early 1999, in conjunction with the new Network 99, was designed to indicate that ACTION was becoming a more commercial organisation. However, the cost reductions and the expected revenue increase from higher patronage forecasts only led to very small improvements in financial viability. In fact, ACTION acknowledged that the Network 99 services and the new enterprise bargaining agreement were not sufficient to increase revenue and reduce costs to set the operator on a path to improved financial sustainability. As a result, all services were subsequently reviewed by ACTION in a move to reflect a more commercial balance between the patronage and revenue opportunities and the costs of the services, and some services were rationalised to reduce the prospect of continually widening deficits. In operational terms, only in the areas of bus repairs and maintenance and bus capital charges does ACTION appear to materially lag behind other public sector operators, and ACTION needs to continue to focus on these areas to achieve further efficiencies.

In response to growing concerns about ACTION's call on public funds and in order to assist with greater commercialisation, the government has proposed to establish ACTION as a statutory authority from July 2000. The Board of the new authority will be responsible for the operator's performance, which, in association with the more formal purchaser/provider model, should provide a more arm's length management from government.

While the Commission had hoped to be able to make a longer-term price Direction on this occasion, the proposal to establish ACTION as a statutory authority was not known at the time of the previous determination. Consequently, the Commission is concerned that its Direction does not unduly impede the future directions of the authority, given the current ongoing budgetary difficulties affecting ACTION. Hence, it has only provided a price Direction for one year.

Nevertheless, from the submissions received, the Commission notes that the future direction of ACTION will be critically affected by the role which the government and the community wish ACTION to play in the broader ACT transport market. Broadly, ACTION currently enjoys just over 5% of the total market, which means that a 5% increase in patronage, while laudable, makes little significant difference to the overall transport situation. The Commission notes that there are wider debates currently being conducted in the community about environmental issues affecting transport and the need for a more integrated land use and transport policy. Clearly, the role and functions of a public transport provider is integral to those issues.

The Commission has therefore adopted a position which it believes will not act adversely on the outcomes of these other deliberations. It acknowledges that currently ACTION receives 70% of its revenue in the form of CSO payments, which largely represent the objectives of government to maintain services and particular fare levels. The Commission believes that there is an urgent need to make more explicit those CSO payments. This review considered the details of the recently instituted service agreement between ACTION and the purchaser, the Department of Urban Services (the Department), and sought to identify a clearer understanding of the minimum service levels which the Department required. ACTION acknowledged that a number of its services exceeded the minimum service levels required under the agreement, and that some of those represented a non-commercial outcome, ie. costs exceeded revenues. On the other hand, the Commission acknowledges that the determination of a "commercial" service network involves an assessment of the overall integrity of the services provided. However, the Commission has assessed that the provision of services corresponding to a minimum service level (MSL) network could lead to a net reduction in costs to ACTION of around $11 million. Thus, in a commercial environment, no services provided in excess of the MSL should lead to a financial outcome worse than this.

While the Commission believes that the moves already undertaken to develop more explicit and transparent service decisions are in the right direction, it is concerned that the process of establishing the costs and revenues for different services has moved too slowly. The new formal purchaser-provider arrangements provide a more focused approach to establishing ACTION in a more commercial environment. The Commission hopes that by the time ACTION is established as a statutory authority there is a clearer picture of the financial implications of service operations.

The Commission has assessed that the difference between ACTION's current fares and "commercial" fares, is around $18.3 million annually. This is represented in part by the existing pricing CSO and in part by the shortfall in total revenue which has been funded by a rundown of accumulated funds. To eliminate this shortfall would require an average fare increase of at least 82%. This is clearly not the intention of government, nor does the Commission consider that it would have any positive effects on patronage levels. However, it does highlight the dilemma of a public transport provider operating a very small share of market with little prospect of substantive increases in farebox revenue. Nevertheless, the Commission believes that there are some anomalies in the fare structure, ie. between periodical tickets and cash fares and whether all concession and student fares represent the 50% and 35% values of their adult equivalent fares. By the same token, the calculations of such concession and student usage should be more explicit in obtaining adequate reimbursement from government. Within the narrow price cap provided under this direction, the Commission has recommended that these anomalies be addressed. The Commission does not believe that such adjustments could be viewed as inequitable as they would largely constitute a return to previous relativities.

The Commission has also assessed that the costs to ACTION of being in government ownership, assuming that it is not required to earn a return on investment, is around $3.3 million annually. If a return had to be earned on net assets, the figure rises to over $8 million. The Commission believes these costs should be explicitly provided for in the government payments to ACTION.

In summary, while the Commission believes that more can be achieved in terms of operating costs, it also believes that the average fares, for the distance travelled, are lower than reasonable commercial comparators. As a result, despite concerns about cost levels, the Commission is of the view that there are grounds for increasing fares. Significant government contributions, through explicit CSO payments, will still be required over the next few years to support ACTION's financial position.

3. INDEPENDENT PRICING AND REGULATORY COMMISSION

The Independent Pricing and Regulatory Commission (IPARC) was established in late 1997 by the ACT Government. The functions and powers of IPARC are set out in the IPARC Act 1997. In setting prices,

> *… the Commission shall decide on the level of prices for services…and give a price direction accordingly to each person providing regulated services.*
>
> A price direction may specify, in relation to the supply of a regulated service, any or all of the following:
>
> *a. a price;*
> *b. a maximum price;*
> *c. a maximum price and a minimum price;*
> *d. a formula for calculating a price referred to in paragraph a, b or c;*
> *e. a method, by reference to price indices or otherwise, by which a price referred to in paragraph a, b or c is to be ascertained;*
> *f. a period or periods during which the direction, or any provision of the direction, is to apply.*

The legislation establishing the Commission lists a number of matters the Commission must consider in making its decision. These include:

> *the protection of consumers from the abuses of monopoly power…*
>
> *standards of quality, reliability and safety…*
>
> *the need for greater efficiency…*
>
> *an appropriate rate of return…*
>
> *the cost of providing the regulated service…*
>
> *the principles of ecologically sustainable development…*
>
> *the borrowing, capital and cash flow requirements…*
>
> *the effect on general price inflation over the medium term; and*
>
> *any arrangements that a person providing regulated services has entered into for the exercise of its functions by some other person.*

4. ACTION

The Australian Capital Territory Internal Omnibus Network (ACTION) is an ACT Government owned enterprise supplying bus services throughout the ACT.

ACTION has 712 full time equivalent employees, as at 1 July 1999, and incurs annual operating costs of $72 million with revenue derived from operations of around $17.5 million and explicit government contributions of $39 million to maintain the current level of service, as shown in the 1998/99 budget.

ACTION has two depots, from which its fleet provides services. These are located at Belconnen and Tuggeranong. The operational fleet status as at October 1999 totalled 385 buses (21 of which are Special Needs Transport buses) with an average age of just over eight years. The fleet requirements are determined by significant peak demands.

From July 1999, ACTION and the ACT government have established an ownership agreement, which sets guidelines and performance requirements to ensure the government receives the best possible return through efficient operation and professional management of ACTION. The agreement has been determined through consultation with the Minister for Urban Services, the Minister for Health and Community Care and the Minister for Education and Training. The ownership agreement covers efficient management of finances, assets and staff, in line with the policy goals of the ACT government and in the light of ACTION's past performance. One significant aim of the ownership agreement is to quantify appropriate minimum service level requirements between the Department of Urban Services as purchaser and ACTION as provider.

According to the ownership agreement, ACTION's mission is to provide the ACT community with an efficient, effective and accessible passenger transport service. This is to be achieved by:

- improved customer service;
- increased people involvement;
- creation of a positive community profile; and
- increased commerciality with the ultimate aim of providing the owner with a commercial rate of return on its equity in the business.

The major corporate objectives of ACTION are as follows:

- subject to the requirements of government policy and legislation, to operate as a customer service oriented entity along business like lines;

- to use benchmarking to operate at least as efficiently as alternative service providers and to provide quality, value for money services in all aspects of ACTION's operations;

- to use financial practices and maintain accounts and records which satisfy the requirements of the *Financial Management Act 1996*, including the associated ACT Accounting Policy Manual modelled on the requirements of Australian Accounting Standards, and which fairly present ACTION's financial position and operational cashflow results for planning and reporting purposes;

- to adopt high standard operating practices to safeguard the environment and health and safety of staff;

- to provide a productive and satisfying work environment for staff, and a commitment to high standards of human resource management based on equal employment opportunity.

As further indications of the changes to ACTION's commercial environment, the ACT Government is preparing legislation to establish ACTION as a statutory authority. It is expected that this will take effect from mid 2000.

In addition, a new regulatory framework is being prepared (Public Passenger Transport Bill) which will regulate all bus service providers (both ACTION and private operators).

5. ISSUES CONSIDERED BY THE COMMISSION

Under Part IV of the Independent Pricing and Regulatory Commission Act 1997, the Commission in completing a Determination is required to consider a number of factors and indicate what regard it has had to each factor. The Commission's assessment of each of the Part IV factors is detailed below.

5.1 Costs and Efficiencies

Under Part IV of the Independent Pricing and Regulatory Commission Act 1997, the Commission in completing a determination is required to consider the cost and efficiency factors, as detailed below:

- *the cost of providing the regulated services (Part IV 20.(2e));*
- *the need for greater efficiency in the supply of regulated services to reduce costs to consumers and producers (Part IV 20.(2c));*
- *any arrangements that a person providing the regulated services has entered into for the exercise of its functions by some other person (Part IV 20.(2k)).*

5.1.1 Operating Costs

ACTION's financial statements indicate that the organisation recovers significantly less than the accrual-based costs of providing the services. Over the past six years, farebox cost recovery has fallen within the range of 22.1% to 24.7%. The results are illustrated in Table 5.1.

Table 5.1: Operating Costs ($'000)

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99
Employee Costs	40,920	39,099	38,414	42,473	42,658	46,280
Administrative Expenses						
Bus Running and Maintenance	8,044	7,289	7,290	7,149	7,356	8,068
Other	5,347	6,188	7,139	7,781	6,568	6,959
Depreciation and Amortisation	7,404	7,496	7,467	7,368	7,041	6,418
Interest	8,554	8,345	6,851	6,381	3,441	2,428
Other Expenses	-	-	-	-	-	1,519
TOTAL	70,269	68,417	67,111	71,152	67,064	71,672
Revenue (Fares)	15,527	16,429	15,676	17,235	16,583	16,266
Farebox Cost Recovery	22.1%	24.0%	23.4%	24.2%	24.7%	22.7%

As indicated in last year's price determination, costs for 1998-99 and beyond were expected to be higher than those for 1997-98 because the ACT Government had introduced an equivalent tax regime for its utilities, which imposed payroll tax, sales tax, insurance and increases in superannuation costs. Last year, these were estimated to amount to around $6.5 million per annum for ACTION.

A review of 1998-99 financial statements suggest that payroll tax amounted to $2.668 million, insurance $952,000, sales tax $422,000, income protection $322,000, and other ACT taxes and charges $122,000. Together, these add up to almost $4.5 million worth of increased charges that ACTION has not previously faced.

Over 55% of the increase in employee costs in 1998-99 is accounted for by an increase of almost $2 million in redundancy payments during the year. In fact, the sum of the redundancy payments and the payroll tax are greater than the aggregate increase in employee costs. The major offsetting item was the reduction in salaries of $1.3 million or almost 20%, representing a reduction in administrative staff.

Interest payments have continued to fall in the financial statements, but the further reduction in 1998-99 was offset by a new item, Other Expenses. This represents a change in the way that lease payments are reported in the financial records. Lease payments for buses were previously reported as interest payments, but are now included as Other Expenses.

"Other" administrative expenses increased by 6%. While most areas within this category actually fell, these reductions were more than offset by a substantial increase in advertising and promotional expenditure in support of the introduction of Network 99. This expenditure rose from $806,000 in 1997-98 to $1.414 million in 1998-99. Had this item remained unchanged, the total of these "other" expenses would have fallen to just over $6.35 million or a 3.3% reduction. While there may be ongoing promotional expenditure in support of the new network services, the Commission would expect that next year's budget in this area would be significantly reduced on the 1998-99 figure.

Nevertheless, as was acknowledged in last year's price determination, the new services under Network 99 are expected to lead to increases in costs with higher service hours, which will only in part be offset by increased driver productivity through the recently negotiated Enterprise Bargaining Agreement (EBA). Bus running costs and maintenance costs in 1998-99 increased by 10%, largely as a result of the increases in bus kilometres travelled under Network 99, and higher than expected fuel prices.

5.1.2 Efficiency

The major change affecting ACTION's efficiency which occurred last year was the new enterprise bargaining agreement (EBA). When it was introduced, ACTION claimed that it would achieve annual total savings of $10.5 million, of which $7.7 million were seen as cash savings and the remaining $2.8 million represented service improvements, particularly increased driver productive hours, and forgone wage increases. At the time of the previous price determination, ACTION estimated that $7 million of these savings had been achieved by March 1999. The remaining $3.5 million savings were to come from additional efficiency improvements in administration, workshop and driver operations over the 1999 and 2000 calendar

years. The Commission stated in its previous determination that progress towards realising those remaining savings would be taken into account in the current price determination.

ACTION advised the Commission that, as at November 1999, almost $7.28 million of the savings had already been achieved, including all of the service improvements and other items introduced in conjunction with Network 99. This left a further $3.24 million of annual savings still to be achieved.

The following table indicates ACTION's expectations about achieving these savings as at November 1999.

Table 5.2: Outstanding Savings under EBA ($000)

	Amount to be Achieved	To be Achieved 1999-2000 on annualised basis	To be Achieved post July 2000 on annualised basis	Not Achievable
Administration	165	165	-	-
Workshops	897	816	-	81
Drivers	2,075	1,390	585	100
Other	100	-	-	100
TOTAL	**3,237**	**2,371**	**585**	**281**

ACTION expects to have achieved over 70% of the outstanding efficiency savings ($2.4 million on an annualised basis) by the end of 1999-2000. At the time of the IPARC public hearing in February 2000, ACTION assessed that some $8.5 million of these savings had already been implemented. While these savings would have been signed off progressively during the year, they will not be taken up in 1999-2000 on a full year basis. Therefore, a full year's benefit of these savings will not be reflected in the 1999-2000 accounts.

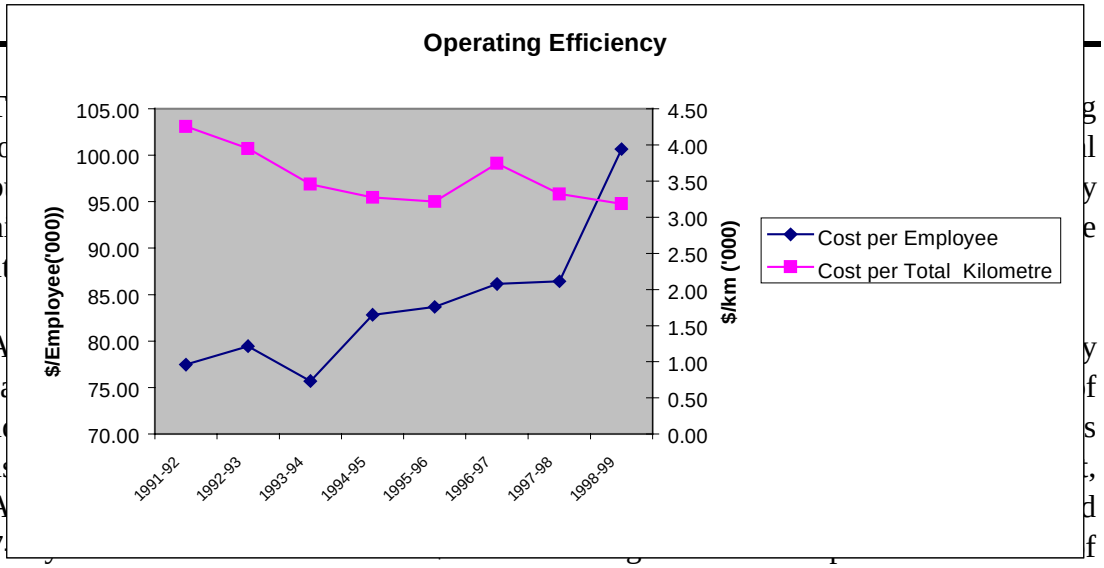
Clearly, these efficiency improvements are in the right direction although less progress has been made than was previously expected. The Commission acknowledges that there are often practical difficulties which impede the speedy implementation of efficiency improvements which involve industrial arrangements, although it remains concerned that 9% of the outstanding savings are now not expected to be achieved at all while the other 18% have been put back to subsequent years. Although ACTION has stated that it intends to identify and implement alternative measures to compensate for these, there is always the risk that the deferral of efficiency improvements leads to their eventual abandonment, as the difficulties justifying their initial postponement become too entrenched.

Certainly, these improvements will go some way to reduce the adverse margin between ACTION's average costs by comparison with average public and private bus operators, discussed in the previous determination. There, the evidence of other consultants' reports suggested that ACTION's overall costs ranged between 10% and 20% higher than other public bus operators, and significantly more against private operators.

ACTION has referred the Commission to recent benchmarking work by Booz-Allen and Hamilton. Based on 1998-99 data, it indicated that ACTION has been making progress in improving productivity and reducing costs. ACTION has stated that the analysis indicated that, since 1994, driving unit costs had been reduced by 18%, overheads by 12% and total costs, excluding bus capital, by about 12%. While ACTION claims its costs are now in the middle of the range of public operators included in the benchmarking study, the Commission notes that ACTION bus repairs and maintenance and bus capital charges are higher than other operators.

Figure 5.1 illustrates recent trends in ACTION's performance and particularly indicates the effects of the 1998-99 year when the EBA was negotiated.

Figure 5.1: Operating Efficiency



this increase in the aggregate cost figure, the cost per employee in 1998-99 has increased significantly from over $86,000 per employee in 1997-98 to over $100,000 per employee, an increase of more than 16%. The major explanation of this large increase in per employee cost is the decrease in staff numbers, with an increase in operating costs. In order to compare like with like, the cost per employee without incorporating the $4.5 million of taxation equivalent adjustments only rises to over $94,000. This is nevertheless an underlying increase of over 9% in one year, and underscores the Commission's concern about the capture of efficiency savings by remaining staff rather than those savings being used to reduce the deficit and therefore taxpayer subsidy.

ACTION is an urban bus operator with a cost, operational and demand profile similar to that observed in other Australian capital cities. That is not to say that ACTION's costs are directly comparable with other urban bus operators. There are significant differences between the market served by ACTION and the other urban bus operators in Australia. There are also differences in the level of service provided, fares structure and availability of concessions. Consequently, when considering these benchmarking comparisons, it is important to be aware of the different market characteristics.

Demand for ACTION bus services shows a typical urban public transport peaked profile. The Network 99 service pattern shows that the weekday peak periods (in terms of buses in service) are each less than 30 minutes long and coincide with the school rather than commuter travel periods. Some 10% of the standard sized buses deployed to serve the peak periods are in service for less than three hours in the day. The articulated bus fleet is now almost entirely allocated to school operations. Only eight of the 31 articulated buses are utilised for more than four hours per day and none is used on Saturdays, Sundays or school holidays.

This peakiness in the service profile limits the potential for maximising the efficient rostering of drivers to vehicles. Inevitably, many drivers will only be productive for a short period of paid duty time given that the industrial agreement provides for a minimum payment of three hours in any half shift. After allowing for shift penalties, leave allowances and scheduling inefficiencies, ACTION pays for the equivalent of 2 driver hours at the basic rate per bus hour operated. Although not outside the range for the data available on other operators, this factor is at the top end of the range (~1.3 to 2). For each bus hour in revenue service (ie discounting time spent driving between the depot and termini and other non-revenue trips), ACTION pays for almost 2.4 driver hours. This factor is also at the top end of the range for comparator operations.

Maintenance costs for ACTION operations equate to $0.37 per bus kilometre. For public sector operators, a range of $0.21 to $0.44 has been observed. The $0.44 figure refers to Sydney Buses and was identified as an area for potential cost reduction of 10% in a study by IPART. Sydney Buses fleet has a higher average age than ACTION's which would tend towards higher unit maintenance costs in Sydney.

The cost per total kilometre in 1998-99 was $3.19, which is a 4% decrease on the 1997-98 figure. This continues the downward trend evident earlier in the decade although, allowing for the 1996-97 result, it appears that the unit cost per kilometre may have largely flattened out.

5.1.3 Forecast Costs and Efficiency

Table 5.3 provides ACTION's estimates for operating costs over the next four years, made in April 1999.

Table 5.3: ACTION's Forecast Operating Costs ($'000) – April 1999

	1998-99 Actual[(a)]	1998-99 Expected April 1999	1999-00 Budget April 1999	2000-01 Estimate April 1999	2001-02 Estimate April 1999	2002-03 Estimate April 1999
Employee Costs	46,280	45,129	39,521	38,671	38,654	38,654
Administrative Expenses	15,027	13,873	12,893	13,059	13,321	13,321
Depreciation and Amortisation	6,418	6,017	5,720	5,720	5,720	5,720
Interest	2,428	2,429	2,114	1,800	1,485	1,171
Other Expenses	1,519	3,558	3,607	3,656	3,707	3,707
TOTAL	71,672	71,006	63,855	62,906	62,887	62,573

Source: Department of Urban Services, ACTION Ownership Agreement, April 1999

(a) Actual figure is taken from the 1998/99 ACTION Financial Statements

The aggregate 1998-99 outturn was broadly in line with earlier expectations although there were some major variations between categories. Assuming some adjustments between "other expenses" and "administrative expenses", the principal area where operating costs were expected to come down was in employee costs, with a reduction of around 15% in 1999-2000 (over $6.7 million) and a further 2% in 2000-01 (around $850,000).

In the previous determination, the Commission expressed concern that past efficiency improvements appear to have been absorbed by increases in wages and expressed a desire to see the effects of the new EBA and subsequent efficiency improvements leading to lower requirements for taxpayer subsidy. Of particular concern to the Commission is the possibility that the EBA has encouraged full-time drivers to take redundancy payments and then become re-employed as casuals on penalty rates, which are high compared with rates for casual bus drivers in other states. As a result, this has contributed to the costs associated with Network 99 being greater than ACTION originally expected.

ACTION acknowledged in November 1999 that they had under-estimated the costs associated with Network 99 by around $ 4.5 million. Most of the increase reflects the increased traffic task associated with the new network which has not been offset by efficiency improvements in the EBA. Some of this increase was attributed to increased staff turnover, recruitment and training. However, such costs could be expected to be one-off expenses which should not be continued. ACTION advised the Commission that the service changes made in January 2000 were estimated to save $3 million on a full year basis.

ACTION also faced increased costs which lie more outside ACTION's control, eg. recent increases in diesel fuel prices and IT modernisation costs. In November 1999, ACTION estimated that higher diesel prices then prevailing compared with the middle of the year would increase their bus running costs by around $600,000 on an annual basis. As at February 2000, ACTION was paying over 78 cents per litre compared with the average price of 62 cents in 1998-99. Continuing higher diesel prices could increase running costs by at least $1.5 million, according to ACTION's calculations.

The additional IT costs are estimated at around $500,000 and these IT costs are associated with an ACT government decision to standardise the computer systems within all government agencies and departments. ACTION also faces an extra $0.5 million in Comcare premiums, which has meant that, although ACTION have lower levels of staff, their workers compensation payments have increased. To the extent that the IT costs and the size of the Comcare premiums are forced on ACTION because of their public sector ownership, ACTION should be expressly compensated for the differences between these costs and those which would be incurred by a private

operator.

There is a dispute about the valuation of the Belconnen and Tuggeranong depots and the resultant depreciation that should be taken up in ACTION's accounts. Different approaches to asset valuation have been used: replacement cost and existing use, based on the type of facility which a private operator would require to undertake the services currently provided by ACTION. This issue has yet to be finally resolved. In the meantime, ACTION has proposed to reinstate the original asset valuation, which involves an increase in depreciation and interest costs of $740,000 in 1999-2000, increasing to over $830,000 in 2003-04. The Commission is of the view that a final outcome is likely to involve a somewhat lower depreciation expense than this, and that it may not be appropriate to endorse these numbers at this time.

ACTION also reassessed their revenue forecasts in line with reduced patronage estimates for the future. ACTION had over estimated the level of patronage demand that would occur due to the new network in future years.

Since the introduction of Network 99, ACTION has made a number of refinements, in May and September 1999, and also, because of the significant cost overruns, from the beginning of February 2000. These reductions are expected to reduce the cost overrun from $4.5 million to $1.5 million, and ACTION has informed the Commission that the changes will involve the following:

- service frequencies to be relaxed from 30 to 40 minutes on low patronage daytime routes and from 60 to 90 minutes in the evening;
- selected routes will be amalgamated and connections strengthened;
- low patronage school services will be amalgamated – changes have already been agreed with Schools Transport Advisory Committee and affected schools;
- zone structure and 7-day network features are retained.

Changes represent a decline of about 2 million service kilometres and affect about 10% of the existing network. ACTION advised that adjusted services are above minimum service standards and are still 7% above those offered prior to the introduction of Network 99.

ACTION advise that the effect on the network of these changes will be a 14% decrease in services on Monday to Friday, and an 8% decrease on the weekends, relative to the original service level of Network 99.

The implications of these changes are summarised in Table 5.4.

Table 5.4: Forecasted Operating Costs ($'000)

	April 1999	November 1999 (with May/Sept changes)	December 1999 (with February 2000 Changes)
1998-99	71,672	71,672	71,672
1999-00	71,006	67,844	67,195
2000-01	63,855	67,093	65,449
2001-02	62,906	66,074	64,570
2002-03	62,887	65,810	64,346
2003-04	62,573	65,548	65,270

ACTION claims that the adjusted figures take account of the $3 million per annum savings due to changes in service levels, as well as increased expenses due to factors discussed above.

The overall position over the next five years varies for ACTION. Further revisions to the services provided need to be considered. The Commission understands that significant reviews of both school services and non-school route services are currently being undertaken to establish a better match between demand for services and their provision. This involves looking at services which are in excess of the minimum service levels contracted by DUS and assessing how to rationalise poorly patronised services. ACTION proposes that these form the basis for further changes to be effective from the beginning of 2000-01.

The Commission acknowledges the moves towards more effective cost controls on ACTION's network and understands that ACTION is developing a route profitability model which should inform the evaluation process. ACTION has advised the Commission that the model should be effective in the first half of 2000, at which time responsibility for performance accountability will rest with the new Board. It is to be expected that, at that stage, more reliable indications of cost will be forthcoming from ACTION. Given the past performance of ACTION's financial forecasts, the Commission believes that the route profitability model be enhanced as a matter of urgency. Without such specification, the Commission is concerned that these more recent revised cost estimates will have no more validity than their predecessors.

5.1.4 Contracting Out

In the previous price determination, the Commission expressed concern that little effective investigation of potential outsourcing opportunities appeared to have been undertaken by ACTION. Given the increasing trend in other jurisdictions to outsource non-core functions and the increasing pressure on ACTION to reduce costs, the Commission was of the view that further opportunities needed to be assessed.

The EBA includes provision for reviewing business activities with a view to reforming them or, if they cannot be reformed to competitive cost levels, to contracting them out. To date, ACTION has undertaken a review of bus refuelling

and bus cleaning processes in conjunction with external consultants. The costs associated with bus cleaning and refuelling were estimated to be around $860,000 per annum; for 364 buses, this constituted an annual average cost of $2,360 per bus. The review found that ACTION's current practices led to significantly higher costs than comparable public and private bus operators. The two comparators (State Transit Authority of NSW (STA) and Surfside Bus Lines on the Gold Coast) indicated that ACTION's cleaning and refuelling costs were higher: between 33% (STA - $1,775 per bus) and 100% (Surfside - $1,200 per bus). The review also noted that the STA estimates were not necessarily consistent with best practice as evidenced by a consultant report to the NSW Independent Pricing and Regulatory Tribunal (IPART) that further savings could be achieved by STA in these areas. This would suggest that the margin between ACTION and a more efficient public bus operator could be even greater.

ACTION acknowledged that substantial improvements in bus cleaning and refuelling were necessary, particularly as the review suggested that contracting out of non-core business, covering these particular services, can usually offer significant savings, in the order of 20%. However, a preliminary estimate from a facilities management company on the likely costs to outsource these services was given in May 1999 as $800,000, which is only 7% lower than ACTION's assessed costs. The Commission notes that the estimate was given as a "worst case estimate" and was not an expression of interest or a response to a tendering process. In fact, the contractor was of the view that "once work schedules are fine tuned and productivity is maximised, there is a strong possibility of further cost savings".

Although ACTION's own internal review suggests that its costs are at least 33% higher than they need be (and probably even more), the Commission is concerned that, given the without prejudice response from a contractor, suggesting an improvement of only 7%, ACTION may adopt more modest ambitions at achieving efficiencies. If the internal benchmarking analysis were valid, the Commission would expect that contractors, under an open competitive tendering process, would offer far greater savings. If those savings were of the order of 20-25%, this would amount to an annual saving of around $200,000, and the cost per bus would still be above STA's current cost. It appears that ACTION has only planned around $50,000 worth of annual savings from this area, and the Commission expresses concern that not enough is being done to achieve savings in these non-core areas.

The Booz-Allen and Hamilton benchmarking study noted above, indicated that one of the major areas where ACTION still records significantly higher costs than those of other operators is in bus repairs and maintenance. While the Commission acknowledges that ACTION has undertaken major industrial reorganisation through the recent EBA, it will be looking very hard in its next review at the progress towards significantly lower maintenance costs, approaching those of other operators. Again, if marked progress is not made, the Commission is of the view that the investigation of contracting out maintenance functions should be undertaken.

5.2 Consumer Protection

Under Part IV of the Independent Pricing and Regulatory Commission Act 1997, the Commission in completing a determination is required to consider the consumer protection factors, as detailed below:

- *the protection of consumers from abuses of monopoly power in terms of prices, pricing policies and standard of regulated services (Part IV 20.(2a));*
- *standards of quality, reliability and safety of the regulated services (Part IV 20.(2b));*
- *the social impacts of the decision (Part IV 20.(2g));*
- *the effect on general price inflation over the medium term (Part IV 20.(2j)).*

5.2.1 Pricing

In its previous determination, the Commission provided for ACTION to increase the average fare prices for 1999-2000 by no more than the consumer price index. It also allowed ACTION some flexibility in adjusting its fare structure provided that the effect of any fare increases did not lead to an increase in its average fare prices weighted by the expected patronage in excess of the price cap.

ACTION chose not to change any of its fares, principally because it had only recently made changes to the fare structure in January 1999 with the introduction of Network 99 and because very small increases would have resulted in implementation problems. Furthermore, ACTION argued that, at that time, it expected reasonably strong patronage growth as a result of the new network and had expected that this would translate into correspondingly strong revenue growth. Unfortunately, while market analysis undertaken tends to confirm some increase in patronage, revenue growth has been less than originally forecast, in part because of a shift to periodical tickets which represent a lower price per journey. ACTION also claim that, with the new zonal fare structure, some passengers are over-riding and this constitutes a loss of revenue.

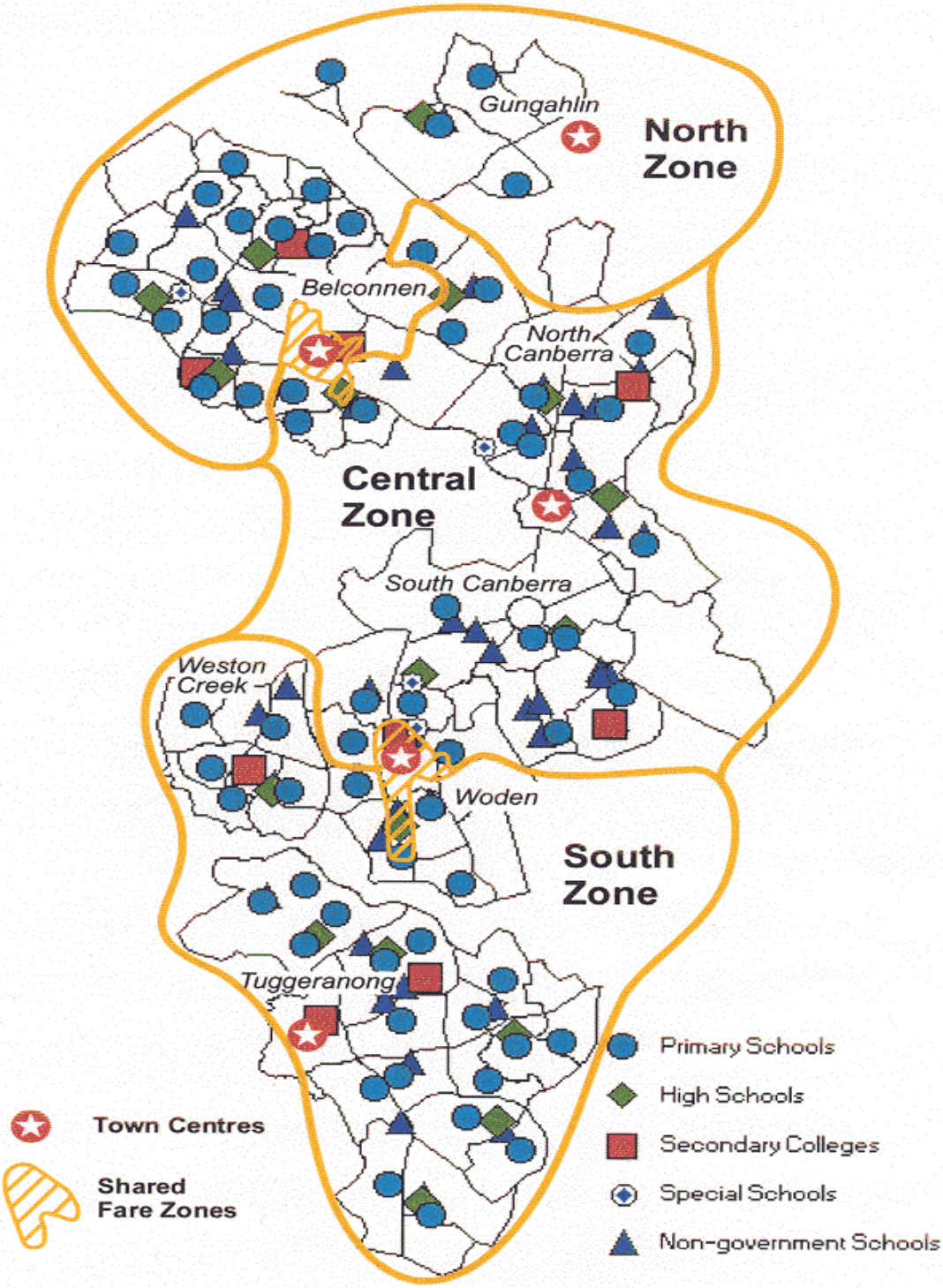
The specific fares available under Network 99 are given in the following table, which compares those fares with the pre-Network 99 fares.

Table 5.5: Pre and Post Network 99 Structures

Fare Types	Pre 1 Vehicle	Pre- 2 Vehicles (1 Interchange)	Pre- 3 Vehicles (2 Interchanges)	Post Zone 1	Post Zone 2	Post Zone 3
FareGo 4	1.80	3.60	5.40	1.80	3.60	3.60
Cash	2.00	4.00	6.00	2.00	4.00	4.00
Adult Daily	6.70	6.70	6.70	7.00	7.00	7.00
FareGo 10	1.70	3.40	5.10	1.70	3.40	3.40
Adult Monthly	109.00	109.00	109.00	55.00	110.00	110.00
Shoppers Off-peak Daily	4.00	4.00	4.00	4.00	4.00	4.00
Adult Weekly	29.00	29.00	29.00	17.00	34.00	34.00
Conc FareGo 4	0.70	1.40	2.10	0.85	1.70	1.70
Conc Cash	1.00	2.00	3.00	1.00	2.00	2.00
Conc Daily	2.70	2.70	2.70	3.50	3.50	3.50
Conc FareGo 10	0.70	1.40	2.10	0.85	1.70	1.70
Conc Monthly	45.00	45.00	45.00	27.00	55.00	55.00
Pensioner Off-peak	1.00	2.00	3.00	1.00	1.00	1.00
Conc Quarterly	105.00	105.00	105.00	n.a.	n.a.	n.a.
Conc Weekly	12.00	12.00	12.00	8.50	17.00	17.00
Student FareGo 4	0.45	0.90	1.35	0.60	1.20	1.20
Student Cash	1.00	2.00	3.00	1.00	2.00	2.00
Student FareGo 10	0.45	0.90	1.35	0.60	1.20	1.20
School Term	68.00	68.00	68.00	45.00	90.00	90.00

Figure 5.2 illustrates the three-zone structure of Network 99.

Figure 5.2: Zonal Structure (Network 99)



Source: ACTION

As a result of the previous determination, the Commission raised a number of issues which it would take into account in this price determination. These cover patronage response to Network 99 and the revenue implications. In particular, the Commission recommended that ACTION undertake a survey of passenger responses.

5.2.2 Survey Responses

ACTION commissioned a survey of community and customer attitudes towards the bus service, which was undertaken in June 1999. ACTION also commissioned a profile of the current market, drawing on an analysis of ticket usage patterns and a customer travel diary survey.

The main points which emerged from the surveys were as follows:

- patronage growth increased for the five months to June 1999 by around 6-6.5% on the same period last year. There were difficulties in measuring patronage because of the nature of boardings and the changed ticketing arrangements;

- the majority of passengers are travelling one zone or between a shared and adjacent zone and have shifted towards a greater use of monthly tickets which offer savings over previous corresponding tickets;

- the market is dominated by concession and student passengers, with the former estimated to have increased by almost 20% over the past year. The student market represents around 60% of total passengers;

- there has been a marked shift by students in the use of term tickets away from Faresaver (Farego) tickets, reflecting the dominance of single zone student movements;

- overall, single zone journeys comprise 68% of total journeys;

- 62% of journeys are undertaken during the AM and PM weekday peak periods;

- the perception that ACTION is providing a valuable community service increased from 79% in 1997 to 87% in 1999;

- a decline in community perception as to whether ACTION's fares represent value for money was recorded – in 1995, 58%; in 1996, 53%; in 1999, 44%;

- the main reasons cited for people not using ACTION buses were greater flexibility with their own cars; bus trips were longer than car trips; cars required during the day; bus frequency did not permit flexible travel; work timing was inconvenient for bus travel; and services did not go where wanted;

- the main reasons cited by ex-users were car purchase; change of job or house; need to drop off family members; and walking or cycling. These reasons do not reflect substantive dissatisfaction with ACTION.

5.2.3 Revenue Implications

On the basis of these findings, the Commission considers that ACTION will experience difficulty in maintaining strong passenger growth. The recent increase has resulted from the new network despite the changed fare structure. While some further increase may still come through, it is unlikely that it will be substantial. It appears that ACTION no longer subscribes to the view that the farebox revenue will increase by 1999-2000 in the order of $1.8-$2.4 million. In fact, according to the most recent advice from ACTION, the Commission understands that ACTION expects that its fare revenues for 1999-2000 will be around $1.5 million less than originally budgeted.

With future years unlikely to see any substantive patronage growth for the reasons found in the survey, future revenue shortfalls from original budgets also increase, up to almost $3.7 million in 2001-02 although the shortfall is expected to narrow by 2003-04 to $2.2 million. This includes ACTION's estimate of lost revenue (around $500,000) through over-riding. It believes that, through revenue protection measures, between $200,000 and $350,000 per annum of this revenue can be recovered, at a recovery cost of around $80,000.

On the basis of past performance, the Commission is concerned that ACTION's presentation of future revenues assumes an initial deterioration on what was previously forecast followed by a modest narrowing of the gap by 2003-04. Through its new Network 99, ACTION has only raised its estimated share of passenger trips in Canberra from around 5% to around 5.25%, despite having originally targeted a 6% share, itself still a modest position. While some of the submissions to the Commission expressed concern that the new network was not given sufficient time to make a material impact on travel patterns, the Commission was not furnished with firm evidence to suggest that ACTION's share of total passenger trips can rise substantially above the numbers already quoted. In the light of the survey data discussed in section 5.2.2, there is strong evidence to suggest that the choice of public transport has far more to do with service factors and the geographical structure of Canberra than it does with the fare levels. While the Commission is aware of the wider debate on an integrated transport strategy for Canberra (see section 6.4.1), it believes that, in the short term, it is unrealistic to embark on a price path which assumes future growth. Even a 1% per annum growth in patronage in the light of overall population growth is going to be difficult to achieve within a cost-effective network.

ACTION's fare elasticity estimates, outlined in the previous determination, indicated generally low elasticities, ranging for different class of tickets from zero to a maximum of –0.25. This compares with a general industry expectation of public transport fare elasticity of –0.3. This would suggest that Canberra's bus passengers are more price inelastic than others. Some of the submissions to the Commission raised doubts about such low elasticities. Even ACTION itself expressed concern about the potentially adverse effect on patronage levels of major increases in fares, which is somewhat at odds with their own elasticity figures. The Commission raised

the issue of removing fares altogether and canvassed the likely impact on patronage. Again there appeared to be little expectation that this would lead to a substantial increase in bus patronage. From this, the Commission concludes that the existing low market share for public transport in Canberra and the survey data which indicated that bus passengers are broadly those who do not have access to private vehicles confirm the generally low elasticities. From a farebox revenue maximising position, therefore, there are grounds for raising ACTION's fares.

There are wider efficiency implications associated with setting bus fares. Bus transport competes with private road transport, which is seen to be cheaper, particularly when there is so much free parking available. The broader strategic issues of integrated transport are discussed further in section 5.4, but some of the submissions to the Commission raised the concern that, to achieve a more efficient outcome, competitive modes also need to be priced accordingly.

Others suggested that increases in bus fares should be focused on peak travel, which determines the number of buses in the fleet, to produce an appropriate differential with off-peak fares. Table 5.6 provided by ACTION indicates estimates of the average fare per ride for each ticket type, which suggest that there is already a differential between peak and off peak and casual and frequent passengers.

Table 5.6: ACTION's Current and Proposed Fare Structure

	Current Fares			Proposed Sample fares
	Price	Average Rides	Fare Per Ride	Price
Single Tickets				
One Zone Concession	$1.00	1.2	$0.86	$1.00
All Zone Concession	$2.00	1.2	$1.71	$2.00
One Zone Adult	$2.00	1.2	$1.73	$2.00
All Zone Adult	$4.00	1.2	$3.46	$4.00
Off-Peak				
Adult – All Zone	$4.00	3.0	$1.33	$6.00
Concession – All Zone	$1.00	2.5	$0.40	$1.00
Daily				
Adult	$7.00	3.2	$2.19	$9.00
Concession	$3.50	3.7	$0.95	$4.50
Faresaver				
One Zone Concession	$8.50	14.0	$0.61	$8.70
All Zone Concession	$17.00	14.0	$1.21	$17.00
One Zone Adult	$17.00	11.8	$1.44	$17.40
All Zone Adult	$34.00	11.8	$2.88	$34.00
One Zone Student	$6.00	11.0	$0.55	$6.00
All Zone Student	$12.00	11.0	$1.09	$12.00

	Current Fares			Proposed Sample fares
	Price	Average Rides	Fare Per Ride	Price
Weekly Tickets				
One Zone Concession	$8.50	15.6	$0.54	$9.30
All Zone Concession	$17.00	15.6	$1.09	$17.00
One Zone Adult	$17.00	14.3	$1.19	$18.60
All Zone Adult	$34.00	14.3	$2.38	$34.00
School Term				
One Zone Student	$45.00	87.9	$0.51	$45.00
All Zone Student	$90.00	87.9	$1.02	$90.00
Discounted All Zone	$68.00	87.9	$0.77	$68.00
Monthly				
One Zone Concession	$27.50	64.1	$0.43	$33.70
All Zone Concession	$55.00	64.1	$0.86	$57.00
One Zone Adult	$55.00	55.6	$0.99	$67.40
All Zone Adult	$110.00	55.6	$1.98	$114.00

There are of course equity considerations involved in the setting of fares, particularly when a large number of bus passengers are concession travellers. In particular, ACTION indicated that its fastest growing ticket was the $1 daily off-peak concession. Over the past year, the number of such tickets have increased by around 50%, from around 120,000 boardings per month to around 180,000 boardings per month. ACTION estimate that the value of the concession on this ticket alone is worth more than $1.5 million annually. From ACTION's position, it is comparatively indifferent as to whether its revenue comes from the farebox or from explicit concession payments from the public purse. However, agreement must be reached between ACTION and the government on the appropriate reimbursement for such concession passengers. If the 50% concession benchmark against the full adult equivalent fare is an appropriate reflection of government policy for non-student concession fares, the data in Table 5.6 suggests that the $1 ticket could be raised to $1.50 under the current structure. Advice provided by ACTION at the public hearings suggested that the time limitations on the use of this concession fare particularly for pensioners could be removed as a way of compensating these patrons for any perceived price increase. From a peak period demand perspective, ACTION does not believe that travel by pensioners would be likely to transfer into the peak period but that removal of the time limitations would be welcomed by these concession fare users.

The Department of Urban Services raised with the Commission a concern that the concession provided on school term student tickets represented an average fare which was lower than that nominated as government policy, ie. 35% of the adult equivalent each fare. Based on the data in Table 5.6, it appears that both the one zone and all zone student tickets constitute just under 30% of the adult fare, on an average fare per

ride basis. On current fares, that would suggest that these tickets could increase by at least 10% without violating the 35% threshold point.

In response to the 1999 fare restructuring, recent data suggests that the adult fare passengers have responded to the new network and fare structure by changing their ticket purchases, from Faresaver to periodical tickets. If the previous fares were considered broadly acceptable on equity grounds, any move towards recovering more revenue from those passengers who have transferred their ticket purchases to cheaper fares could not reasonably be considered to be inequitable, particularly as one of the largest shifts has occurred in the single zone monthly which, at $55, represents an almost 50% reduction on the previous one vehicle monthly. On the contrary, the Commission believes that such a move to raise fares for these passengers to levels prevailing before the new structure was put in place while still providing a discount could certainly be seen as reflecting a more efficient and equitable outcome.

Probably, the most effective way to achieve this adjustment in the first instance is to reduce the discounts for periodical tickets. Currently, these discounts amount to around 20% off the standard single zone Faresaver ticket. The Commission noted in its previous determination that multi-ride ticket users are more likely to be in full-time employment and tend to be more affluent than cash fare payers (IPART 1998 Determination for STA, page 17) (although some submissions suggested anecdotally that this might not be the case in Canberra) and that ACTION had reduced its previous discounts, which were around 50% in the early 1990s, to around 15% before the new fare structures were put in place. The Commission believes that it would be appropriate for ACTION to reduce the current discounts and in its draft direction suggested that those discounts be reduced from around 20% to no more than 15% and perhaps even less, subject to a rounding up or down of fare values.

A further equity issue was raised in one of the submissions. Given that there are two shared zones (Woden and Belconnen) and that there are localised concerns about short distance trips which cross zones, it was suggested that a corridor across both zonal boundaries (north/central and south/central) might be appropriate in minimising some inequities. Such an approach might also be helpful in addressing some of the school transport distance anomalies. The Commission is not in a position to determine whether this proposal is appropriate. However, the Commission is aware that this proposal has been examined by ACTION and, although seen to have some merit, is considered to be impractical at this time. There is concern that it will provide further opportunity for over-riding and ACTION has advised that it is unable to fund the additional ticket inspectors that would be required to counter this problem. New ticketing equipment which is it least two years away may be able to resolve these practical difficulties. The Commission will continue to monitor developments.

Since the draft price direction, ACTION has developed a sample fare schedule which is given in Table 5.6. The suggested fare changes were based on a net fare increase of 3.1%, with a forecast zero change in patronage. Neither cash fares nor school fares were increased. The prices of weekly and monthly tickets for single zone travel were

increased to 75% and 70% respectively of the cash fare for adult single zone travel, allowing for average rides per ticket. Slightly greater discounts for all zone travel were available, while the FareSaver 10 ticket represented around a 15% discount on the cash fare.

5.2.4 Student Fares

In its previous direction, the Commission recommended that no increases in student fares on average be made and that no increase at all be made in the highest student fare. At that time it was proposed that any further review of student fares would be based on a study to review alternative fare and zonal structures as the major issue raised at the hearing remains the existence of some anomalies in terms of school and residence location and zonal boundaries.

The Commission is of the view that school transport services are not different in principle from route services as far as crossing zonal boundaries is concerned, although it acknowledges that in both cases there are likely to be a few passengers who appear to be relatively disadvantaged. In the previous direction, ACTION estimated that only 11% of students would fall into this category.

The Commission is of the view that these anomalies while recognised as existing by ACTION and the government, cannot be readily resolved in the context of the zonal structure currently in use. It is not simply a matter of making a few minor changes to the existing zone boundaries in order to resolve these anomalies. Improved ticketing systems and technologies ultimately will provide the tools that will allow resolution of these zone boundary problems. The Commission would endorse continued high priority being given to the acquisition of new ticketing technology as it becomes available. This has the potential not only to resolve these continuing concerns with zonal boundaries, but also to improve the level of service provided to passengers wanting quicker travel times over the network.

In terms of the wider issue of student fares, the Commission is of the view that the fare structure appears to offer greater concessions than is mandated by government policy. As already indicated, the Commission believes therefore that there are grounds for raising student term fares to no more than the stated policy of 35% of the adult cash fare, on an average fare per ride basis. This could amount to around a 10% increase on term tickets.

The issue of who should benefit from a student concession ticket also needs to be resolved. At the moment there is no differentiation between a school student and a tertiary institution student. The structure of the term fares for the student concession is clearly directed towards school terms, not university or technical college terms. It is a matter for the government to determine as to the intended coverage of student concessions. This issue needs to be resolved at a government policy level in order to provide guidance on what, if any, action is required to extend concession periods for

tertiary students or to adjust the relative level of concession available for tertiary students.

5.2.5 Social Impacts

The Commission assesses the social impacts of price and policy changes to minimise any adverse impacts on consumers. ACTION already has an extensive concession fare system covering disabled, pension and student passengers. In fact, over the past year, ACTION advises that the fastest growing ticket has been the $1 All Zone concession fare – an increase of 50%. CSO payments already represent around 70% of ACTION's total revenue, although these go beyond pricing CSOs, school services CSOs and concessional travel payments (see Table 5.9).

Although fares were restructured as part of the introduction of Network 99, ACTION advised the Commission that this was aimed at revenue neutrality and furthermore that fares had not actually increased since 1996.

Given the shift towards more periodical tickets over the past year, the Commission observes that a large number of passengers have effectively enjoyed a fare reduction. Also, increasing concession and student fares to 50% and 35% respectively of the adult equivalent fare would only be restoring previous relativities which appear to have eroded the margin. Thus, it is unlikely that any small increase in fares would be seen as having unacceptably adverse social impacts. However, the Commission draws the government's attention to the needs of certain groups within the community for whom the cost increases may warrant the need for some form of direct assistance under existing support services programs.

5.2.6 Effects of Pricing Proposals on the Cost of Living

The Australian Bureau of Statistics conducts a Household Expenditure Survey. Public transport charges are estimated to comprise around 0.4% of an average household's weekly expenditure (ABS Cat. No. 6535.0 1993/94).

Therefore, the Commission is of the opinion that a fare increase corresponding to an increase no greater than the last two years' CPI (and excluding the net impact of the implementation of the GST) will have a negligible impact on the overall CPI for 2000/01, ie. less than 0.1%.

5.2.7 Treatment of GST

Under the provisions of the *Trade Practices Act*, ACTION is categorised as a government activity falling within the 'carrying on a business' test. As such, ACTION is required to consider what cost savings will be achieved as a result of the implementation of the Commonwealth Government's *New Tax System* changes to take effect from 1 July 2000 and to pass these cost savings on to customers in terms of its

prices. In addition, ACTION is required to apply the 10% GST to its final fares, also to take effect from 1 July 2000.

The Australian Competition and Consumer Commission (ACCC) has responsibility for ensuring that cost savings from the *New Tax System* pass through to consumers. Under an agreement with the various State and Territory jurisdictional regulators, the ACCC has delegated responsibility to the relevant jurisdictional regulators for ensuring that regulated businesses such as ACTION pass through these cost savings in regulated prices. In formal advice from the ACCC to the Commission, the ACCC has directed the Commission's attention to the *Intergovernmental Agreement on the Reform of Commonwealth-State Financial Relations* as providing an indication of how ACT Government businesses are expected to respond to the *New Tax System* changes in price decisions.

Under the *Intergovernmental Agreement*, embedded tax savings flowing to general governments have been used to help offset the negative impact of tax reform on State and Territory budgets in the transitional period until such time as the revenue generated from the GST flow to these State and Territory budgets. For ACTION, the Commission has been advised by the ACT Department of Treasury and Infrastructure that two thirds of the embedded tax savings ascribed to ACTION is assessed as being included in the Territory's general government sector. This reflects the fact that the ACT Government funds more than two thirds of ACTION's operating costs. As embedded savings, these cost reductions will not be applied to ACTION but rather will be retained by the Territory Government as part of the trade off against the transitional funding arrangements agreed between the Commonwealth and Territory Governments under the *Intergovernmental Agreement*.

Thus, under the terms of the *Intergovernmental Agreement*, the Commission is required to ensure that a third of the anticipated cost savings from the *New Tax System* flow through to any fare adjustments after 1 July 2000. The Commission has accordingly examined estimates prepared by ACTION using the *Econtech* model of projected cost savings. There are a variety of models currently available which purport to estimate likely savings from the *New Tax System*. The Commission has had the opportunity to examine the results from these models, especially with respect to the impact on costs in the first year of the *New Tax System*. The Commission is prepared to accept the Econtech estimates of the short term (that is, first year) cost changes. In total these are estimated to be $1.034 million. However, as only one third of these cost savings will be available for transfer to ACTION customers under the terms of the *Intergovernmental Agreement*, the saving that will be passed through in terms of the net GST adjustment will be $344,500.

ACTION has estimated farebox revenue in 2000-01 of $17.6 million (before GST) after allowing for a 3.1% increase in average fares based upon the Draft Determination released by the Commission in December 1999. In the Final Price Direction, the Commission will be allowing an average fare increase above the Draft Determination estimate reflecting more recent CPI movements. However, as it is

unclear just how patronage levels will respond to this increase, the Commission has continued to use the $17.6 million revenue estimate for purposes of the net GST impact determination. Allowance has also been made in this total revenue for other charges made by ACTION to bring total estimated revenue (other than CSO and subsidy funding) to $18.7 million.

The cost saving of $344,500 must be made against this revenue as it represents ACTION customers' *'share'* of the savings under the terms of the *Intergovernmental Agreement*. After deducting this cost saving and then applying the full 10% GST, the net GST impact on fares for ACTION is determined as being an increase above the pre-GST fare revenue of 8.0%.

A price increase of this magnitude aside from any price increase that the Commission may otherwise allow will have a direct impact upon patronage levels. The elasticity information available to the Commission is not capable of providing a meaningful estimate of the likely impact on demand for bus services given the size of this proposed increase. As a consequence, ACTION may find that it is unable to meet a revenue cap set for the business based upon average fare increases consistent with the underlying rate of inflation across Canberra. This places even greater emphasis upon the need to consider possible reductions in discounts offered on some fare types as a means of increasing revenue without adding further cost increases beyond the net GST effect to all categories of passengers.

The Commission notes that the GST impact on fares, even after allowing for embedded cost savings from the *New Tax System* may not be as relatively severe as suggested at first sight. Other prices will increase across the economy, reflecting the wider application of the GST. Although there will be some potential price advantages for private car purchasers as a result of the removal of wholesale sales tax on cars, the rising price of fuel (largely as a result of the recent decline in the Australian dollar and the current crude oil price increases), may mean that the relative attraction of private transport over public transport will not be as great as might otherwise be feared.

The Commission expects to be able to use the patronage results for 2000-01 as a guide to elasticity estimates for use in future price determinations.

5.3 Financial Viability

Under Part IV of the Independent Pricing and Regulatory Commission Act 1997, the Commission in completing a determination is required to consider the financial viability factors, as detailed below:

- *an appropriate rate of return on any investment in the regulated industry (Part IV 20.(2d));*

- *the borrowing, capital and cash flow requirements of persons providing regulated services and the need to renew or increase relevant assets in the regulated industry (Part IV 20.(2i)).*

In addition, the Commission has been requested to consider ACTION's financial viability in the light of best practice "commercial price", taking account of cost benchmarks and potential patronage and service levels.

5.3.1 Government Contributions to ACTION

The following table details ACTION's November operating statement and future estimates prior to the latest financial reviews.

Table 5.7: Updated Forecasted Operating Statement ($'000) - November 1999

	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Expenditure	(67,064)	(71,672)	(67,844)	(67,093)	(66,074)	(65,810)	(65,548)
Revenue	17,871	17,478	17,891	18,705	19,395	20,113	20,859
Government Contribution	37,398	39,295	39,047	37,082	35,427	35,732	35,732
Other	780	166	7	0	0	0	0
Operating Deficit/Surplus	(11,015)	(14,733)	(10,899)	(11,306)	(11,252)	(9,965)	(8,957)
Operating Injection		2,326	1,943	2,569	4,398	4,093	4,093
Operating Deficit/Surplus after abnormal and extraordinary items	(11,015)	(12,407)	(8,956)	(8,737)	(6,854)	(5,872)	(4,864)
Accumulated Funds	52,578	36,953	27,997	19,260	12,406	6,534	1,670

Source: ACTION and DUS, November 1999.

The following table details ACTION's December operating statement from 1997-98 with forecasts from 1999-00. These estimates take account of the proposed service changes from February 2000 and were provided by ACTION to the Commission in its submission.

Table 5.8 : Forecasted Operating Statement, with February 2000 Service Changes ($'000) - December 1999

	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Expenditure	(67,064)	(71,672)	(67,195)	(66,293)	(65,624))	(65,360)	(66,025)
Revenue	17,871	17,478	17,898	18,705	19,395	20,113	21,435
Government Contribution	37,398	39,295	43,172	42,409	41,090	40,677	38,124
Other	780	166	0	0	0	0	0
Operating Deficit/Surplus	(11,015)	(14,733)	(6,125)	(5,179))	(5,139))	(4,570)	(6,466)
Operating Injection		2,326	1,943	2,569	4,398	4,093	4,093
Operating Deficit/Surplus after abnormal and extraordinary items	(11,015)	(12,407)	(4,182)	(2,610))	313(741)	537(477)	(2,373))
Accumulated Funds	52,578	36,953	32,771	30,161	29,420	28,943	26,570

Source: ACTION and the Department of Urban Services.

As can be seen from the above tables, ACTION is forecasting continued deficits in the future years. The consequence of this is that again ACTION must fund the deficit using accumulated funds. The Commission expressed concern about this continued decline in accumulated funds in the previous price determination. The predictions for future years show a small reduction in the operating deficits for ACTION based on decreases in employee expenses, administration expenses and the continued operation of Network 99, but these are much smaller savings than ACTION initially believed would be made. Given that half of the 1998-99 financial figures were achieved under Network 99 and took into account savings due to the first stages of the EBA, it seems unlikely that there will be further significant reductions in the operating expenses of ACTION without further revisions to services and operating practices.

The major difference between the two positions involves a significant increase in government contributions throughout the period, which appears to be the only means by which ACTION's accumulated savings can be protected.

A detailed breakdown of the government's contribution is shown for the last three years:

Table 5.9: Government's Contribution ($'000)

	1996-97	1997-98	1998-99
Pricing CSO	16,340	13,376	14,189
General Route Off Peak Services CSO	9,038	7,779	9,455
School Services CSO/ School Transport Services	9,387	9,684	9,780
General Subsidy/Injection for Operating Requirements[(a)]	3,000	1,000	2,326
Concessional travel payments (Dept of Education and Community Services)	3,501	3,606	4,159
Special Needs Transport	1,022	1,922	1,712
Resources Provided free of Charge	-	31	-
TOTAL	**42,288**	**37,398**	**41,621**

(a) In 1998-99 the General Subsidy category of government payments is now reported as an injection for Operating Requirements, in a separate section of the financial reports.

Before 1996 Government contributions were treated differently, and therefore there can be no direct comparison between the years before this and the figures since 1996-97. There has also been a change in the way in which government contributions are included in financial statements due to the ownership agreement. The government component of ACTION's revenue is no longer considered a contribution but a charge. The government is charged for services that ACTION must provide.

The three major areas of government support in 1998-99 were in:

- pricing CSOs, which represent reimbursement for offering fares below a commercial level;

- school transport services, which is the estimated cost of subsidised travel for both tertiary and school students;

- general route off peak service CSOs, which represent reimbursement for providing non-commercial off peak services.

As mentioned in the Commission's last price determination, pricing bus services below their efficient costs results in bus users not bearing the full cost of their transport decisions. Theoretically, under open market conditions, a subsidy that lowers the price of public transport should result in travel mode shifts toward it. But this may not be the case in public transport if alternative modes are inappropriately priced, for example, if the cost of a road vehicle use does not adequately reflect environmental or congestion costs that such use may incur on the community, or if the price elasticities are very low, as already discussed.

The Commission reaffirms the need for greater transparency in the allocation of CSO payments. The previous price determination indicated that the Department of Urban Services must specify the minimum service requirements of ACTION, in order that CSO's be apportioned on the basis of these requirements. As part of the ownership agreement, a minimum service level agreement was developed between DUS and ACTION for 1999-2000, which sets outs time bands for feeder, primary and trunk routes. These standards are very supply side orientated with little concern for patronage demand. The minimum service agreement also sets out a reliability objective of 99.8% of all scheduled services that operate each day. Any variations to ACTION's services, greater than 1% of the network, must be agreed upon with DUS.

The Commission also reaffirms its concern that government funding support in total for ACTION continues to increase. The magnitude of these increases is indicated in Table 5.10, where total government support required for the next five years as at December 1999 is expected to be between $4.8 million and $6.4 million higher than previously projected.

Table 5.10 : ACTION Additional Funding Requirement from Government ($'000)

1999/2000	2000/2001	2001/2002	2002/2003	2003/2004
4,865	6,114	6,400	5,732	5,036

Source: Department of Urban Affairs

The Commission reaffirms the need for greater transparency in the allocation of CSO payments to ACTION. Not unreasonably, ACTION is concerned that the quantum of the CSOs (more than $40 million), representing around 70% of its total revenue, is sometimes seen to be a reflection of its inefficiency rather than the explicit realisation of government policy. On top of this are the figures in the above tables that still indicate deficit financing even after CSO payments. The Commission is concerned that the calculation of the various CSO payments may not fully represent the value of

the services which ACTION actually provides. As part of the conversion of ACTION to a statutory authority, the Commission would expect to see at the time of the next review clearer and more justifiable CSO payments.

To the extent that explicit CSO payments may have to increase to match existing services provided, the Commission would expect to see a corresponding reduction in general additional funding for ACTION.

5.3.2 Cost Recovery

Cost recovery for 1999-2000 is forecast by ACTION to be 25%, as shown in Table 5.11 below.

Table 5.11: Cost Recovery Trend

	1997-98	1998-99	1999-00[(a)]	2000-01[(a)]	2001-02[(a)]	2002-03[(a)]	2003-04[(a)]
Fares	16,583	16,266	16,791	17,605	18,295	19,013	20,335
Operating Cost (Total Expenses)	67,064	71,672	67,195	66,293	65,624	65,360	66,025
Farebox Cost Recovery	**24.7%**	**22.7%**	**25.0%**	**26.6%**	**27.9%**	**29.1%**	**30.8%**

(a) ACTION and DUS forecasts (December 1999), Includes February service level changes.

Table 5.12 compares ACTION's recent Farebox cost-recovery performance with three other operators.

Table 5.12 : Farebox Cost Recovery

Public Bus Operators	Cost Recovery
ACTION	22.7% (1998-99)
Metrobus (Tasmania)	26.9% (1998-99)
Sydney Buses	55.7% (1998-99)
Newcastle Services[1]	20.8% (1998-99)

1. Newcastle Services include Ferry operations.

This table reflects fewer examples than that given in the Commission's previous determination because of reporting changes in other jurisdictions which do not facilitate direct comparison. Nevertheless, the Commission considers that there has been no material change in the relativities and that ACTION remains at the lower end of the cost recovery range.

Cost recovery is affected by changes to either costs or non-government revenue. Given the earlier discussion on efficiency, the Commission would want to ensure that strenuous measures are in place to effect substantial improvements in operating efficiency, so that such low cost recovery levels are not maintained through excessive

cost structures. On the other hand, a cost recovery outcome also reflects particular fare structures, which may be unrealistically low in commercial terms but which may be endorsed by government for broader social policy reasons.

There was an expectation that Network 99 would lead to broadly similar cost recovery levels as seen over recent years. This expectation was based on expected fare revenue increases, associated with increases in patronage, being offset by higher costs due to service level increases, higher statutory taxation and charges applied to ACTION. However, 1998-99 cost recovery fell by 2%. Patronage did in fact rise around 5% according to the recent market analysis document, but because of costs and ticketing distribution there was a fall in cost recovery. ACTION's actual costs were higher than predicted in 1998-99, due in part to the operation of Network 99. The reasons for this have been discussed earlier in the report. Another unexpected outcome associated with the operation of Network 99 and the zonal ticketing system has been a shift from Faresaver to periodical tickets. The purchase of Faresaver tickets declined by 7% in the first five months of Network 99 and ACTION believes that patrons have shifted towards monthly periodical tickets that include a discount of at least 20% on a single zone fare saver ticket.

From Table 5.11 above, it can be seen that ACTION is predicting an improvement in cost recovery based on a reduction in costs associated with a reduction in service levels from those initially introduced as part of the new network. These reductions affect low patronaged services although the level of service nowhere falls below the minimum service level agreement with DUS. The effects of the changes to both costs and revenues are expected to increase cost recovery, to around 26.6% in 2000-01.

5.3.3 Rate of Return

The Commission indicated in its previous determination that it had cited little evidence that ACTION had applied a rigorous assessment of new investments in terms of prescribed rate of return criteria. It also stated that ACTION needed to establish clear investment guidelines for capital decisions, for bus acquisition and replacement, consistent with accepted commercial practice.

The Commission has been provided with information on ACTION's proposed bus fleet replacement program. ACTION has recently extended the useful economic life of its buses from 15 to 18 years, based on other operators' practices, ACTION's bus kilometres travelled, the state of the ACT road network and the value of the second-hand bus market. ACTION stated that an average age of 10 years was considered optimal, although no supporting evidence was given. The Commission notes that the average age of the STA fleet in Sydney is not allowed to exceed 12 years, not 10 years.

According to ACTION, the weighted average age of its bus fleet in 1998 was 7.7 years. In 1999, the average age has increased to 8.4 years. Both of these numbers are

less than ACTION's optimal figure of 10 years, which implies that ACTION can allow its fleet on average to age further before expending major funds on replacement.

ACTION claim that there are advantages in aggregating annual bus replacement expenditures to ensure smoother contractual arrangements and probably being able to negotiate a more competitive price. However, in terms of like-for-like replacement, the Commission does not believe that a program of 25 new buses per year starting in 2001 is necessary to ensure that the average age of buses meets these criteria, particularly as there are currently four different bus types in operation. Almost 80% of the fleet are rigid buses, while a further 9% are articulated buses which are now used only during the peak periods and only for school transport. The most recently acquired 25 midi buses are used for all forms of service, while the 21 mini buses are used for special needs transport (SNT).

Thus, the economies of scale associated with more consistent bus purchases may not be as great as ACTION suggests. Secondly, the limited application of articulated buses suggest that their capacity would likely be replaced by rigid buses. Furthermore, the proposed schedule for replacement, representing 25 new buses annually, appears to lead to a significant reduction in capacity between 2007-08 and 2015-16. In the first six years from 2001-02, the number of new buses coming onstream cumulatively exceeds the number of buses being retired because of expiry of their commercial lives. For the next eight years, the total number of buses in the fleet would be much lower than the current numbers - the difference peaks in 2011-12 by which time 344 buses would have been retired and replaced by only 275 new buses.

While longer-term decisions about bus replacement may be better made closer to the time in the light of potential changes to market conditions, the Commission is concerned that ACTION is proposing a replacement schedule which appears to leave a significant shortfall of required bus capacity towards the end of the next decade. Clearly, this could be overcome by retaining the older buses in service for longer than 18 years, but there is no indication in ACTION's statements to suggest that this will be the case. On the other hand, if there is no expectation about excess demand, the Commission is concerned that this implies that there is currently excess capacity, ie. that there are more buses in service than are required.

However, the acquisition of new buses is affected not only by economic imperatives of a generally ageing fleet with associated increases in maintenance costs and reductions in service reliability and quality. It is also affected by exogenous factors such as the type of buses which is driven by environmental concerns and by social requirements such as disability criteria. If more serious consideration is given to the acquisition of CNG buses and of buses with appropriate disability access, to comply with the Commonwealth Government's *Disability Discrimination Act* (1992), the Commission would expect that these would contribute to the need for earlier rather than later acquisition of new buses.

The Commission notes that ACTION is not proposing to endorse a bus replacement program in the current financial year but is looking for ratification of its proposal for 2000-01. In the light of the above comments, the Commission believes that not enough detailed analysis has yet been undertaken to develop an optimal bus replacement program. Such analysis should take account of the following:

- the implications of the lumpiness of the ageing profile of the current fleet;
- to what extent the commercial lives of buses will need to be extended beyond 18 years for a given annual intake of new buses;
- the advantages and disadvantages of acquiring CNG buses;
- the choice of bus types and sizes; and
- annual budgetary impacts and the benefits of "smoothing" out funding peaks.

The Commission expects that this analysis would be taken up by the new statutory authority, which would also have the responsibility for working out appropriate funding arrangements.

5.3.4 Best Practice 'Commercial Price'

The average fares revenue per passenger boarding for ACTION bus services is currently $1.08. After adjustment for discounted tickets, concession usage and students, this is equivalent to an average adult single fare of $2.15. Because a zonal fares structure applies in the ACT, it is not possible to estimate the average passenger journey length.

An adult single fare of $2.15 is equivalent to a journey length of 5.8 kilometres if the NSW private bus operator urban fare scale is applied. The Commission understands that the private operators serving outer Sydney receive no direct operating subsidies although they are compensated for revenue forgone for the carriage of concession passengers and schoolchildren. The NSW private bus operator fare scale is therefore a reasonable proxy for a commercial price for bus travel. Given the geographical distribution of the ACT population, an average journey distance of 5.8 kilometres would appear to be at the low end of the expected range. This suggests that the base ACTION fares are also low in comparison with commercial bus fares in similar urban operating environments. However, this comparison provides an indication only since there are other factors which would influence the level of commercial fares including the passenger demand profile, spread of service, availability of alternative modes and bus journey speeds.

The service levels currently operated by ACTION are between 30% and 50% higher than the specified Minimum Service Levels (MSL). The operation of services above the MSL is a commercial decision on the part of ACTION. It would be expected that

these additional services produce fares revenue income which exceeds the marginal cost of operation. Given the deficit incurred by ACTION, it is appropriate to review the net revenue benefit due to the services operated in excess of the MSL.

The Commission has reviewed some of the performance indicators derived from data provided by ACTION to support this analysis. Overall, there are 0.72 passenger boardings per bus revenue kilometre on the current ACTION service levels. This is equivalent to $0.57 fares receipts per revenue kilometre.

As indicated, ACTION has made a commercial decision to operate services additional to the MSL requirements. The Commission has estimated the potential impact on revenues and costs of operating only the MSL services. For this estimate, an overall elasticity of demand to service changes of 0.5 has been used. It is recognised that a marginal rate can only give an indication of the impact of such a large change in the level of service, and therefore, a more detailed study would be required to determine the exact impact of a large service change.

On the cost side, the Commission has separated the fixed and variable costs of bus operation and has included cost savings from the variable measures only. The current distribution of costs is 41% fixed costs and 59% variable costs. Fixed costs include administration, marketing and bus leasing costs. Variable costs include bus operating costs, such as drivers, and bus running costs as well as maintenance costs. The variable costs are calculated to be $2.27 per revenue kilometre.

The MSL network would increase the passenger boarding rate from 0.72 to 0.93 boardings per kilometre. At current fares levels, revenue would be about 17% lower overall due to the patronage reduction in response to the lower service levels. Costs would fall by 20%. In a full year, based on the network in August 1999, the net cost of service provision would be reduced by $11.5 million if ACTION were to operate to MSL only. This figure is higher than the predicted annual deficit assuming current service levels are retained.

ACTION has already moved towards the adoption of lower service levels with the service change introduced in February 2000 and consequently the full year net cost of service provision if ACTION were only to operate to MSL would be less than $11.5 million. This approach is sound in that it allows the operator to monitor the impact on demand and revenue of adjusting the service frequency on the poorest performing routes operated above the MSL requirements. The data required for such an analysis was not available to the Commission and would require a detailed assessment which, it is expected, ACTION will undertake prior to introducing any further timetable changes.

The data available to the Commission indicates that the supplementary routes, which are services that are entirely above the MSL requirements, do not show particularly high boarding rates. In reality, some journeys may be worth operating if fares revenue is high or costs are low when assessed at an individual journey level. If individual

supplementary services were run, the net financial position for ACTION in comparison to the MSL network would be further improved, as the services would not be run, in a commercial operating environment, if the revenue gained from the supplementary services was not greater than the costs incurred.

Clearly, further discussions about any future changes to the network would provide the basis for an explicit determination of appropriate route CSO payments as part of the negotiated purchaser/provider agreement between ACTION and the Department.

In terms of assessing the "best practice commercial price", the current services which ACTION provide are expected to cost $66.3 million in 2000/01, as indicated in Table 5.13.

ACTION has been improving its efficiencies but it still incurs additional costs because of its public ownership. These include higher Comcare charges and concern about the relating size of its IT costs. While some of these may change when it is transformed into a statutory corporation, its current situation is estimated by INDEC to constitute a cost base around $8.3 million higher than that which an efficient private operator would incur. This is based on INDEC's figure of $102.59 per service hour, quoted in ACTION's submission to the Commission. At a revised number of 565,000 service hours in 1999-2000, this produces a total cost of $58 million, and compares with ACTION's revised budget for 1999-2000 of $67.2 million. The differences comprise a number of employment conditions (higher public sector superannuation, higher Comcare premiums, higher sick leave and annual leave entitlements), reporting costs (eg. ministerial inquiries) and depreciation expenses (associated with ACTION having to carry a higher asset valuation than a commercial operator).

In addition, an efficient operator would need to obtain a return on investment and achieve an acceptable profit. For the purposes of calculating a "commercial" price, the Commission has assumed that this would be around $5 million, which represents around 11-12% return on current net assets.

The following table illustrates the revenue requirement estimate if a private operator were performing the bus services.

Table 5.13: Best Practice Commercial Price

1. Proposed Fare Increase (+3.1%)	**$M**	**$M**	
Costs:			
ACTION's actual costs		$66.3	
Efficient private operator cost savings	$8.3		
Sub-total		$58.0	INDEC margin
Rate of return/profit – assume:	$5.0		
Revenue requirement for efficient operator		$63.0	
Revenues:			
Farebox revenue	$17.6		ACTION's forecast for 2000-01
Service CSO	$10.4		pro rata increase on 1999-2000 government contributions
Schools CSO	$10.7		pro rata increase on 1999-2000 government contributions
Concessions CSO	$4.8		pro rata increase on farebox revenue
Other revenue	$1.1		as in 1999-2000
Sub-total		$44.6	
Revenue shortfall to efficient private operator		$18.3	
Revenue shortfall to ACTION		$21.7	
2. Commercial Fares (no Pricing CSO)			
Costs:			
ACTION's actual costs		$66.3	
Efficient private operator costs	$8.3		
Sub-total		$58.0	INDEC margin
Rate of return/profit – assume:	$5.0		
Revenue requirement for efficient operator		$63.0	
Revenues:			
Farebox revenue	$32.0		82% increase
Service CSO	$10.4		pro rata increase on 1999-2000 government contributions
Schools CSO	$10.7		pro rata increase on 1999-2000 government contributions
Concessions CSO	$8.7		pro rata increase on farebox revenue
Other revenue	$1.1		as in 1999-2000
Sub-total		$63.0	
Revenue shortfall		$0.0	
Resultant government support:			
without pricing CSO (fares up: 82%)		$29.8	
with pricing CSO (no increase in fares)		$44.3	

If it is assumed that the existing service, student and concessions CSOs and other revenue item corresponded to expectations for 2000-01, the revenue shortfall for an efficient operator, at the proposed fare levels based on the Draft Direction (ie. up 3.1%), is $18.3 million. This would broadly correspond to a pricing CSO, ie. the difference between farebox revenue which an unconstrained operator would charge and the proposed fare levels. To the extent that exogenous costs increase (eg. diesel fuel), the amount of the pricing CSO would rise correspondingly.

Under these assumptions, farebox revenue would need to increase by 82% in order to eliminate the pricing CSO. Explicit CSOs to an efficient private operator on the above basis, including pricing CSO, would amount to $44.3 million if the fares are constrained to the levels consistent with the Draft Direction.

In practice, this derived farebox revenue increase would need to be exceeded because the above calculations have assumed no elasticity response. In other words, it has

assumed that the level of patronage is not adversely affected by such a large fare increase. Clearly, this is unreasonable although it is difficult to assess what the effects would be because the change is outside the normal range for elasticity applications. It may be that such an increase would have the effect of deterring large numbers of passengers to the extent that the farebox revenue outcome would actually be lower than it is currently. Furthermore, the introduction of the GST from 1 July 2000 will further complicate the likely demand response, taking the total fare increase beyond levels for which available elasticity information applies.

The Department of Urban Services acknowledged in the public hearing that it was not the intention of the government to increase fares to such a "commercial" level, acknowledging that the position would not be financially sustainable. However, the Commission believes that this assessment provides a basis for a negotiated agreement between ACTION and the Department as part of the purchaser/provider discussions as to the scale of the differences between actual fares, with a modest increase, and "commercial" fares.

The Commission notes that these calculations assume that a net cost of government ownership (ie. the difference between ACTION's actual costs and the revenue requirement for an efficient private operator) is an additional $3.3 million, assuming that ACTION is not required to earn a profit or return on assets. This difference could be provided as an explicit operating injection. If the asset base were reduced, as a result of an agreed reduction in the valuation of its depots, ACTION's actual costs would fall because of lower depreciation expense and so would the assumed rate of return; the net effect between ACTION's actual costs and the revenue requirement for an efficient operator would be broadly similar.

5.4 Environmental Issues

- *The principles of ecologically sustainable development referred to in subsection 7 (2) of the Territory Owned Corporations Act 1990 as modified by virtue of subsection 4(I) of that Act (Part IV 20.(2f)).*

- *Considerations of demand management and least cost planning (Part IV 20. (2h)).*

5.4.1 Ecologically Sustainable Development

Ecologically sustainable development (ESD) requires the implementation of improved valuation and pricing of environmental resources. Urban public transport is a critical component of government initiatives to reduce air pollution. ACTION has the potential to remove up to 80 private cars from the road per bus round trip, which provides improvement in air quality. In the absence of a road pricing regime, incorporating higher parking charges, the Commission realises that significant price rises could result in customers switching to alternative modes of transport, mainly cars, which have higher environmental costs.

As indicated in the previous price determination, the Commission questions ACTION's continued lack of CNG or other low emission buses. CNG powered buses or even hybrid buses, powered by a combination of battery and small diesel engines, have significantly lower emission levels compared to conventional diesel buses. If ACTION were to increase the number of such buses, the externality benefits, in terms of environmental savings, of ACT public transport would further increase.

ACTION currently has two re-engined CNG buses which they claim are unreliable and costly to maintain. The experience of other public bus companies is that re-engined buses do tend to be unreliable, but new CNG buses tend to work suitably. The Tuggeranong bus depot is fully equipped with CNG fuelling capabilities, and ACTION should look to obtaining CNG buses as part of their bus replacement program. The view of ACTION is that CNG buses will be considered when evaluating new bus acquisitions, and the decision on whether CNG buses are purchased will be guided by technical and operational performance, financial analysis of costs and benefits and government policy directives.

In attempting to satisfy the principles of ESD, the Commission understands the need to balance the requirement for government support for higher bus patronage outcomes and the payments by users.

The ACT government has recently issued its Greenhouse Strategy and a discussion paper on "Integrated Land Use and Transport Planning in the ACT". These refer to the contribution which transport contributes to the ACT's greenhouse gas emissions (22%) and indicates that 84% of those emissions come from private passenger vehicles. The Commission acknowledges that patronage levels and revenue expectations for ACTION need to take into account broader environmental objectives and the willingness of the community to adopt appropriate pricing signals and other measures to encourage public transport, including the price and availability of parking and the provision of road infrastructure. Discussion of these issues and the adoption of acceptable policy positions will take some time and will extend beyond the timeframe of this Direction.

The Commission therefore needs to adopt a position which is not opposed to the possible outcomes of these deliberations and which appropriately balances the financial imperatives as outlined in the terms of reference and the wider role which ACTION is asked to provide. While the Commission cannot change the road infrastructure network or car parking levels, both of which, due to their abundance, have significant impact on transport users' choice of mode, the Commission endorses the move towards a more integrated approach to these issues and is of the view that its price Direction does not imperil the outcome of these considerations. In effect, given the evidence presented to it, the Commission does not believe that the fare increases proposed, particularly in the context of some rationalisation of the discounts offered, will act materially to inhibit patronage growth within an efficient and equitable

framework for the provision of public transport services in the ACT[1]. On the other hand, the moves, specifically encouraged by the Commission, to develop more transparent community service obligations and associated payments between ACTION and the Department will facilitate a more focused approach to ensuring a sustainable public transport service as part of broader community objectives.

5.4.2 Demand Management

ACTION's improved fleet management has resulted in the utilisation of almost all available vehicles in the morning and afternoon peak (333 of 364 buses not including Special Needs Transportation). It is these morning and afternoon peaks which determine fleet size and constrain any reduction in bus numbers. The Commission is pleased to note that since 1991 the proportion of buses in excess of maximum daily demand has fallen by nearly 50% from 16.6% to 9%.

For ACTION, weekday journeys comprise nearly 90% of all journeys. With the morning and evening peaks constituting approximately 40% of weekday services, this percentage does not appear to be high given Sydney Buses weekday peak period journeys comprise approximately 45% of all journeys. ACTION has significant lulls on weekend and night services that receive disproportionate amounts of resources. Weekend services carry around 8% of weekly patronage and consume about 12% of resources, while night services carry only 2.5% of passengers and around 10% of resources. Demand management within given minimum service levels may allow ACTION to reduce the level of resources used in these areas. The Commission has already noted that ACTION is planning to make modifications to services to reflect this.

The introduction of Network 99 brought with it increased through routing and extended services to developing areas of the ACT such as Gungahlin. This equates to an increase of around 20% in scheduled services without increasing the size of the bus fleet. The increase in service has mainly occurred in off peak periods. Management of the Network 99 routes is necessary if ACTION is to achieve efficient operating levels. Review of the patronage levels on routes, and the bus supply to these routes, must be an on going process. As already discussed, in September 1999, ACTION undertook a review of routes which led to the removal of service along some routes and changes to the timing of other routes, and further changes were implemented in February 2000.

ACTION's charter service revenue has fallen in 1998-99 to $530,000. This is a significant change in trend from previous years given that between 1993-94 and 1997-98 charter service revenue had grown from $552,000 to $626,000. The reasons for this decline are due to the introduction of Network 99. ACTION has more timetabled requirements for its bus fleet and does not have the same level of spares to

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[1] The Commission acknowledges that the introduction of the proposed GST from 1 July 2000 could alter relative prices to the disadvantage of public transport and towards private transport, but believes that underlying cost increases in fuel costs in particular could in part counter this effect.

use as charter services. Also, there has been a fall off in demand, with reduced school charters because of lower budgets and an increase in competition for such services from other operators. ACTION forecasts a similar level of charter service revenue in 1999-2000, around $500,000.

5.5 Proposed Fare Adjustment for 2000-01

In reaching a final determination on fares for 2000-01, the Commission has been mindful of the fact that ACTION has not increased its fares since the introduction of Network 99 and even at that time, the fare adjustments were designed to be revenue neutral. The Commission is also anxious to move towards some improvement in farebox recovery, but recognises the need to achieve a balance between fare increases (and likely impact on patronage) and achieving greater cost efficiencies.

The Commission has decided to allow a price increase consistent with the setting of a price cap such that the increase in average fares in 2000-01 should not exceed the rate of inflation over the last two years. A two year period has been adopted in recognition that ACTION did not make any increase in its average fares in 1999-2000 despite the Commission allowing an increase consistent with inflation in the previous 12 months.

In terms of the practical application of this average fare adjustment, the Commission would normally specify the relevant period in terms of the Consumer Price Index series released by the Australian Bureau of Statistics. While the Commission will continue to use the ABS CPI series, in order to allow ACTION sufficient time to prepare revised fare estimates while still incorporating the latest estimates of inflation, the Commission will adopt an estimate of the CPI increase in the March 2000 quarter. To the extent that this estimate does not coincide with the actual results for the March 2000 quarter, the Commission will adjust any future decision on fares to be made for the year 2001-02.

Thus, for the purposes of this Direction, the Commission will direct that the increase in average fare prices for the financial year 2000-01 should not exceed the sum of the increase in the Australian Bureau of Statistics Consumer Price Index All Groups for Canberra for the 21 month period ending December 1999 plus one percentage point. Thus based on the Canberra All Groups CPI results taken from Table 1, *Consumer Price Index* ABS 6401.0 December Quarter 1999, the increase in the average fares for 2000-01 will be 3.6% (that is 2.6% + 1.0%).

SCHEDULE 1. PRICE DIRECTION FOR ACTION'S REGULATED SERVICES

Methods for Ascertaining Maximum Prices to be Charged Under the Independent Pricing and Regulatory Commission Act (1997)

This Price Direction specifies the method for ascertaining maximum prices for ACTION's regulated fares and charges applicable from 1 July 2000 to 30 June 2001.

For the period commencing 1 July 2000, the Commission's price direction for ACTION is that:

- without reference to the impact of the goods and services tax (GST), the increase in average fare prices for the financial year 2000-01 should not exceed the sum of the increase in the Australian Bureau of Statistics *Consumer Price Index*, All Groups for Canberra for the 21 month period ending December 1999 and one percentage point;

- given the size of the discounts available for the purchase of periodical tickets, the allowable increase in the average fare as outlined above should be focused on reducing the discounts for these tickets and, to a lesser extent, FareSaver 10s. This should be addressed by raising the fares of periodical tickets rather than lowering the cash fares;

- consistent with government policy, concession tickets should be set at 50% of the full adult equivalent tickets and student tickets at 35%. Where greater discounts than these currently exist, some fare tickets may need to be increased. In addition, this Direction does not prevent government from making a policy decision to redefine the category of persons eligible for student or concessional fares;

- without prejudice to the average fare increase allowed by this Direction, a further increase of 8.0% be applied across all fares and all other direct charges made by ACTION (excluding CSO receipts and government subsidy funding) to reflect the net impact of the GST after allowing for anticipated embedded tax cost savings;

- given the range of different fares available, ACTION is required to submit to the Commission for formal endorsement at least three weeks prior to any new fare increase being announced, a revised fare table which indicates which fares it proposes to increase while ensuring that its average fare prices weighted by the expected patronage in 2000-01 do not exceed the cap set by this Direction;

- this Direction is made for one year only.

Attachment 1: Terms of Reference

Australian Capital Territory

Independent Pricing and Regulatory Commission Act 1997

Declaration of Regulated Industries Under Section 4
and
Reference for Investigation Under Section 15
and
Specified Requirements in Relation to Investigation Under Section 16

Instrument No 202 of 1999

Reference for Investigation Under Section 15

Pursuant to subsection 15(1) of the Independent Pricing and Regulatory Commission Act, I refer to the Independent Pricing and Regulatory Commission (the 'Commission') the matter of an investigation into the determination of prices for public transport bus services supplied by ACTION within the Territory for the period from 1 July 2000 until 30 June 2001.

Specified Requirements in Relation to Investigation Under Section 16

Pursuant to subsection 16(1) of the Act, I specify the following requirements in relation to the conduct of the investigation:

(a) The final report is to be provided to the Minister of Urban Services in relation to determined public transport prices for the period from 1 July 2000 to 30 June 2001 and the determination of the best practice 'commercial price' (specified below) – by 10 March 2000;

(b) A draft report in relation to determined public transport prices for the period from 1 July 2000 to 30 June 2001 is to be provided to the Minister for Urban Services and be made available for public examination and consultation in accordance with Section 18 of the Act – by 13 December 1999;

The Commission in conducting its investigation into the determination of prices shall specifically determine a price path based on best practice 'commercial price'. This will be done using best practice cost benchmarks taking into account potential patronage in the Territory and the service levels specified by the Department of Urban Services as the purchaser on behalf of the Territory Government.

Dated this twelfth day of August 1999

BRENDAN SMYTH
MINISTER FOR URBAN SERVICES

ATTACHMENT B: INVESTIGATION TIMETABLE

STAGE	DATE
1. Release of draft report and price direction for 1 July 2000 to June 2001	20 December 1999
2. Closing Date for receipt of written submission in response to the draft report from, ACTION, the Department of Urban Services, customers and interest groups	1 February 2000
3. Public Hearing	15 February 2000
4. Release of the Commissions' Final Report and Price Determination for 1 July 2000 to 30 June 2001	10 March 2000

ATTACHMENT C: SUMMARY OF SUBMISSIONS

ACTION

- ACTION's submission supports the draft price direction and believe that it allows them to achieve their fare revenue objectives.

- There was a 20% increase in service associated with Network 99, which produced a 5% gain in patronage. ACTION states that this is not a sustainable position and as such they have reduced services. Additional government funding has been included in the Territory's draft budget to support this new level of service.

- ACTION also expresses some difficulties with costs. Some of these were due to external factors, but there have also been some unanticipated changes in cost behaviours, such as staff turnover and workers compensation. There have also been costs associated with the increase in services, greater than forecasted.

- There have been substantial changes in customer behaviour resulting from the introduction of a zonal fare system. There has been a switch in ticket usage from the Faresaver to monthly and term tickets.

- Stated that the GST is likely to further reduce the attractiveness of using public transport in favour of car usage. Because of this the reduced patronage growth projections will be difficult to achieve.

- ACTION is of the view that it has made good progress on reducing costs, but must continue to work towards achieving industry competitive costs to become a viable operator.

- ACTION believes further work is needed to improve the transparency of its funding arrangements, particularly in terms of CSO payments. Believes that the determination of a commercial fare is essential.

Conservation Council

- Would like to see more research and analysis in to the cost of providing a network for road users and comparing this to the cost of providing a public transport system. As part of this the Council would like to see a report undertaken on parking charges and road user charges in the ACT.

- Believes that the reduction in the frequency of ACTION's services will result in less bus patronage and more use of the private car.

- Recommends that for ecologically sustainable development principles to be met, the following must be put in place.

- Impose higher parking charges and fees for those that use private cars.
- Implement more bus lanes to make bus travel quicker than car travel.
- Provide two ticket validators in each bus to speed up the processing of tickets at bus stops.
- Increase the frequency of service for ACTION buses to make it more attractive to the residents of the ACT.

- The Council is of the view that it takes a number of years for people to change their travel behaviours and as such Network 99 should have been given longer to operate at the original levels of service.

- The Council requests more details of the minimum service levels, both what they are at present and how the Department of Urban Services set these levels. Recommends that the government give ACTION a subsidy over and above the minimum service level subsidies for providing more environmental benefits to the community.

- The removal of the zonal fare system and replacement with a single fare for two hours duration. It is believed this will encourage more long distance travellers, those that create the most greenhouse emissions as well as wear and tear on the roads, to travel in cars.

- The Council believes that the current budget pressures are the reason that ACTION has not converted a higher proportion of their bus fleet to CNG buses. Believes that the ACT should fund the purchase of CNG buses for the ACTION fleet.

- Believes that IPARC should recommend to the ACT government that they make changes to provide a more ecologically sustainable transport system.

Association of Parents and Friends of ACT Schools Inc (APFACTS)

- Believe there is a lack of information concerning student travel and the impact of 1999 price changes on ACTION'S revenue.

- Requires clarification on the changes in student fares, in terms of the definition of "overall cap" and "the highest student fare" in the draft price direction.

- APFACTS are looking for more information on the GST and the likely effect on student fares. Asks that student cash fares be set so that including GST they remain at $1 for one zone and $2 for all zones.

- Concern is expressed about the time element of fares. Some students have to purchase two tickets to go home in the afternoon due to the one-hour transfer

element of fares, if there is no appropriate connecting bus. APFACTS feels that a reduction in services may exacerbate this problem.

- Are convinced that direct school service represent the more cost effective use of ACTION's resources because of the high loading rates.

- Would like more indication as to the extent of public reaction to the increase in student fares due to the zonal network, especially those students that travel two zones.

- Expressed great difficulty in understanding how CSO's are estimated and adjusted. Agreed with the Commission that there has to be more transparency in the determination of CSO's. Particularly interested in how CSO's are calculated on school services and concessional travel.

- Mentioned that the replacement of articulated buses, which currently provide the school services, with rigid buses may not provide the savings mentioned in the draft report, because these services currently operate with high levels of passenger numbers.

ACT Council of Social Services Inc (ACTCOSS)

- Believes that the focus is on the financial aspects of ACTION at the expense of the social equity elements of public transport in the ACT. The ACT is characterised by lower density housing which means that access to vehicular transport is important for social and vocational activities.

- States that in their view the increases in patronage numbers have been under estimated, due to the through running of buses under Network 99. In determining equivalent patronage numbers, the Council believes there has been under estimation.

- Recommends that there is a review of zoning, due to the increased fares faced by some bus users under the zonal system.

- Expressed a view that ACTION look into professional behavioural change advice to influence increased public transport usage in the ACT, before making too many changes to Network 99. Stated that this has been successful in other areas of government.

- Believes that there is a need to more comprehensively determine the costs imposed on the community by the private transport system.

- Public transport provision should not be disadvantaged by higher cost obligations, such as superannuation, which are imposed on operators due to their public ownership.

Dudley Horscroft

The submission poses three main questions.

- Requests that the Commission should detail how the pricing CSO payment will vary with a change in the fare levels before recommending any adjustments to fares.

- Would like to see more detail on the level and determination of minimum service levels between ACTION and DUS.

- Expresses a view that the Final Price Direction can not be expected to deliver a satisfactory result taken in isolation, that is, a determination or study of prices for road infrastructure and parking services needs to be undertaken.

- Believes that fares and the level of service be determined on other grounds, such as, ecological.

- Believes the service changes are not conducive to increasing patronage or the ACT government's greenhouse strategy. States that price rises for ACTION, will tend to shift patronage from more fuel and resource efficient public transport to private passenger cars.

- Looking for more information on the effect of GST on ACTION's pricing.

- Believes that there is justification for increasing cash fares in the peak period and reducing them in the off peak. Suggests $2.5 for services arriving in the City or Woden in peak hours.

- Suggests a modification of zone boundaries for students, so as to increase the number of schools in a single zone.

Elizabeth Henderson

- Believes that the removal in the concession quarterly, as part of the shift to a zonal system, is too high, given that the cost of 3 monthly tickets are 57% higher. Expressed a view that concessional and periodical tickets need to be discounted at a very high rate to encourage people to use public transport rather than cars.

- Notes that the ACT Greenhouse strategy recommends increasing public transport usage to cut car fuel emissions. Believes that cutting back services and raising fares is not the way to encourage patronage.

- Expresses a view that two zones carry the same cost as three zones seems unfair.

Attachment D: Referred Material

Public Transport Fares Model and Prices (Stages 1 and 2), Booz Allen and Hamilton (1998)

An Efficient Cost Framework for ACTION, INDEC Consulting (1998)

Public Transport Fares, CityRail and STA Buses and Ferries, Independent Pricing and Regulatory Commission (1998)

Parking Fees and Bus Usage in the ACT, A Discussion Paper (1998)

Review of ACTION's Services, Roger Graham and Associates (1997)

Options for Changes to Student Fares, Roger Graham and Associates (1998)

Submission to the Legislative Assembly Standing Committee on Urban Services - Inquiry into ACTION Bus Services for School Children, (1998)

ACT School Bus Service Safety Issues, Roger Graham and Associates (1999)

Annual Report (1993-94 to 1998-99), Department of Urban Services

Canberra at the Crossroads, A way out of the transport mess, Conservation Council of the South East Region & Canberra (1997)

Integrated Land Use and Transport Planning in the ACT, Department of Urban Services, (1999)

ACT Greenhouse Strategy, Department of Urban Services, 1999