

INVESTIGATION INTO ACTEW'S ELECTRICITY, WATER & SEWERAGE CHARGES FOR 1997/98

MAY 1997



ACT ENERGY AND WATER CHARGES COMMISSION

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Foreword

This report contains the outcomes of the Commission's first investigation into, and price direction for, ACTEW's charges for electricity, water and sewerage monopoly services.

The price direction is for the 1997/98 year only. Considerable data collection and analysis will be required prior to the determination of a medium term price path.

In giving its direction the Commission has had to balance the interests of the various stakeholders, including customers and the Government as owner. The Commission has also taken into account the commitment of all Australian Governments to pricing reform including a greater reliance on usage based pricing and full cost recovery.

The price direction provides for increases in the charges for water and sewerage services. The extent of the increases are not as great as those proposed by ACTEW, however, they will improve the "apparent" sub-commercial return earned by ACTEW on these activities and provide for continued, community supported, environmental expenditure. The provision of water and sewerage services is essential for public health and safety. However, water is a scarce resource and sewage discharge can have adverse environmental consequences. It is therefore essential that prices be adjusted over time to reflect the full economic cost of the provision of these services.

The adjustment process may create financial hardship for some members of the community. The extent of assistance provided to those so affected is a matter for Government, however, the Commission has sought to avoid the full extent of price increases that were included in ACTEW's proposals.

ACTEW claims that the business community currently subsidises domestic electricity consumers to the extent of \$16M. Such cross subsidies may lead to distortions in the use of electricity. To offset the cross subsidy ACTEW had proposed substantial price increases for domestic consumers and significant reductions for business. The Commission has directed that ACTEW reduce its overall electricity price while limiting the extent of any increase in domestic bills to the movement in the CPI. This will enable ACTEW to reduce the cross subsidy, but similarly with water and sewerage, minimise the impact on households.

ACTEW is in a strong financial position. This position will be strengthened by efficiency gains and reductions in the wholesale price of electricity. The Commission believes that there is scope for efficiency gains consistent with recent investment in information systems.

Based on the information currently available to the Commission the outlook for the medium term is one of price restraint. The main factors affecting future charges are:

- the scope for cost savings
- developments in the national electricity market
- environmental standards
- the need for structural reform of prices to reduce cross subsidies
- shareholder expectations.

Paul Baxter
Commissioner
1 May 1997

1. INTRODUCTION

The ACT Water and Energy Charges Commission (the Commission) was established in August 1996 to investigate and determine maximum prices to be charged by ACTEW Corporation. This first pricing review has taken place over the period from September 1996 to April 1997. The Commission is being assisted in the investigation by the Independent Pricing and Regulatory Tribunal of NSW (the Tribunal).

This report describes the outcome of this investigation, determines ACTEW's charges for 1997/98 and discusses issues relating to ACTEW's longer term price path for the monopoly electricity, water and sewerage services. The Commission's direction to ACTEW is set out in Schedule 1 of this report.

Because of data limitations, the Commission considers that it is not in a position to determine a medium term price path for ACTEW. However, the Commission has undertaken a preliminary review of ACTEW's future revenue requirements and its proposed price reforms to 1999/2000.

2. APPROACH TO PRICE DETERMINATION

This investigation has involved extensive consultation including public hearings and discussions with government departments, industry and interest groups. Meetings with ACTEW have also taken place, including discussion of a draft determination in early February 1997.

In making recommendations, the Commission is required by legislation to have regard to a wide range of matters including protection of customers from the abuse of monopoly power, protection of the environment, costs and efficiency, rates of return, cash flow requirements, standards of service and social impacts. The outcomes of the investigation are summarised below together with supporting considerations.

3. SUMMARY OF OUTCOMES OF INVESTIGATION

For the 1997/98 year the Commission's determination implies:

- *Reducing average retail electricity charges by 5.3 percent in nominal terms. Reductions in charges are to be directed to those customers currently cross subsidising other customers. Increases in charges for those customers currently being subsidised will be permitted, however, the extent of any increase will be restricted by side constraints. No residential bill is to increase by more than the greater of (a) 1.7 percent or (b) \$3.35 per quarter.*
- *Increasing water usage charges and water and sewerage fixed charges, broadly in line with those proposed by ACTEW.*
- *Reducing the impact of the environmental works charge on non residential customers with more than two flushing cisterns.*
- *Maintaining current miscellaneous charges pending consultation by ACTEW with relevant customer groups.*

- *Disallowing ACTEW's proposed water abstraction charge of 5c/kL. The Government's Office of Financial Management has stated that the introduction of such a charge is a matter for Government and not ACTEW¹.*

Consideration of the daily allocation of water consumption for calculating usage charges was deferred because of legislative impediments.

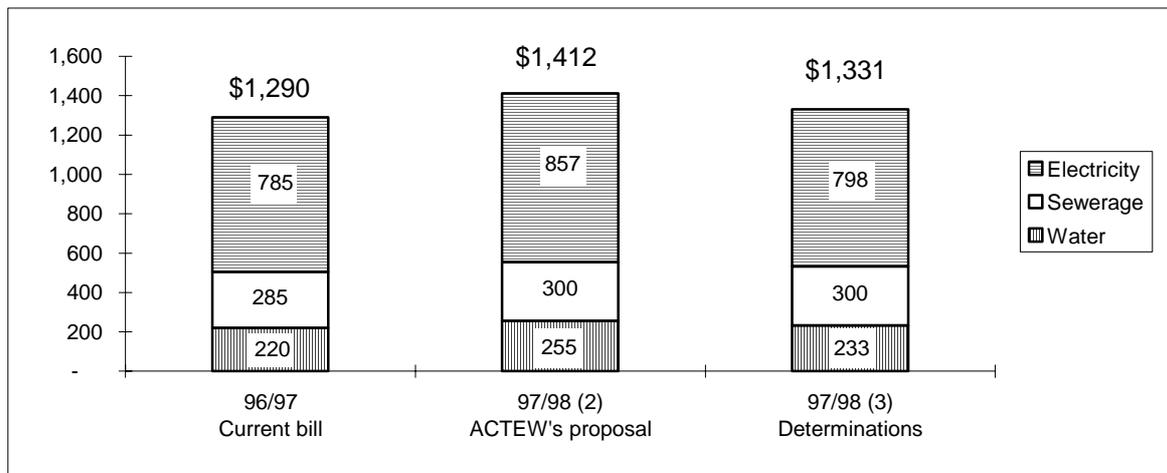
The Commission is not empowered to set bulk prices for water supply to Queanbeyan Council. It is recommended that charges for bulk water to Queanbeyan remain at the existing level pending negotiation of a bulk water supply contract between ACTEW and Queanbeyan Council.

The Commission has not scheduled trade waste charges for determination on the basis of legal advice. The Commission understands that ACTEW is able to charge for trade waste under the contract provisions of section 50(3) of the Energy and Water Act 1988.

Effect of the determination on average household bills

The following graph illustrates the impact of the Commission's determination on the average household bill compared with 1996/97 charges and ACTEW's proposals for 1997/98.

Figure 3.1: Overall impact on average residential bill \$⁽¹⁾



Notes:

1. Based on a customer's using 280 kL water and 9,000 kWh electricity a year.
2. Under ACTEW's proposal, the increase in the water bill is the combined effect of price changes, daily allocation of water consumption, and the proposed water abstraction fee of 5 c/kL.
3. Under the Commission's determination, the daily allocation of water consumption and the proposed water abstraction fee are disallowed. The variation in sewerage charges reflects the increase in the sewerage fixed charge of \$15. The electricity bill includes the maximum increase of \$13.40 permitted under the side constraints set by the Commission. The actual electricity bill will depend on ACTEW's tariff setting, but the increase will not exceed the amount shown on the graph.

For business customers, increases in water charges will be tempered by the reduction of environmental works charges for customers with more than two flushing cisterns. The number of cisterns does not accurately reflect sewage discharge content (eg contaminants)

¹ Office of Financial Management, Submission to the ACT Energy and Water Charges Commission, November 1996, p8.

and volumes. With the reduction in the existing cross subsidies to households, business will enjoy a real reduction in electricity bills.

The Commission has not determined prices beyond 1997/98. However, it has indicated that:

- ACTEW has scope for cost reductions. There is potential for lower charges in future years depending upon market developments and environmental standards.
- Future electricity charges will be subject to variations in the wholesale price of electricity and the extent to which the retail market is opened up to competition.
- Water usage charges should be rationalised with a common usage fee charged for all water consumed. This would replace the current inclining block tariff. A transition step would be the adoption of ACTEW's proposal to reduce the consumption allowed under the lower priced first block from 350 kilolitres to 175 kilolitres a year².
- The bases for setting water and sewerage fixed charges for non residential customers need to be reviewed to better reflect potential demands on the system. The current system discriminates against the tourism industry.
- Developer charges should reflect the cost of developments in different locations and avoid double counting in upfront and periodic charges.
- The phasing out of special levies (eg environmental works charge). The division of works between normal business operations and special 'environmental' works may be artificial and the accounting for special levies and related expenditure creates additional administrative expense.

4. OVERVIEW

ACTEW's proposals contained significant increases in charges for many customers. These increases were premised on:

- continuing the current vesting price for all electricity purchases
- making limited efficiency improvements
- needing to improve ACTEW's rate of return
- introducing new charges for environmental expenditure
- removing cross subsidies.

A comparison of the existing, proposed and determined charges for 1997/98 is shown in Table 4.1.

² ACTEW has argued for the retention of the inclining block tariff but with the higher price for the second block to commence from 175 kilolitres. ACTEW has indicated that consumption below 175 kilolitres is related to 'internal use' and important for public health and safety. This would imply retaining part of the marginal cost of supplying the first 175 kilolitres consumed within the fixed charge. The fixed charge is paid by all residents, with a discount for pensioners. The Commission's longer term proposal, which would be subject to community consultation before being implemented, would weight all consumption equally.

Table 4.1: Overview of ACTEW's proposals and determination

Charges	Current 1996/97	ACTEW Proposals	Determination
Electricity			
Average retail price		+3.6% ¹	-5.3%
Distribution network revenue	\$95.7m	\$96.3m	\$82m
Retail gross margin	\$3.8m	\$4m	\$8m
Water			
Fixed charge	\$133.9	\$135	\$135
Usage charge			
- 1 to 351 kL	30.9 c/kL	35 c/kL	35 c/kL
- above 351 kL	72.1 c/kL	79 c/kL	76 c/kL
Water abstraction fee	na	5 c/kL	nil
Sewerage			
Fixed charge	<i>Residential \$245 Non-residential A supply charge of \$245 plus \$245 for each flushing cistern in excess of two</i>	<i>Residential \$260 Non-residential A supply charge of \$260 plus \$260 for each flushing cistern in excess of two</i>	<i>Residential \$260 Non-residential A supply charge of \$260 plus \$260 for each flushing cistern in excess of two</i>
Environmental works charge	<i>Residential \$40 Non-residential \$40 plus an additional \$40 for each flushing cistern in excess of two</i>	<i>Continue the charge & renamed it as Environmental Protection and Security Charge</i>	<i>Residential \$40 Non-residential \$40</i>

Notes:

1. ACTEW proposed that domestic charges increase by CPI +6%.

The Commission is not satisfied that the increases proposed by ACTEW are justified. With the introduction of competition into electricity generation there have been substantial falls in electricity prices in the wholesale market. Although the extent of these falls is unlikely to be sustained over the longer term, it is anticipated that prices will stabilise significantly below those submitted by ACTEW. This is supported by the anticipated cost of production from new generation plant and the prices on offer in the market for medium term (5 year) contracts.

In its submission, ACTEW anticipated corporatisation of the Snowy Mountains Authority with subsequent higher electricity purchases prices from October 1996. Corporatisation has been postponed till July 1997. As a result of the delay, ACTEW's projected financial outcomes in 1996/97 will improve.

ACTEW accepts that further efficiency gains are achievable. The extent of gains is greater in the water and sewerage operations than electricity distribution. The extent of savings is limited by institutional factors (eg Government employment and wage policy). Nonetheless, the Commission believes that given the increase in ACTEW's expenditure over recent years, including on new systems and organisational change, and the achievements of other utilities, then ACTEW's expenditure estimates are conservative.

ACTEW has argued for an increase in prices to improve its rate of return. The rate of return is inexorably linked to the asset base to which it is to be applied. Although ACTEW's asset valuations satisfy accounting standards and corporate law, they are inappropriate for price setting by the Commission. The asset values reported by ACTEW have been derived using a discounted cash flow approach based on ACTEW's assumptions for future prices. For the

Commission to use these values would create a circular argument (prices determining values and values determining prices). Given these difficulties, the Commission has determined prices on the basis of a review of a suite of financial indicators, including rate of return.

Under Section 18(2)(j) of the ACT Water and Energy (Regulation of Charges) Regulation, the Commission is required to consider the borrowing, capital and cash flow requirements of ACTEW.

The following table reflects the Commission's estimate of ACTEW's projected outcomes. In its determination the Commission has assumed lower wholesale electricity price figures than those adopted by ACTEW. However, the figures used are still very conservative.

Table 4.2: Commission's assessments of ACTEW's financial outcomes 1997/98¹ (\$m)

	1996/97	1997/98	
		ACTEW Proposal	Commission Determination
Profit before tax	51	65	48
Depreciation	41	40	40
Available funds	92	105	88
Change in working capital	(1)	(2)	3
Cash Distribution to Government	(40)	(37)	(30)
Capital expenditure (net of contributions)	(40)	(36)	(36)
Net increase in cash	11	30	26
Cash & investments less debt	(23)	7	3
EBITD ² /Sales	29%	31%	28%
Interest Cover (times)	9.6	12.6	9.7
Return on total assets ("fair value")	3.9%	4.7%	3.6%
Return on total assets (historical cost ³)	10.7%	12.6%	9.8%

Notes:

- 1 The figures in this table are the Commission's own estimates and do not necessarily accord with ACTEW's projections.
- 2 EBITD- earnings before interest, tax and depreciation.
- 3 The calculation of the return on an historical cost basis has used the historic cost asset base with the fair value depreciation figure. This will understate the actual outcome. The historic cost asset base is approximately \$538m, compared with a revalued asset base of approximately \$1460m. If the same relationship applies to depreciation as applies to the asset base then the 1997/98 return under the Commission's determination would increase by approximately 4.4% to around a 14% return.

If electricity purchase prices are lower than those assumed by the Commission and ACTEW makes efficiency gains, then a greater surplus will result enabling higher distributions to government and/or an increase in ACTEW's net cash and investments.

ACTEW has proposed continuing the environmental works charge (\$40) and introducing a new environmental charge, termed a water abstraction fee at 5c/kL. The water abstraction fee was proposed by ACTEW to fund broadly defined water resource management activities. The Government's Office of Financial Management has stated that³:

the introduction of a water abstraction fee referred to in ACTEW's submission is a matter for the ACT Government (rather than ACTEW) to determine.

³ Office of Financial Management, Submission to the ACT Energy and Water Charges Commission, November 1996, p8.

The question of whether ACTEW or the ACT Government has the power to impose such fee is uncertain. Until this matter is resolved and until the Commission is given a better understanding of how the proceeds from such a levy would be spent then the Commission has disallowed ACTEW from imposing the fee in 1997/98.

The environmental works charge was introduced to fund a suite of environmental works including the Lower Molonglo treatment plant. ACTEW's proposal was to continue the charge to fund denitrification works and local sewage reuse options. The Commission has relied upon advice from the ACT Government that the continuation of this charge is justified on good environmental grounds. Desirably, specific proposals matching expenditure with funds received need to be established. The Commission will rely upon ACTEW's auditors to verify that the moneys raised through the levy are spent on the approved projects.

Receipts from the environmental works charge in 1997/98 have been reduced by limiting the charge to \$40 per customer. Previously, the charge was levied on every flushing cistern in excess of two owned by a customer. This was an inaccurate basis to assess the demands being made on the system and discriminated against the tourist industry relative to other non-residential customers. ACTEW has the legislative power to require customers to treat waste to an acceptable standard before it is discharged into the sewer.

The Commission queries the need for special purpose levies. If activities to be funded by such levies are part of the normal business operations of ACTEW, then the introduction/continuation of special purpose levies is inappropriate.

ACTEW has argued that part of the reason for its proposed electricity price increases for residential customers is the removal of cross subsidies. The Commission recognises that a number of cross subsidies exist and that their removal is desirable. The price distortions caused by cross subsidies can lead to inappropriate price signals and distorted consumption patterns.

However, the Commission is concerned that the sudden removal of cross subsidies could create severe price shocks for some customers. The Commission proposes that, to the extent possible, the removal of cross subsidies be funded by efficiency gains by ACTEW, and where not possible, cross subsidies should be removed over an appropriate time frame supported where necessary by the Government's community service obligation policy.

5. MATTERS AND ISSUES CONSIDERED BY THE COMMISSION⁴

5.1 Costs and efficiency

- ◇ *the need for greater efficiency in the supply of services in order to reduce costs to consumers and taxpayers s18(2)(c)*
- ◇ *the cost of providing the services concerned s18(2)(e)*
- ◇ *any arrangements that the Company has entered into for the exercise of its functions by some other body or person s18(2)(m)*

⁴ The summary refers to section 18 of the ACT Energy and Water (Regulation of Charges) Regulation and the Terms of Reference.

The Commission has examined the costs of electricity, water and sewerage services. Having reviewed ACTEW's efficiency across a range of indicators, the Commission has assessed the scope for improved efficiency taking account of ACTEW's operating circumstances, various benchmarking studies and cost comparisons.

5.1.1 Greater operating efficiency

The movement in ACTEW's operating expenditure over the period 1988/89 to 1995/96 is shown in the table below.

Table 5.1: ACTEW Corporation - cost trend and operating statistics (\$m of year)

	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96 ⁽¹⁾	Annual average change
Operating cost									
-operations & services	48.7	48.3	52.2	60.5	57.9	61.5	62.5	na	4.2%
-corporate & administration	29.7	34.4	35.5	29.1	36.6	43.7	50.4	na	9.2%
Total operating costs	78.4	82.7	87.7	89.6	94.5	105.2	112.9	110.3	5.0%
Nominal change		5.5%	6.0%	2.2%	2.6%	14.4%	7.3%	-2.3%	5.0%
Real change		-1.8%	0.9%	-0.4%	3.8%	9.5%	3.9%	-6.5%	1.2%
Electricity purchases ⁽²⁾	116.4	128.8	135.8	146.2	152.6	149.3	141.4	134.3	2.1%
Depreciation	13.8	37.4	34.6	35.3	38.1	39.9	41.4	40.6	16.7%
Financing charges	16.7	15.7	14.6	13.5	11.9	10.0	9.1	7.9	-10.1%
Total expenditure	225.3	264.6	272.7	284.6	294.5	304.4	304.8	292.9	3.8%
Nominal change		17.4%	3.1%	4.4%	3.5%	3.4%	0.1%	-3.9%	3.8%
Real change		9.4%	-1.9%	1.7%	1.9%	1.6%	-3.1%	-8.0%	0.1%
No of employees ⁽³⁾									
- electricity	803	831	794	798	796	763	739	na	-1.4%
- water	297	337	292	296	301	334	281	na	-0.9%
- sewerage	323	249	286	294	300	303	330	na	0.4%
- corporation total	1,423	1,417	1,372	1,388	1,397	1,400	1,350	1,260	-2.4%
GWh sold	1979	2093	2164	2,165	2,249	2,216	2,272	2,254	1.9%
No of customers									
- electricity	104,236	107,278	110,699	113,690	117,765	121,679	124,715	126,730	2.8%
- water/sewerage	95,515	94,572	98,796	100,819	105,634	108,421	113,371	116,008	2.8%
CPI - ACT	6.6%	7.4%	5.1%	2.6%	1.6%	1.7%	3.3%	4.5%	3.7%

Source: Annual reports

Notes:

1. The allocation of operating cost into electricity, water and sewerage in 1995/96 on a comparable basis with prior years was not available.
2. Electricity purchases include supply charges and transmission charges.
3. The notional split of employee numbers into electricity, water and sewerage businesses is not shown in the Annual Reports, commencing 1995/96.
4. Accounting policy changes were introduced in 1993/94 which, in part, distort comparisons with prior years.

Total expenditure stabilised in 1994/95 and fell in 1995/96 after a substantial increase in the period to 1993/94 (6.2% a year). This decline related principally to a fall in the purchase price of electricity. Operating expenditure also reduced in 1995/96.

The nominal increase in operating costs over the full period of 5 percent per annum compares with an average CPI of 3.7 percent and customer growth of 2.8 percent.

In the Auditor General's report⁵, ACTEW advises that:

A large portion of the increase in operating costs since 1989 has occurred in the process of establishing ACTEW as an integrated body and in the construction of facilities to meet customer requirements, such as the South and North Region Service Centres. Some portion of increasing operating costs can be attributed to expenditure on information systems which, in the short term, are a cost to ACTEW, but in the longer term, the efficiency gains from these systems will far outweigh the initial costs.

In its electricity submission, ACTEW states that:

Temporary increases in operating costs in 1993/94 and 1994/95 reflected expenditure on information systems (which in the longer term will produce efficiency gains outweighing initial costs) and an increase in salary costs imposed on ACTEW by the ACT Government Enterprise Agreement for 1993/94.⁶

At the public hearing, the following comment was made by ACTEW:

In water and sewerage it has been reactive (to problems that occur in the system), and the systems that we have commissioned last year and are just commissioning now will enable us to make sure that work is better organised fundamentally and you don't have as much waste time.⁷

The variation in ACTEW's costs can be compared with other utilities. Such a comparison is shown below:

Table 5.2: Comparative reduction in employee numbers and operating cost

	1988/89	1995/96	Total change %
Number of employees			
NSW metro distributors	12,092	6,111	- 49
NSW rural distributors	4,432	3,075	- 31
Total NSW electricity distributors	16,524	9,186	- 44
Sydney Water Corporation	9,092	5,099	- 44
Hunter Water Corporation	1,280	671	- 48
ACTEW	1,423	1,260	- 11
Real operating costs¹ (95/96\$m)			
NSW metro distributors	616	466	- 24
NSW rural distributors	217	187	- 14
Total NSW electricity distributors	833	653	- 22
Sydney Water Corporation	995	636	- 36
Hunter Water Corporation	82	62	- 24
ACTEW	101	110	+ 9

Notes:

1. excluding depreciation and interest
2. Figures for all organisations are subject to accounting policy changes over the period and new imposts by government, eg introduction of sales tax or purchase by government entities.

It is noted that in addition to the significant cost reductions achieved in recent years, NSW utilities have targeted minimum cost reductions of 20 percent over the period 1996 - 2000.

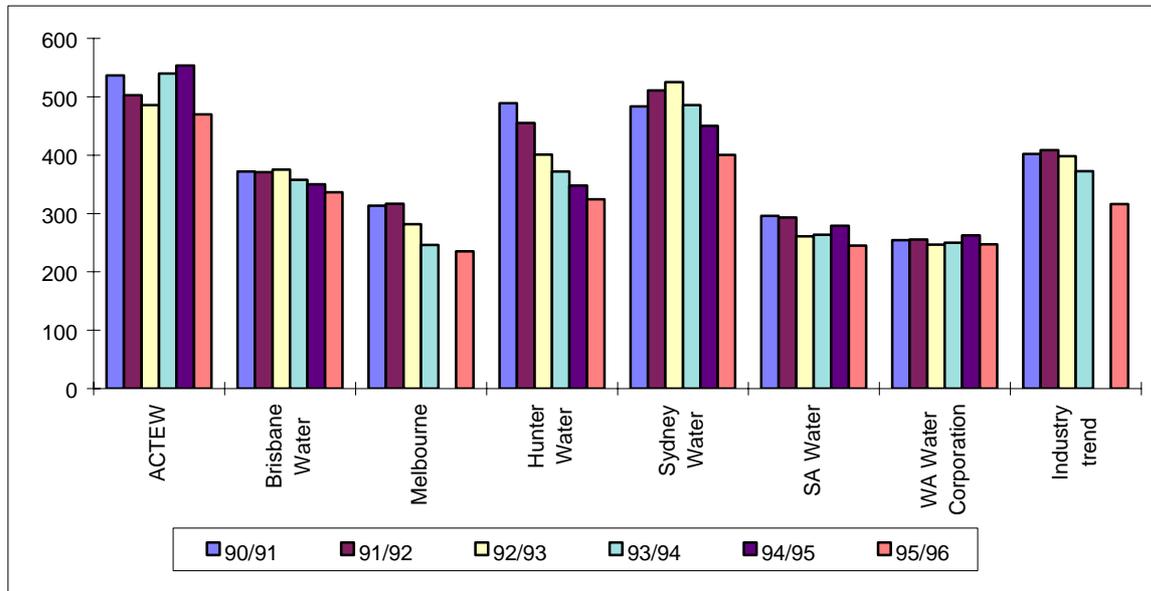
⁵ Auditor General's Report *ACTEW Benchmarked*, p101.

⁶ ACTEW, 1997/98 Electricity Pricing Submission, p19.

⁷ ACT Energy and Water Charges Commission, Transcript of Proceedings, 13 November 1996, p16.

Movements in operating costs per property for the major water utilities around Australia are graphed below. Note that ACTEW is the only utility with full tertiary treatment of wastewater.

**Figure 5.1: Combined water and wastewater operating cost per property
1990/91 - 1995/96 (1995/96\$)**



Source: The Australian Urban Water Industry WSAA facts'96.

Note: On 1 January 1995, Melbourne Water was disaggregated into the wholesale business (Melbourne Water) and three retailers including City West Water, South East Water and Yarra Valley Water. The comparison shows the trend for Melbourne Water up to 1993/94 and the aggregated result for all these businesses in 1995/96.

ACTEW's cost projections, provided on a commercial in confidence basis to the Commission, show operating cost increases marginally below the expected CPI over the next four years.

The absence of significant real reductions in ACTEW's operating costs (past and projected) might be justified if ACTEW's starting cost levels were significantly below other utilities and/or service levels were significantly better. ACTEW has quoted from a number of sources in support of this argument⁸. One such study is that of the Auditor-General, although ACTEW has disputed the methodology adopted and some of the findings. The findings are summarised in the following table.

⁸ London Economics, *Measuring the Efficiency of the Electricity Supply Industry*, 1993
 ESAA, *International Performance Measurement for the Electricity Supply Industry*, ESAA, 1994
 Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1990/91 to 1994/95*, 1996
 ACT Auditor-General, *ACTEW Benchmarked*, 1995
 ESAA, *Electricity Australia* 1996, 1996.

Table 5.3: Auditor General's Report - DEA benchmarking results

	Water supply	Sewerage reticulation	Sewage treatment	Electricity distribution
<i>Minimum savings</i>				
\$m per annum	2.8	4.7	na	not quantified
\$ per customer	26	43	na	not quantified
<i>Maximum savings</i>				
\$m per annum	8.5	6.4	na	not quantified
\$ per customer	79	59	na	not quantified
DEA benchmarking results	Could improve efficiency in regard to both the quality and mix of resources	Low levels of efficiency compared with both overseas and Australian utilities	Highly efficient. Areas of inefficiency caused by requirement to highly treat sewage	Against other Australian electricity distributors, ACTEW was relatively efficient overall. ACTEW is efficient in managing the overall quantity of resources but not the mix.

Source: Auditor General report *ACTEW Benchmarked 1995*.

The Commission has reviewed this study and the others referred to by ACTEW. In some cases the data is based on information from 1991/92 or 1993/94 and earlier years, which fails to take account of productivity improvements relative to ACTEW by the other utilities in more recent years. In other cases, ACTEW has submitted data on a basis which is inconsistent with other utilities. For example, no independent audit is conducted by the ESAA and the National Steering Committee to ensure identical interpretation of data requests for the reports they publish.

Such inconsistencies are reflected in the following table comparing electricity distributors:

Table 5.4: ESAA comparison 1994/95

	O&M Costs (Excluding fixed costs)		O&M Costs (Including fixed costs)	
	\$/Circuit km	\$/MWh	\$/Circuit km	\$/MWh
ACTEW	5,588 (10,290)*	11.8 (23.3)*	14,381	30.4
Sydney	6,589	13.2	12,993	26.0
Prospect	4,455	12.3	7,710	21.3
Orion	3,254	16.0	4,557	23.0
Illawarra	3,205	18.9	4,896	28.8
SEQEC	3,906	13.0	6,489	21.7

Source: ESAA Electricity Australia 1996

Note:

* The adjusted figures use the same cost base as other distributors.

Whilst ACTEW's reported operating and maintenance costs per MWh is the lowest, the Commission notes that there is an anomaly in the comparison because the cost base used in ACTEW's calculation differs from those of other distributors. ACTEW's calculation is based on its costs of operations and services but excludes corporate and administration costs (which represents about 49 percent of total operating costs). For other distributors, operating costs include corporate overheads and support services.

The adjusted figure for ACTEW for 1994/95 is \$23.3/MWh sold, well above other distributors.

Several cost drivers are outside of ACTEW's control, eg Government negotiated enterprise agreements, the limited number of private contractors in the ACT. In addition, some of the movements in ACTEW's costs are explained by accounting policy changes, eg reclassification of items between capital and operating expenditure. Nonetheless, the Commission considers that further savings in ACTEW's operating costs are achievable. The extent of cost reductions will be affected by labour productivity and the process of business reform, eg market testing of internal service providers. ACTEW's efficiency levels will also be driven by competition in the national electricity market.

Some of the efficiency to be gained is the realisation of benefits flowing from significant expenditure on information and technology systems in prior years. Judging from the increasing trend of corporate and administration costs, greater operational efficiency can be achieved by reducing overheads. This should not impact upon service standards.

With the exception of electricity purchases, the Commission has used ACTEW's cost projections in its financial analysis. Such analysis indicates that ACTEW's financial position remains strong even in the absence of cost reductions.

Given that a significant proportion of ACTEW's controllable expenditure is labour related then ACTEW is concerned that any substantial reduction in costs implies a similar reduction in staff numbers. ACTEW's approach to this issue is best reflected in the following quote from ACTEW's response to the Auditor-General's report⁹:

.... ACTEW has taken a conscious decision, not to haphazardly shed staff in a cost minimisation plunge, but rather to invest resources in longer time profit optimisation for the ACT by capitalising on expertise. Much of this is now only just beginning to bear the returns on our investment.

The Commission is required to balance the interests of the various stakeholders. One of those stakeholders is ACTEW's franchise customers. It would be of concern to the Commission if these customers were being charged prices greater than efficient costs to fund non price regulated activities.

5.1.2 Capital investment

Over 30 percent of the cost of supplying electricity, water and sewerage relates to capital charges for depreciation and interest. The level of capital investment has major cost implications. Given the long life of infrastructure assets, there is a need to undertake regular reviews of capital expenditure programs, including asset renewal. The Commission has not conducted a capital audit of ACTEW's capital works program. Such an audit would be essential prior to the establishment of a medium term price path.

The latest population forecasts suggest that growth in population and therefore customer numbers is limited. This will restrain the need for new expenditure.

⁹ Auditor General's Report, *ACTEW Benchmarked*, Report No 7-1995, p11.

5.1.3 Contracting out

ACTEW currently outsources all construction works. A similar approach is not adopted for operating activities. To the extent that the market allows, greater emphasis should be put on market testing and competitive letting of contracts for both core and non-core internal services.

5.2 Consumer protection

- ◇ *the protection of consumers from abuses of monopoly power in terms of charges, charging policies and standard of service s18(2)(a)*
- ◇ *social impact of the decision s18(2)(g)*
- ◇ *the effect on general price inflation over the medium term s18(2)(k)*

The Commission has had to consider the reduction or elimination of existing cross subsidies in ACTEW's price structure and at the same time ensure safety nets are available consistent with the government community service obligation (CSO) policy of minimising any adverse impact on those less able to pay in the community. The Commission has also reviewed broad measures of ACTEW's standards of service.

5.2.1 Pricing issues

The Commission supports cost reflective pricing structures. The movement towards cost reflective prices must take account of the practical aspects of pricing and the impacts of these changes. The rate of eliminating cross subsidies will be influenced by future efficiency gains.

Based on ACTEW's electricity wires 'fully distributed' costing model, 'cross subsidies' from businesses to domestic customers are estimated to be \$16m¹⁰ in 1996/97. Tariff revenue from domestic customers covers only 83 percent of the costs of service to these customers.

The current sewerage price structure which is based on the number of fixtures (ie flushing cisterns) has resulted in some businesses paying too much and others too little.

The Commission stresses that ACTEW should give the highest priority to:

- eliminating the existing fully distributed based cross subsidies implicit in electricity retail margins
- reviewing the two block water usage charge
- reviewing water and sewerage access/supply charges for large meter sizes
- restructuring non residential sewerage charges including eliminating charges based on the number of flushing units
- reviewing developer charges.

¹⁰ ACTEW's submissions

5.2.2 Customer impacts

In making its determination, the Commission has attempted to make charges more cost reflective in order to better signal the value of the resources consumed. This has been done with due recognition of the impacts on customers.

The Commission has not determined individual electricity charges, but rather established an overall revenue cap for electricity for ACTEW to work within. This provides ACTEW with the flexibility to set individual charges and to work towards the elimination of cross subsidies. However, to avoid price shocks the Commission has introduced side constraints on the maximum allowable price increases. For example, residential bills will not be able to increase by more than the maximum of 1.7% or \$13.40 for the year. This maximum increase is considerably below the CPI+6% increase proposed by ACTEW for residential customers. Given the overall reduction in electricity revenue this implies a reduction in charges for those customers who currently pay too much.

In water and sewerage charges the Commission has disallowed ACTEW's proposed water abstraction fee (5c/kilolitre) and reduced the effect of the environmental works charge on those customers with more than two flushing units. It has also reduced the proposed increase in the usage charge for consumption greater than 350 kilolitre. Nonetheless, water and sewerage bills will increase. This is intended to better reflect the full cost of the provision of these services.

The following tables indicate the movement in bills for given consumption levels for residential, pensioner and a range of non residential customers. With an increasing emphasis on usage pricing then customers can more directly influence their own bills.

For the average household consumption level of 280 kilolitres of water a year the combined water and sewerage bill will increase by 5.5 per cent, that is 53 cents per week. This will increase to 70 cents per week for a household consuming 500 kilolitres a year. To the extent that such water consumption is discretionary (eg outdoor use) then savings can be made by adopting water saving practices. ACTEW's estimate of essential indoor use is 175 kilolitres of water a year for the typical household.

Table 5.5: Residential customers' water & sewerage bills

Annual consumption (kL)	1996/97 Current \$	1997/98			
		New bill \$	\$ change	% change	cent/ week
Water and sewerage bill					
100	449.5	469.7	20.2	4.5	38.77
200	480.4	504.7	24.3	5.0	46.65
280	505.1	532.7	27.5	5.5	52.96
350	526.7	557.2	30.4	5.8	58.48
400	562.4	594.7	32.4	5.8	62.23
500	634.5	670.7	36.3	5.7	69.73
600	706.6	746.7	40.2	5.7	77.23
1000	995.0	1050.7	55.8	5.6	107.23
% of water usage component of W&S bill					
100	6.8%	7.4%			
200	12.8%	13.8%			
280	17.1%	18.3%			
350	20.5%	21.9%			
400	25.5%	26.9%			
500	34.0%	35.1%			
600	40.7%	41.7%			
1000	57.9%	58.6%			

Pensioner bills will increase by a lower dollar amount than non pensioner households. This reflects the operation of the pensioner rebate scheme.

Table 5.6: Pensioners' water & sewerage bills

(pensioner rebates = 60% of the fixed availability charge)

Annual consumption (kL)	1996/97 Current \$	1997/98			
		New bill \$	\$ change	% change	cent/ week
Combined water and sewerage bill					
100	198.2	208.7	10.50	5.3	20.19
200	229.1	243.7	14.60	6.4	28.08
280	253.8	271.7	17.88	7.0	34.38
350	275.4	296.2	20.75	7.5	39.90
400	311.0	333.7	22.70	7.3	43.66
500	383.1	409.7	26.60	6.9	51.16
600	455.2	485.7	30.50	6.7	58.66
1000	743.6	789.7	46.10	6.2	88.66

The main variation between the impact on residential and non residential bills is the effect of limiting the environmental works charge to \$40 per customer. The *Canberra Sewerage and Water Regulations* enable ACTEW to restrict the discharge to the sewer of substances that may be harmful to the sewerage system. This enables ACTEW to require potential polluters to treat on site, or otherwise dispose of, harmful wastes prior to their entry to the sewer.

Table 5.7: Non-residential customers' water & sewerage bills

Water bill	Consumption	1996/97	1997/98	change	change
	kL	\$	\$	\$	%
Bookstore	80	158	163	4	3
Pharmacy	100	164	170	5	3
Dry cleaners	300	226	240	13	6
Local supermarket	600	422	447	25	6
Take away	2000	1,431	1,511	80	6
Cafe	4000	2,873	3,031	158	5
Club	18193	13,106	13,817	711	5
Hospital	59000	42,528	44,831	2303	5
Hotel	73656	53,095	55,969	2874	5
Office block	67872	48,925	51,573	2649	5
Sewerage bill	Fixtures				
Bookstore	1	285	300	15	5
Pharmacy	1	285	300	15	5
Dry cleaners	1	285	300	15	5
Local supermarket	1	285	300	15	5
Take away	2	285	300	15	5
Cafe	6	1,425	1,340	(85)	-6
Club	24	6,555	6,020	(535)	-8
Hospital	117	33,060	30,200	(2,860)	-9
Hotel	327	92,910	84,800	(8,110)	-9
Office block	111	31,350	28,640	(2,710)	-9
Combined water and sewerage					
Bookstore		443	463	19	4
Pharmacy		449	470	20	4
Dry cleaners		511	540	28	6
Local supermarket		707	747	40	6
Take away		1,716	1,811	95	6
Cafe		4,298	4,371	73	2
Club		19,661	19,837	176	1
Hospital		75,588	75,031	-557	-1
Hotel		146,005	140,769	-5236	-4
Office block		80,275	80,213	-61	0

5.2.3 Service standards

ACTEW's service standards compare favourably with other Australian utilities. The following tables show one measure of service standard for each of the water, sewerage and electricity industries. It should also be noted that Canberra is the only major Australian city that treats its sewage to a tertiary level of treatment. This is necessary because Canberra is an inland city with discharge into the Murrumbidgee River.

Table 5.8: Water supply- restoration of service interruptions within 5 hours

	1993/94	1994/95	1995/96
	%	%	%
ACTEW	89.5	98.8	99.9
Brisbane Water ¹	94.5	96.0	97.0
Melbourne Water	91.0	94.0	n/a
SA Water	51.4	54.7	92.6
Sydney Water ²		99.4	99.5

Notes:

1. 8 hour response times.
2. 6 hour response times.

Source: WSAA, The Australian Urban Water Industry- WSAA facts 1996, March 1997, p42.

Table 5.9: Wastewater system- restoration of system failures within 5 hours

	1993/94	1994/95	1995/96
	%	%	%
ACTEW	99.3	98.8	99.9
Brisbane Water ¹	97.3	98.5	n/a
SA Water	92.7	94.3	69.5
Sydney Water		92.0	94.8

Notes:

1. 8 hour response times.

Source: WSAA, The Australian Urban Water Industry- WSAA facts 1996, March 1997, p42.

Table 5.10: Electricity distributors- outages per customer (1994/95)

Average number of outages per customer	
ACTEW	0.93
Sydney	2.03
Prospect	0.86
Orion	1.38
Illawarra	3.55
Citipower	na
Solaris Power	2.00
United Energy	na
SEQEC	1.41

Source: ESAA Electricity Australia 1996.

It is not anticipated that this price determination will affect these service standards.

5.2.4 Community services obligations (CSOs)

To ensure transparency, the ACT Government has agreed to fund ACTEW's CSOs including pensioner rebates and concessions to churches, schools and hospitals. The ACT Government has also established the Essential Services Review Committee (ESRC) to ensure the provision of essential services to persons suffering substantial financial hardship.

ESRC statistics indicate that there has been a large increase in applications for assistance. This is partly due to the effect of the change in the billing frequency of electricity charges. The Commission understands that there has been on going dialogue between ACTEW and

the ESRC. These discussions have revolved around providing an appropriate safety net to people in genuine need while avoiding others rorting the system.

The costs involved in meeting regulatory requirements (including environmental standards) are not CSOs. Such costs should be part of ACTEW's normal business expenditure.

5.2.5 Effect on inflation

The overall changes in energy and water charges in 1997/98 will have a minimal effect on the cost of living in the ACT. Electricity, water and sewerage charges are small components of the total basket of goods adopted for calculating the CPI. For the typical household the combined electricity, water and sewerage charge will increase by 3.2%. This compares with the increase of 1.7% in the 1997 March CPI (annualised) compared with 1996.

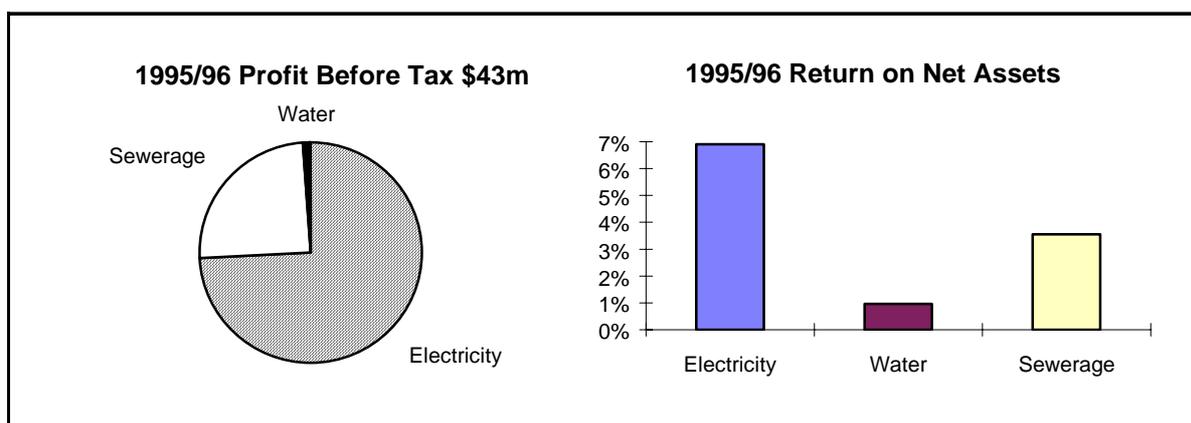
5.3 Financial viability

- ◇ *the appropriate rate of return to the Australian Capital Territory on its investment, including appropriate payment of dividends to the ACT for the benefit of the people of the ACT s18(2)(d)*
- ◇ *the borrowing, capital and cash flow requirements of the company (ACTEW Corporation) and the need to renew or increase relevant assets of the company s18(2)(j)*

5.3.1 Rate of return and asset valuation

ACTEW's overall profitability has improved in recent years but there remains major differences in the profitability of the electricity, water and sewerage businesses.

Figure 5.2: Profitability of electricity, water and sewerage entities



Source: ACTEW's submissions.

The robustness of any rate of return analysis is dependent upon the asset base to which the return is to be applied. In the private sector, and generally under North American regulatory regimes, that asset base is historic cost. That is the original purchase price of the asset less allowance for depreciation representing obsolescence and wear and tear.

To offset inflation many Australian government entities revalue their assets to the cost of equivalent modern assets. This generally gives a much higher figure than historic cost. If the same return (%) is applied to both historic cost and a revalued asset base then the outcome (\$) from using a revalued asset base can be significantly higher.

For a regulated utility any increase in the regulated asset base will result in higher prices and higher dollar returns for a given (%) return.

In the non current year ACTEW valued its non current assets on an historic cost basis. Its reported asset values were \$306m. By 1994/95 reported non current asset values¹¹ had jumped to \$1484m, with an asset revaluation reserve of \$1161m. In 1995/96 ACTEW amended its method of asset valuation to 'fair value'. Fair value is calculated as the present worth of future cash flows generated by the assets. The size of the future cash flow is dependent upon assumptions about price levels.

With the adoption of this approach ACTEW's overall reported value of property, plant and equipment did not vary greatly from the 1994/95 figures. However, the reported value of electricity assets increased by 28% while the reported value of water assets and sewerage assets reduced by 23% and 14% respectively.

The appropriateness of each of these asset bases for price regulation has been considered by the Commission¹². The least appropriate is ACTEW's fair value approach. Given that the asset values are dependent upon pricing assumptions then for the Commission to adopt ACTEW's asset values would involve adopting ACTEW's own pricing assumptions. If those pricing assumptions represented an abuse of monopoly power then such an abuse would be factored into the Commission's determination.

This view is supported by a consultant's report¹³:

Using the net present value method for determining asset values presents several well documented problems, primarily relating to the circularity of prices determining values and values determining prices. As is well known, this circularity needs to be overcome in order to appropriately determine a pricing structure based solely on NPV valuation methodologies.

The approach to be adopted in Victoria is mandated in the Electricity Industry Act 1993 (EIA), Section 158A, Tariff Order, s5, Distribution Network Tariffs, 5.10 Restrictions on review of price control arrangements by the Regulator-General.

the Regulator-General must

*(a) utilise price based regulation adopting a CPI-X approach and not rate of return regulation
(b) where the value of the fixed assets which were allocated to a Distributor under the allocation statements under Section 117 and 137 of the EIA is required to be taken into account, use the adjusted asset value for that Distributor as at 1 July 1994 determined in accordance with the table set out below, adjusted to take into account inflation and*

¹¹ Written down current replacement cost.

¹² The Commission does not dispute the validity of ACTEW's asset values used in the annual accounts. The method adopted satisfies accounting standards and corporate law requirements. However, it is inappropriate for price regulation.

¹³ Report to the ACT Energy and Water Charges Commission, *Review of ACTEW Corporation's pricing and Asset Valuation Policies*, February 1997 Ernst & Young.

depreciation on the asset value as increased by inflation since 1 July 1994 and for any disposals since 1994:

	<i>Eastern \$m</i>	<i>Powercor \$m</i>	<i>Solaris \$m</i>	<i>Citipower \$m</i>	<i>United \$m</i>
<i>Optimised Depreciated Replacement Cost</i>	1046	1227	361	482	743
<i>Adjustment</i>	(218)	(161)	61	129	136
<i>Adjusted asset value (opening book value)</i>	828	1066	422	611	879

The total of these opening book values is \$3806m and the number of customers in Victoria as at 30 June 1994 was 1,985,687¹⁴ giving an asset value per customer of \$1,917. This is comparable to NSW figures and considerably lower than the latest ACTEW figure of \$3,441.

ACTEW has indicated that because of the ACT operating environment (cold winters, high proportion of domestic customers, peaky load) then the physical assets required to service customers is justifiably higher than other Australian utilities. However, the reasonableness of the extent of the variation remains to be fully explored.

Part of ACTEW's asset base has been customer (developer) funded. While there is no consensus on this issue, the Commission considers that it would be inappropriate for customers to both pay upfront for these assets (or provide them free of charge to ACTEW) and subsequently pay ACTEW a rate of return on them. This is because a profit element has already been included in the price the customer had to pay in the first place. ACTEW has not provided the Commission with the value of its customer funded assets in its total asset base.

To assist in price regulation for the medium term the Commission would require ACTEW to provide:

1. the value of property, plant and equipment valued at historic cost
2. the independently verified optimised replacement cost of its current asset base
3. the value ascribed to customer funded (and free assets) included in both asset bases
4. both a gross asset value and a written down (for accumulated depreciation) value.

In the absence of this information the Commission has calculated rates of return based on both 'fair values' and estimated historic cost. The alternative asset base would be optimised written down replacement cost adjusted to exclude customer funded assets. This figure was not available to the Commission.

The following table shows rate of return figures for 1997/98 based on both a fair value and historic cost for the corporation as a whole. The proceeds from the environmental works charge have been included as part of ACTEW's income for the purpose of calculating the rate of return.

¹⁴ ESAA, Electricity Australia, 1996, p38.

Table 5.11: Rate of return - Corporation

	1995/96	1996/97	1997/98 ACTEW	1997/98 Commission
	%	%	%	%
"Fair Value"	3.6	3.9	4.7	3.6
Historic Cost	9.9	10.7	12.6	9.8

Note: The calculation of the return on an historical cost basis has used the historic cost asset base with the "fair value" depreciation figure. This will understate the actual outcome. The historic cost asset base is approximately \$538m, compared with a revalued asset base of approximately \$1460m. If the same relationship applies to depreciation as applies to the asset base then the 1997/98 return under the Commission's determination would increase by approximately 4.4% to around 14% return.

The following table breaks down the "fair value" return by business segment.

Table 5.12: Rate of return ("fair value") - business segment

	1995/96	1996/97	1997/98 ACTEW	1997/98 Commission
	%	%	%	%
Electricity	6.2	6.3	6.7%	4.9%
Water	1.0	1.1	2.4%	1.7%
Sewerage	3.4	4.0	4.9%	4.2%

Whatever asset base is used the determination will give a lower return than ACTEW's proposals. In both water and sewerage the determination will provide for an increased return on prior years. This may still be below an appropriate commercial level although this depends in part on the scope for cost savings. The return on electricity will be significantly lower than prior years if ACTEW is unable to reduce operating costs below its forecast levels and wholesale electricity prices do not fall below those adopted for the determination.

However, the return on electricity assets should be considered in the context of the 28% increase in electricity asset values in 1995/96 over the values reported in 1994/95 and the valuation adjustment that may arise from optimisation and exclusion of customer funded assets. While water and sewerage assets were down valued in 1995/96 they would be similarly affected by the last two adjustments.

Given the uncertainties associated with the figures the Commission has not relied upon any single measure of financial performance but made a judgement based on the results of these calculations in the context of a suite of other financial indicators (eg gross margin, ratios adopted by credit rating agencies) to assess ACTEW's financial health. These indicate that ACTEW will remain in a very sound financial position given its projected capital expenditure requirements and opportunities for cost improvement.

5.3.2 Distributions to government

The ACT government has adopted a dividend policy (including tax equivalent payments) based on 70 percent of the average operating profit over three years (previous, current and coming years). Taking account of the government's view of the appropriate trade-off between future price increases and ACTEW's return to government, the Commission has ensured that dividend payments will be above the minimum dividend target.

5.3.3 Cash flow and capital structure

ACTEW is required to maintain cash to meet working capital requirements (eg salaries and wages and monthly settlements of electricity purchase bills), dividend payments and capital expenditure.

Under ACTEW's pricing proposals there would be a large increase in cash generation. In part ACTEW's high level of cash generation is explained by its relatively new asset base and its position in its investment cycle. It also relates to its low level of debt and the return being paid to the Government, as shareholder. This return is affected by the application of a fixed percentage to a profit result reduced by a depreciation figure inflated by asset revaluations.

Assessments of an organisation's financial capacity and ability to service debt are made by rating agencies applying cash based ratios. These ratios include:

- funds flow interest cover (to assess an organisation's ability to service debts)
- net cash flow/capital expenditure (to assess internal financing capacity)
- net debt/funds from operation (to assess ability to repay debt).

Whilst ACTEW does not have a credit rating of its own, notional credit rating ratios are shown below to assist in evaluating its financial strength. Based on 1995/96 results, ACTEW's ratios and notional ratings would be:

Table 5.13: Credit rating ratios and notional rating

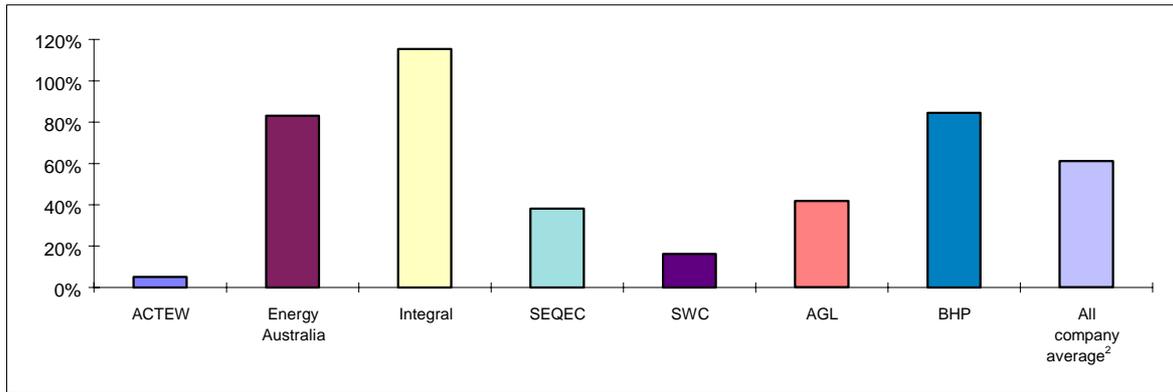
	1995/96	Notional credit rating
Funds flow interest cover (times)	11.4	AAA
Funds flow net debt payback (years)	0.95	AAA
Net cash flow/capital expenditure (%)	224%	AAA

Note: The notional credit rating is based on the range specified for various rating categories in a study for the NSW Treasury by S&P - Australian Rating (November 1992).

At the end of 1995/96, ACTEW's debt level was \$66m. Equity of \$1,295m was comprised largely of contributed capital and reserves. ACTEW's debt to equity ratio¹⁵ was 5%. A comparison of the gearing ratio with other metropolitan distributors and water utilities is shown in Figure 5.3.

¹⁵ Gearing ratio is defined as the ratio of debt to equity.

Figure 5.3 : Debt/equity ratio comparison



Note:

1. As part of the industry restructuring arrangements, an additional \$750m was borrowed by Energy Australia and Integral and paid to the NSW Government. The amount of the additional borrowing was based on an analysis of future cash flows of the business carried out by Pacific Road Securities on behalf of the NSW Treasury.
2. Source, Australian Stock Exchange.

As shown in the comparison, ACTEW has the lowest gearing compared with enterprises in both the private and public sectors. ACTEW's level of debt is substantially below the level that would be expected in a commercial business.

It is not unusual for GTEs to eliminate debt and rely on internal financing of capital expenditure. This reduces financial risk and shields them from the vagaries of the financial markets. However, too low a debt level may also create inter-generational inequity by shifting the burden of providing assets to service future generations on to the current generation, and possibly lead to suboptimal investment and management decisions.

The level of debt and the level of cash retained within the business relative to what is paid to the shareholder is a matter for Government. However, the level of cash generation reflects upon the profitability of the organisation and is a concern of the Commission.

The determination allows ACTEW to cover its operating costs, fund its capital works, meet its debt servicing obligations and satisfy the Government's dividend expectations while still increasing its net cash holdings.

5.4 Environmental considerations

- ◇ *the need to comply with the principles of ecologically sustainable development s18(2)(f)*
- ◇ *considerations of demand management and least cost planning s18(2)(h)*

The structure of prices and the form of price regulation should not create impediments to demand management and alternative energy sources where these are economically efficient. There are several policy options for promoting demand management and renewable energy options.

ACTEW has engaged in extensive community consultation on its environment policies. For example, following 18 months of community consultation, ACTEW released its *Water Future Strategy* in June 1994. Key short term elements of this strategy were to:

- (i) establish a basic water audit advisory service

- (ii) develop a resource efficient demonstration house and garden
- (iii) commission the Southwell Park water mining project
- (iv) establish domestic wastewater and greywater trials.

ACTEW has engaged a consultant (International Centre for Economics) to price environmental costs. This report is due for release shortly and will assist the Commission in future pricing determinations.

By continuing with the environmental works charge (\$40) and by increasing the sewerage fixed charge (\$15), the Commission has made direct provision for environmental concerns in ACTEW's charges and provided ACTEW with sufficient funds to undertake major environmental works. However, the Commission questions whether specific environmental levies are appropriate or whether they should be included as part of normal charges.

An additional matter for ACTEW to consider is the green pricing option. That is, the purchase of electricity provided from renewable energy sources. To the extent that there is a demand from customers for such energy and that customers are willing to pay the higher financial cost of its provision then ACTEW has the opportunity to encourage energy conservation.

ACTEW is currently reviewing various energy options including production of electricity from methane gas sourced from rubbish deposits.

5.4.1 Ecologically sustainable development (ESD)

The Commission has taken account of the principles of ESD and the need to integrate economic, environmental, social and equity considerations in decision making. Cost effective instruments such as pricing are used to help achieve ESD outcomes.

5.4.2 Environmental costs

The Commission acknowledges that a user/polluter pays approach to allocating environmental costs is being considered by the ACT Government. Polluters and beneficiaries (where the pollution source is diffuse) should be asked to contribute to the cost of monitoring, and the cost of remedial works.

5.4.3 Demand management

Usage pricing should be applied to encourage conservation. The success of this approach is reflected in the reduction in the water demand of average households from the high level of over 350kL in 1990 to 280kL in 1995/96. However, to achieve the best outcomes, non-price measures are also important (eg encouraging electricity and water efficient appliances).

ACTEW has developed a long range water supply strategy directed at deferring infrastructure investment. ACTEW's future water supply strategy¹⁶ recommends that:

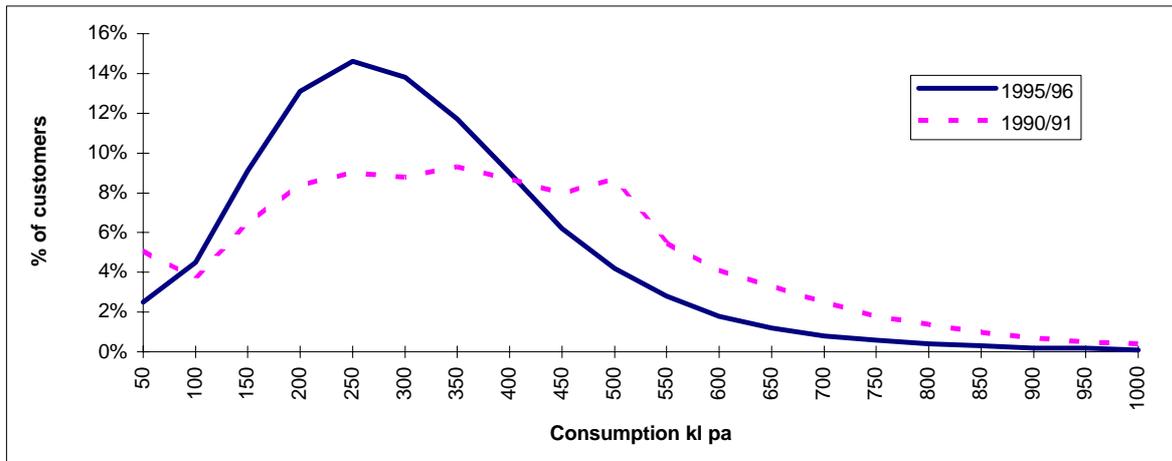
the following water conservation targets be adopted by the community as a reflection of its desire to defer the need for a new dam:

¹⁶ ACT Future Water Supply Strategy, ACTEW Corporation, June 1994.

- 15% of annual per capita demand by 2000
- 25% of annual per capita demand by 2010
- 35% of annual per capita demand by 2020.

The pricing reform has resulted in a significant per capita reduction in water consumption to 479 litres per person per day in 1995/96, compared with 600-700 litres per person per day in the 1980s. Effectively, this means that the next dam may be deferred to 2040. Deferral to 2040 or beyond is conditional on many factors; most importantly the continued reduction in demand and changes in environmental flow requirements.¹⁷ The shift of domestic consumption (ie a greater proportion of households are using less water) is illustrated in Figure 5.4.

Figure 5.4: Distribution of water consumption for domestic customers



Source: ACTEW

The reduction in water consumption has revenue implications for ACTEW. In a late submission to the Commission ACTEW has indicated that this shift in demand will reduce its annual revenue by approximately \$2m below the level indicated in its original submission.

The Commission and ACTEW have agreed to continue to monitor the level of consumption and the relevant financial implications.

5.5 Standards

◇ *standards of quality, reliability and the safety of the services concerned s18(2)(b)*

ACTEW’s pricing proposals are based on its existing obligations. Whilst there may be continuing pressure for further environmental improvements (eg sewer overflow reduction), the Commission will require additional information from ACTEW for future determinations on any associated expenditure requirements. The retention of the environmental works charge and the increase in sewerage base charges provide for additional environmental works in the 1997/98 year.

¹⁷ Government Trading Enterprises Performance Indicators 1990-91 to 1994-95 Volume 2, Steering Committee on National Performance Monitoring of Government Trading Enterprises June 1996 p239.

This determination is made on the understanding that ACTEW will maintain at least current levels of quality, reliability and safety. Higher service standards can be achieved as efficiency gains are made.

If higher service standards are planned, the implications of these on capital and operating costs need to be examined carefully. Full cost pass through should not be permitted unless options for meeting higher standards are evaluated with full community consultation.

6. FORM OF REGULATION

Price and revenue caps in the form of $CPI \pm X$, rather than rate of return regulation, are considered to be in the best interests of customers who are not protected by a competitive market. Rate of return regulation can encourage over capitalisation (gold plating) while not providing appropriate incentives for cost reduction. Price/revenue caps provide better incentives for efficiency. (See earlier reference to Victoria under 5.3.1). For the 1997/98 year, the Commission has adopted revenue caps for electricity regulation and determined prices for specific services in the water and wastewater functional areas. This was based on available information and the desire to avoid price shocks. The intentions for regulation in future years are described below.

6.1 Electricity - formula based revenue cap

Although some costs may be proportional to the number of kWh sold, most costs are related to the number of customers. The formula for revenue regulation should be established on this basis. It removes any bias against demand management initiatives. The Commission recognises that ACTEW has undertaken many demand management initiatives that may not increase the net worth of the organisation.

There should be a separate revenue cap formula for each of the network and retail functions. Price regulation of the retail margin will not be necessary when the electricity retail market is fully competitive.

6.2 Water and sewerage - price or revenue cap

The most appropriate form of price regulation for water and sewerage services is a $CPI \pm X$ cap applied to average revenue per property. This does not discriminate against reducing water consumption per property. For any major changes to price structure such as the introduction of a flat usage charge, the Commission may wish to determine the individual prices for services as well as the equivalent revenue cap in the light of possible social impacts.

6.3 Compliance

Prior to commencement of the charging year ACTEW is required to provide pricing schedules for 1997/98. In addition, at the time of its submission to the Commission on 1998/99 prices ACTEW will need to provide evidence of compliance with the 1997/98 determination. Adjustments to the 1998/99 determination may be needed where actual results for 1997/98 vary from the assumptions underlying the 1997/98 determination.

For example, the 1997/98 determination is based on an assumed average wholesale purchase price for electricity. It is intended that the pass through price for electricity purchases be calculated as the average of the vesting contract price and a competitive market price in proportion to the quantities purchased. The extent that this electricity purchase price differs from that assumed for the determination will result in ACTEW either benefiting from a windfall gain or suffering an unplanned loss. Such gains and losses will be taken into account in future years' determinations.

7. AVAILABILITY OF DATA

7.1 Ringfencing of regulated activities

As ACTEW's activities extend more and more across both regulated and non-regulated activities it becomes increasingly important to appropriately ring fence the various business operations. The Commission engaged the consulting firm that had originally helped ACTEW to devise its ring fencing model to test the application of the model and the reasonableness of the outcomes. The model and ACTEW's financial accounts are to be integrated in the near future.

While accepting that the model may satisfy ACTEW's internal requirements the Commission has concerns about the model approach and its ability to provide the data required by a price regulator.

7.2 Quality of data

For the purpose of this investigation, ACTEW was unable to provide the Commission with a financial model to produce projected financial statements and performance reports for use by the regulator. The financial analysis included in this report is based on the use of a financial model developed by the Commission. The outputs of that model are not necessarily endorsed by ACTEW.

In addition, the Commission has had considerable difficulty in collecting appropriate data from ACTEW. This in part relates to the current status of ACTEW's information systems. Work is progressing to better integrate and improve these systems.

When compared to the information required to be provided by utilities under other regulatory regimes, the information demands on ACTEW for this investigation have been very light. Significantly more information, in appropriate form, would be required prior to the establishment of a longer term price path. This is supported by the Commission's review of the information requirements of regulators in North America, the United Kingdom and other Australian states.

The Commission notes that:

- An accounting separation code¹⁸ has been established for electricity distributors in NSW. The code provides principles and guidelines for the accounting separation and financial reporting requirements for the network monopoly activities of distributors. Distributors

¹⁸ Accounting Separation Code for Electricity Distributors in NSW, Independent Pricing and Regulatory Tribunal of NSW, December 1996.

are required to adhere to the procedures when reporting network costs including labour, material and capital costs.

- The Office of Regulator-General, Victoria has issued regulatory information requirements for the electricity distribution business.¹⁹ The guidelines provide for the collection, allocation and recording of business data by the privatised distribution businesses. The data will provide a stable information base to support financial and economic analyses for the purposes of undertaking pricing review of post 2000 network charges. Distributors are required to prepare and present audited regulatory accounting statements and regulatory accounting forecasts. The regulatory accounts are to be prepared by disaggregating the distributor's consolidated financial statements. The disaggregated statements will provide an audit trail to evidence the disaggregation into the various business segments including the regulated business, other non-regulated activities and businesses.
- The Office of Water (OFWAT) in the United Kingdom requires very detailed , audited information (over three volumes) from the regulated water companies. Financial accounts in a form dictated by the regulator are required. The format and content of these accounts varies from the published financial statements. In addition, detailed performance data is also collected. All information is independently verified, separate from the companies' financial auditors.

There is therefore a need for the Commission and ACTEW to consult in the period prior to the next investigation to ensure that the information required for a medium term determination is provided in appropriate form.

8. CONCLUSION

On the basis of available information the Commission has judged that the extent of increases in charges proposed by ACTEW was inappropriate for 1997/98. However, there will be price increases for domestic and some non-residential customers. Other non-residential customers will receive price reductions. The charges determined by the Commission for the 1997/98 year will enable ACTEW to meet its operating expenditure, fully fund its capital works, satisfy the Government's stated dividend requirements and provide for an increase in net cash and investments for future works. The determination will also enable ACTEW to start to address the existing cross subsidies without price shocks for customers.

Considerable work is required prior to the establishment of a medium term price path. The following matters require further examination:

- ACTEW's long term capital works program
- opportunities for efficiency gains
- regulatory asset base
- data requirements for price regulation
- competition in the electricity industry and its effects on ACTEW
- the impact of corporatisation of the Snowy Mountains Authority

¹⁹ Electricity Industry Guidelines No. 3 Regulatory Information Requirements, Office of the Regulator-General, Victoria, Issued on 18/12/1996.

- identification and valuation of environmental costs and benefits.

The Commission believes that its determinations and recommendations for ACTEW Corporation represent a balanced outcome, taking into account a wide range of factors, including the interests of the various stakeholders.

9. SUMMARY LIST OF FINDINGS

Apart from the annual price determinations, the findings of this investigation are listed below.

9.1 Compliance

The Commission proposes that ACTEW report on its compliance with the price determinations on an annual basis.

Prior to commencement of a charging year ACTEW will be required to provide pricing schedules for that year. At the time of its submission to the Commission on the coming year's prices ACTEW will need to provide evidence of compliance with the current year's determination. Adjustments to the coming year's determinations may be needed where actual results vary from the assumptions underlying the current year's determination.

9.2 Data Requirements

Cost information on inputs and functions should be made available for each of the regulated businesses, non-regulated businesses and subsidiaries. For transparency, these costs should be reconciled with the corporation's overall expenditure.

9.3 Efficiency

Contracting out and private sector participation in ACTEW's service delivery need to be examined. Greater emphasis should be placed on market testing and competitive letting of contracts for internal non core services.

An audit should be conducted of ACTEW's capital works program including a review of the approval process and the need for new and replacement expenditure.

An explicit efficiency target should be established and included in ACTEW's business plan.

9.4 Environment

A user pays approach should be used in allocating environmental costs. It is reasonable that polluters and beneficiaries be asked to contribute to the costs of monitoring and undertaking remedial environmental works, provided there is a close link between the resource use and the need for these activities. Where costs are identifiable, they should be paid by those who are responsible for causing them, or those who benefit from the service provision. Those who cause more services to be required, or benefit more, should pay more.

To achieve maximum effects of water conservation and energy efficiency, equal emphasis should be placed on price and non-price measures. ACTEW should continue to explore and institute demand-side management programs, including non-price measures, where cost-effective.

All costs incurred by ACTEW in meeting its environmental obligations should be treated as ordinary business costs and funded accordingly.

If higher service standards are planned, the implications of these on capital and operating costs need to be examined carefully. Full cost pass through should not be permitted unless options for meeting higher standards are evaluated with full community consultation.

9.5 Form of Regulation

In regulating ACTEW's electricity charges, the following approach should be adopted:

- *a revenue cap should be placed on total revenue for the distribution business, at this stage incorporating transmission charges*
- *a retail margin cap approach should be taken for the retail supply business.*

The following should be adopted in regulating ACTEW's network and retail businesses:

- *Instituting separate regulatory approaches for the network business and the retail supply business.*
- *Strong ring fencing of the network and retail businesses' accounting systems and business operations.*
- *Establishing a public register of network prices when the market is opened up to competition. Network prices should not discriminate between the incumbent and new retailers.*

In regulating ACTEW's water and sewerage charges, a CPI+/-X cap should apply to average revenue per property. If major changes to price structure are to be introduced, the price regulator may wish to determine individual prices for services as well as the equivalent revenue cap. In this initial determination, the Commission has set prices for individual services.

In determining prices/revenue caps a price regulator should have regard to a broad range of financial indicators. This broad approach includes rate of return and a cashflow analysis to test the reasonableness of the amounts for depreciation and the value attributed to the asset base.

A regulatory asset base should be established for price regulation purposes. This may require a detailed examination of ACTEW's asset base including factors such as system optimisation.

9.6 Pricing

Negotiation of electricity network prices should be allowed in certain circumstances. Negotiated prices will have to be above the avoidable cost. Any revenue forgone cannot be recouped from other customers prior to the next price determination.

ACTEW's electricity retail pricing structure should be maintained. This price structure of fixed and variable charge provides a sound start for price regulation. The tariff structure generally reflects electricity cost drivers.

ACTEW should prepare and present to the Commission a short to medium term retail electricity pricing strategy for franchise customers.

The following approach should be adopted for electricity purchase prices:

- *Monitoring the competitive market price to pass this through to customers.*
- *Calculating the pass through price as an average of the vesting contract price and a competitive market price in proportion to the quantities purchased.*

In terms of future water pricing directions, ACTEW should:

- *review the existing water price structure, including*
 - * *the two block usage charge taking account of the corporation's marginal cost of water supply and demand management factors. The community should be consulted on the move towards a uniform water usage charge.*
 - * *the level of the existing fixed charge. Differential fixed charges should be introduced to reflect the varying demand of customers for capacity.*
- *submit a charging method for recycled water.*

In terms of future sewerage pricing reforms, cost reflective sewerage charges for non-residential customers should be addressed as a high priority by:

- *Reviewing the use of number of fixtures as the basis for the service charge. An alternative method such as meter size should be considered.*
- *Introducing non-residential usage charges related to a discharge factor. The discharge factor is the assessed percentage of water which is discharged into the sewer.*

A further pricing proposal should be submitted by ACTEW to the Commission prior to the next determination giving details of the proposed capital contributions for electricity assets, of the implementation of water and sewerage developer charges including examples of calculation, and of the outcomes of consultations with developers and the public.

9.7 Other

Consideration should be given to whether:

- *the provision of trade waste services should be contestable*
- *current water charges for high density dwellings are appropriate when individual units are not metered separately*
- *renters should be billed directly for water usage. The implications for public housing tenants need to be carefully considered.*
- *unconnected properties should pay water and sewerage charges.*

SCHEDULE 1 DETERMINATION OF ACTEW CORPORATION'S CHARGES

MAXIMUM PRICES TO BE CHARGED UNDER THE ENERGY AND WATER ACT 1988, ENERGY AND WATER (REGULATION OF CHARGES) REGULATION, NO. 196 OF 1996

This Determination shows the maximum prices for water and sewerage services and the maximum revenue for electricity services to be applicable from 1 July 1997.

1. Electricity

1.1 Charges that are payable to ACTEW for or in connection with supply of electricity to consumers

Subject to the regulation of the network revenue (1.2) and regulated retail margin (1.3), ACTEW will be free to structure tariffs as long as side constraints (1.5) are not exceeded. Customers' bills will need to show network and energy components once retail competition is introduced.

1.2 Formula for regulating network revenue

The 1997/98 network use-of-system charges (network revenue cap) for the network business of ACTEW will be regulated by a formula.

The network revenue cap formula is:

$$NUOS = a + (b_1N_1 + b_2N_2 + b_3N_3) + cM$$

Where:

NUOS = Network use of system revenue

a = residual fixed revenue capturing other costs

b = dollar margin per customer for each customer category

N = customer category

N₁ = number of customers consuming 0 to 20,000 kWh

N₂ = number of customers consuming 20,000 to 200,000 kWh

N₃ = number of customers consuming greater than 200,000 kWh

c = dollars per MWh

M = MWh sales pa

Network revenue cap coefficients

Unit	a	b1	b2	b3	c
	\$	\$	\$	\$	\$/MWh
1997/98	18,244,000	290	2,200	8,500	9.5

The network revenue cap includes both transmission use of system charge (TUOS) and distribution use of system charge (DUOS).

Based on the projected estimates of number of customers and sales, the network revenue cap will be \$99.1m in 1997/98, including TUOS (\$16.9m) and DUOS (\$82.2m).

1.3 Regulated retail margin

Regulated retail margin = Sales - electricity purchases - TUOS - DUOS - market and system fees

The regulated retail margin (RRM) formula is:

$$RRM = a + (b_1N_1 + b_2N_2 + b_3N_3) + cM - Y$$

Where:

- a = residual fixed revenue capturing other costs
- b = dollar margin per customer for each customer category
- N = customer category
- N₁ = number of customers consuming 0 to 20,000 kWh
- N₂ = number of customers consuming 20,000 to 200,000 kWh
- N₃ = number of customers consuming greater than 200,000 kWh
- c = dollars per MWh
- M = MWh sales pa
- Y = an adjustment factor to remove the margin attributed to contestable customers

Retail margin coefficients

Units	a	b1	b2	b3	c
	\$	\$	\$	\$	\$/MWh
1997/98	1,270,000	30	130	900	0.6

In calculating the regulated retail margin, electricity purchase costs are to be calculated on the basis of a weighted average of vesting contract prices and a best estimate of "average market" prices in the competitive wholesale market.

Based on the projected number of customers and sales, the regulated retail margin will be \$8m in 1997/98. The regulated retail margin does not include market operations and system control costs and ancillary charges (\$2m), miscellaneous charges, capital contributions, recoverable works and ACTEW's other ancillary services.

1.4 Pass through of electricity purchase prices

The wholesale electricity purchase price should be passed through to customers on the basis of the average of the vesting contract price and a "competitive" market price calculated in proportion to the quantities purchased.

1.5 Side constraints on retail prices

Side constraints will be put in place to minimise impacts on customers. In 1997/98:

- No single domestic bill (for the same level and pattern of consumption of electricity) is to increase by more than the greater of (a) 1.7%²⁰ or (b) \$3.35 per quarter.
- No commercial or industrial customer's bill is to increase by more than the greater of (a) 5% in real terms or (b) \$50 per annum.

²⁰ Based on year-on-year increase in the Canberra all groups CPI as at December 1996. The Commission notes that current inflation forecast by the Department of Financial Management is 1.75% in 1997/98.

1.6 Capital Contributions

The maximum prices for capital contributions are not to exceed the equivalent charges as at 30 June 1997.

1.7 Miscellaneous electricity service charges

The maximum prices for miscellaneous charges will continue at prices applicable as at 30 June 1997.

3. Sewerage Charges

This determination sets out the maximum sewerage charges that are payable to ACTEW for or in connection with the supply of sewerage services in accordance with the Sewerage Rates Act 1968. In this determination, 'supply' includes 'or the availability of supply'.

3.1 Supply charge

The maximum annual sewerage fixed supply charges applicable to the property are as follows:

a)	For the supply of sewerage services to a Class 1 parcel of chargeable land	\$260
b)	For the supply of sewerage services to each residential unit contained in a building or buildings erected on a Class 2 parcel of chargeable land	\$260
c)	For the supply of sewerage services to each residential unit contained in a building erected on a Class 3 parcel of chargeable land which is, on the first day of a rating year, held under a weekly or fortnightly tenancy from the Commonwealth	\$260
d)	For the supply of sewerage services to a Class 4 parcel of chargeable land described by sub-sections 6(1)(d)(i), (ii) and (v) of the Sewerage Acts 1968 Together with for each flushing cistern or flush valve situated on the parcel of chargeable land in excess of two flushing cisterns or flush valves	\$260 \$130
e)	For the supply of sewerage services to a Class 4 parcel of chargeable land described by sub-sections 6(1)(d)(iii) and (iv) of the Sewerage Acts 1968 Together with for each flushing cistern or flush valve situated on the parcel of chargeable land in excess of two flushing cisterns or flush valves	\$260 \$260
f)	For the supply of sewerage services to a Class 5 parcel of chargeable land Together with for each flushing cistern or flush valve situated on the parcel of chargeable land in excess of two flushing cisterns or flush valves	\$260 \$260

3.2 Environmental works charge

Environmental works charge will continue in 1997/98 and will be charged at \$40 per property. The charge will be the same for residential and non-residential property.

3.3 Miscellaneous charges

The maximum prices for miscellaneous charges will continue at prices applicable as at 30 June 1997.

Paul Baxter
Commissioner
1 May, 1997

ATTACHMENT A: TERMS OF REFERENCE

NOTICES UNDER REGULATION 10(1) AND REGULATION 12 -- ENERGY AND WATER (REGULATION OF CHARGES) REGULATIONS 1996

Pursuant to regulation 10(1) of the *Energy & Water (Regulation of Charges) Regulations 1996 (the Regulations)*, I, Anthony Joseph De Domenico, Minister for Urban Services, refer to the Energy and Water Charges Commission the conduct of an investigation into charges for electricity, water and sewerage services supplied by ACTEW Corporation Limited in the ACT.

Pursuant to Regulation 12 of the Regulations, the following requirements are specified in relation to the investigation.

The following principles should be adopted in setting longer-term charging objectives which are to apply to ACTEW's monopoly charges. These are the guiding principles and the Commission will need to consider appropriate implementation strategies to minimise any adverse impact on the community in reaching these objectives. The principles are:

1. full cost recovery for services
2. commercial profitability should bear some relation to risks involved
3. an appropriate return to Government on the investment in the Corporation
4. elimination of cross subsidies between classes of customers and between the Corporation's different businesses
5. sharing efficiency gains with consumers through lower charges
6. efficient allocation of resources, including capital, within ACTEW Corporation.

The investigation should address a range of issues, some of which are already listed in regulation 18 (2). The investigation should specifically address the following issues:

1. the protection of consumers from abuses of monopoly power, in terms of price, charging policies, and standards of service and access to alternative sources of supply
2. the cost of providing the services
3. the need for greater efficiency in the supply of services to reduce costs to consumers and taxpayers
4. the cash management practices adopted by the Corporation, and the impact of these practices on consumer costs
5. the impact of charging policies on borrowing, capital structure, rate of return on assets and investments, dividend requirements and the impact of any need to renew or increase relevant assets
6. safeguarding of the environment by appropriate charging policies, including the principle of Ópolluter paysÓ
7. the effect of alternative charging policies on the demand for water services, and the indications for major water supply and re-use options.

The investigation should ensure that proper consideration is given to the current and future demand for the Corporation's products, its resource management responsibilities, the

provision of Community Service Obligations, and the impact of competition from other forms of energy. The investigation should investigate the desirability of continuing the Environmental Works Charge beyond 1997, and recommend an appropriate level for the charge.

The investigation will consider all prices which are determined under section 48 of the *Energy and Water Act 1988*. However, the Commission is to pay closest attention to charges for services that would appear to the Commissioner to be for other monopoly provided services, or where competition is not effective. The investigation should include an assessment of the bulk water charge for Queanbeyan.

The outcome of the investigation will form the basis of a report to the Minister for Urban Services by March 1997, at the same time as the Commission makes a direction to the Company on maximum charges, or the way in which charges should be calculated. The report will provide a longer term path for monopoly services, covering at least three years, with specific recommendations for charges in 1997-98, and an implementation strategy which would move towards achieving the longer term objectives.

ATTACHMENT B: PUBLIC HEARING TIMETABLE

Location: Legislative Assembly Building (Reception Room), London Circuit, Canberra

Day 1- Wednesday, November 13, 1996

Time	Organisation	Representatives
10.00am-11.30am	ACTEW Corporation	Dr Michael Sargent Alan Morrison Michael Del Gigante David Graham
11.30am-1.00pm	ACT Office of Financial Management, ACT Department of Urban Services	Tim Spencer Glenys Beauchamp Tony Hays Gary Croston
2.00pm-2.45pm	Essential Services Review Committee	Trish McDonald Joanne Tulk
2.45pm-3.30pm	ACT Council of Social Services	Graeme Evans Shaun Elliott
3.45pm-4.30pm	Conservation Council	Craig Darlington
4.30pm-5.15pm	Ratepayers & Landlords Association	Peter Janson

Day 2- Thursday, November 14, 1996

Time	Organisation	Representatives
10.00am-10.45am	Queanbeyan City Council	Paul Bailey Catherine Pasfield
11.30am-12.15pm	Great Southern Energy	Peter Hoogland

ATTACHMENT C: SUMMARY OF SUBMISSIONS

Office of Financial Management (OFM) - ACT Government

- Pricing structures
 - * Prices should be determined on economic efficiency and associated with full cost attribution. Full costs include infrastructure costs, investment and resource use, as well as environmental and compliance costs, and an appropriate rate of return.
 - * The 'right' price should ensure that goods and services are produced in the most cost effective manner and reflect their full cost.
 - * Support a user pays pricing structure on economic, environmental and social grounds which is consistent with the principles of competitive neutrality.
 - * ACTEW's existing tariff structure for electricity should be more cost reflective to be consistent with National Competition Policy reforms.
 - * Support the two-part tariff for water services but question the fairness of ACTEW's proposed two step usage charge which needs to be justified in terms of marginal cost of supply and demand management objectives.
 - * With regard to the introduction of the water abstraction fee, the OFM stress that it is a matter for the ACT Government rather than ACTEW to determine.
 - * The current number of fixtures are not a useful measure, however practical problems in implementing a usage component for sewerage services are recognised.
- Removal of subsidies
 - * Support ACTEW's intention to remove cross-subsidies between domestic and commercial electricity customers. Also recognise the need to remove any cross subsidies of the water and sewerage businesses by the electricity business.
- The need for strong ring fencing
 - * Proper ring fencing of ACTEW's electricity, water and waste water businesses is a priority to achieve transparency and accountability.
 - * The ring fencing of ACTEW's business units will assist in identifying the costs and efficiency of each business unit, in assessing the relative operational performance, in attributing cost accurately, and in applying appropriate rate of return for each function.
 - * To ensure consistency with National Electricity Market requirements, it is essential that the electricity distribution and retail business activities are clearly ring fenced to prevent cross subsidisation of retail operations from regulated distribution revenue.
- Social issues and CSOs
 - * Adjustment processes and safety nets must be provided to avoid hardship as a result of price changes.
 - * Where the ACT Government wants ACTEW to provide non-commercial services, they must be identified and funded by the Government through the budget.
- Environmental issues
 - * Costs incurred by ACTEW in meeting environmental requirements are legitimate business costs and need to be taken into account in determining prices. This means that ACTEW's charges should recover any capital and operating costs required to meet prescribed environmental standards.
 - * Charges should not contain a component which is used to fund environmental related expenditures that are unrelated to ACTEW's business.

- * The environmental works charge is a tax on all consumers regardless of their demand on resources employed, therefore needs to be discarded.

Conservation Council of the South East Region and Canberra (CCSERAC)

- ACTEW needs to integrate its environmental service obligations into its proposed pricing structures.
- Environmental and social objectives not been adequately addressed in ACTEW's pricing policies.
- Support a user pays system, given that usage-based charges fully reflect all environmental, social and economic costs. This should be moderated at low usage levels and provide basic services for disadvantage people. Higher power and water usage should be penalised through a progressive pricing structure.
- CCSERAC does not support the ACTEW's proposal to eliminate cross subsidies between domestic electricity prices and other classes of customers. They argue that business rates should not differ from domestic rates, however, there needs to be concessions for low income households.
- Water charges need to be implemented for every litre used. To provide an incentive to conserve water, they propose a progressive pricing structure for higher water usage.
- ACTEW should promote and encourage the installation of water efficient appliances to assist households to reduce water consumption, and renters should be billed directly for water consumption.

Environmental Defender's Office (ACT) Ltd

- The Commission should consider itself bound to act in accordance with the principles of ESD as outlined in ACTEW's legislation when making recommendations to ACTEW
- If there is a conflict between complying with the principles of ESD and other principles stated in the inquiry's terms of reference, there is no statutory authorisation for the Minister to give directions to the Commission as to the principles that it should apply.

ACT Council of Social Service Inc (ACTCOSS)

- Cost pricing
 - * Not fond of 'user pays principle' due to the non existence of price elasticity of demand of electricity and water. They argue the end consumer has very little choice in altering their consumption when a price increase occurs, as water and electricity do not have competitive substitutes.
 - * The 'user pays principle' does not take into consideration 'externalities'. Externalities being the ramifications of 'cost pricing' eg diseases in our community, as a result of the poorer people not having access to clean running water.
 - * Concerned about the effects 'cost pricing' will have on the low income earner and larger families.
- Social issues and cross subsidies
 - * They fear removal of cross subsidies could further exacerbate social disadvantages, and believe an investigation needs to be carried out on the equity and effects such charges would have.
 - * Opening up the domestic market for competition could have an adverse effect on the residential user. They do not believe this form of competition has clearly been defined.

- CSOs
 - * ACTCOSS would like to see CSOs funded out of consolidated revenue and provided on a contractual basis. However the identification, valuation and costing of CSOs remains a grey area.

The Essential Services Review Committee (ESRC)

- Propose that ACTEW subsidise non-pricing DSM measures (dual-flush toilets, water saving shower heads, and drip irrigations systems) given the consumers' limited financial capacity and lack of environmental awareness. If ACTEW do not consider it beneficial, the possibility of a CSO should be looked at.
- Express the need for more regular billing to its clients.
- Suggest the possibility of a joint CSO between the ACTEW and ACT Housing Trust to improve housing insulation and increase heat efficiency.

Council on the Ageing - ACT (COTA)

- Flat rate charges generally disadvantage older people as they tend to consume less than average amounts of water and also discharge less wastewater
- CSOs
 - * should be directly financed by the government to minimise economic distortions and increase transparency.
 - * there is a lack of transparency about the nature and actual cost of the CSOs provided by ACTEW.
 - * payments for CSOs by the government to ACTEW appear excessive and more than offset the community responsibilities of ACTEW.
- Support the provision of reduced prices for low income members of the community.

Ratepayers and Landlords Associations of the ACT Inc

- ACTEW must be accountable for the efficient provision of services to the residents of the ACT.
- The Associations suggest that it is inappropriate for ACTEW to increase its prices on the premise that they have the lowest prices in Australia.
- ACTEW should strive to achieve a high level of efficiency rather than a policy of rising prices.

Canberra Consumers Inc (CC)

- Prices should be linked to the quality of services. CC is concerned that the quality of services might become the cost of meeting return, price and revenue targets by ACTEW.
- ACTEW should be required to demonstrate that the quality of services provided is what a consumer expects in a perfectly competitive market.
- CC is concerned about the effect of the daily allocation of the two price steps for water which could work unfairly against those who maintain vegetable gardens as their usage peaks during the spring/summer period.
- The motive behind the abstraction charge is questionable and ACTEW needs to demonstrate how the charge contributes to efficiency and equity.
- CC considers ACTEW's rejection to update the ACIL marginal cost study unconvincing. They suggest that an adequate understanding of ACTEW's economic and financial costs is required in order to assess ACTEW's cost structure.

Canberra Business Council (CBC)

- Pricing issues
 - * there is a need for a clear pricing policy into the future
 - * prices should be cost reflective including a fair return on assets
 - * a single price for all water supplied, ie. no inclining step charge
 - * pass through of efficiency savings flowing from lower administration and maintenance charges to electricity consumers
 - * ACTEW's proposed sliding fixtures charge coupled with volumetric charge for sewerage services is unconvincing.
- User pays and cross subsidies
 - * user pays only for legitimate and efficient costs
 - * there is a need for a headworks or developer charge so that new developments pay a fair share
 - * equity anomalies in the accommodation industry caused by the fixtures charge for sewerage services need to be addressed
 - * a cost reflective trade waste charge is proposed
 - * an end to domestic cross subsidy in electricity supply.

Great Southern Energy (GSE)

- Impact of competition
 - * GSE is critical of the delay by the ACT Government in announcing a timetable for competition in the ACT. They state that it is against the principles of competition to allow ACTEW to operate in NSW and VIC without identical reciprocal rights for GSE and other retailers to operate in the ACT.
 - * ACTEW's efficiency will be truly tested in a competitive environment if retail competition in the electricity market in the ACT was introduced on a similar timescale to NSW.
- The fairness of ACTEW's current charging method for electricity
 - * ACTEW's charges show a greater bias towards usage based charges than most equivalent NSW charges. They argue that higher access charges achieve greater cost reflectivity within a tariff group, as low usage users are likely to be cross subsidised by high usage customers.
 - * ACTEW's prices for small, medium and large business customers are significantly higher than GSE's prices. There is a high degree of price discrimination against medium to large customers on low voltage and high voltage demand tariffs.
 - * Such discrimination would be unsustainable in a competitive retail electricity market.

Queanbeyan City Council (QCC)

- ACTEW is abusing its monopoly power by raising the bulk water charge to QCC in 1996/97 by 13 percent from the previous year without any prior consultation with the Council.
- The disparity in water prices between ACT residents and QCC:
 - * prevents it from implementing a user pays charging system in line with ACTEW
 - * makes it impossible for QCC to benchmark its water service provision against that of ACTEW
 - * provides different pricing signals to residents of the ACT and Queanbeyan in conserving water for environmental benefits

- * applies additional financial pressure to the Council's operations
- * places a higher financial burden on the ratepayers of Queanbeyan.
- The Council proposes a similar level of service, pricing structures, and environmental objectives between ACTEW and QCC. These can be achieved by reforming ACTEW's bulk water supply charging structure and implementing a long-term pricing reform program.

Tuggeranong Community Council

- The community is paying more because of ACTEW's inefficiencies. For example, advertising electricity and water on television is a blatant waste of consumers' money.
- Safety nets are needed to protect low income families and pensioners from rising prices.
- Questions the need to build a new dam in the ACT, and urges ACTEW to encourage water and energy conservation.

Maurice McQueen - Weston Creek, ACT

- ACTEW should impose development charges on re-developers when land is re-developed to pay for renewal of water reticulation assets.
- ACTEW should stop charging depreciation costs for reticulation assets
 - * Water reticulation assets are included in ACTEW's depreciation schedules, and the depreciation is set against expenditure recoverable from water rates
 - * Reticulation has already been paid for by developers and is part of the purchase price of developed land. If charges for re-development are imposed, there should be no need for depreciation charges for reticulation assets
 - * This would lead to lower domestic tariffs.
- Tariffs should be based on the size of water connection which reflects peak demand use
- A Level of Service Statement should be issued by ACTEW to its customers so that ACTEW can be held accountable for its service provision.

S. C. Pratt - Aranda, ACT

- Questions ACTEW's comparisons of its low electricity prices to other states, given its relatively newer infrastructure such as the distribution network, and given the moderate sized city such as Canberra. Based on these circumstances, ACTEW's prices should be much lower given efficient work practices.
- Sceptical of ACTEW's efficiency by giving an example of the replacement of a wooden power pole in the Duntroon area with a concrete one. It was stated that more than 8 men with 3 or 4 vehicles were at the site for about 3 weeks and did absolutely nothing.
- Argues that increases in water prices will not result in environmental benefits and slow growth in water use as stated by ACTEW. This is because:
 - * current high storage capacity of dams and zero or negative population growth in the ACT
 - * basic consumption level of water is not responsive to price changes. A reduction in the basic concessional level of water consumption will lead to higher charges to this group of consumers and no conservation of water.

David Bull - Deakin, ACT

- Questions the retention of separate teams of water and electricity meters readers. It was proposed that a joint facility between ACTEW and AGL being established for a single team to read gas, electricity and water meters. This would result in cost savings, efficiency and eliminate duplication.
- Suggests that ACTEW adopts a flat uniform rate charging system for water supply services, as this would provide transparency and enable charges to be understood.
- Concerned about the effect of the removal of cross subsidies from businesses to residential customers. Question was raised whether the Commonwealth Government and embassies pay full charges as a commercial business.
- ACTEW's charges should only be sufficient to recover operating and capital costs, and should not be used as a hidden system of taxation.
- Price regulation instrument such as CPI-X should be upheld by ACTEW to encourage efficiency. The principle of this instrument should not be lost by use of excuses about eliminating cross subsidies.

Other submissions from individual customers

- Oppose price increases for water and electricity. The argument used by ACTEW to compare Canberra's low prices to other states to justify price increases is inappropriate.
- Concerned about the effects of rising prices on pensioners and low income families.
- Question the need for a new dam in the ACT.
- Despite the corporatisation of ACTEW, it is still an essential public service and ACT ratepayers are in effect the owners of ACTEW. This means that dividends should be given back to the community through cheaper tariffs.

ATTACHMENT D: GLOSSARY AND ACRONYMS

ACCC	Australian Competition and Consumer Commission
ACTEW	Australian Capital Territory Electricity and Water Corporation
Bilateral contracts	A contract between two parties, usually a customer and either a generator or a retailer for the provision of electricity subject to the terms of the contract
BOO(T)	Build own operate and/or transfer. Arrangements involving a private contractor builds, owns, operates the infrastructure over an agreed period, at the termination of which, the infrastructure may be transferred back to the government agency.
Catchment	an area of land that catches water to supply a river system
Capital contribution	Upfront payment required to be paid by customers to cover cost associated with connection to the electricity distribution transmission network
Code of conduct	The code of conduct developed by the National Grid Management Council for the regulation of the national electricity market
Cogeneration	Generation of electricity as part of an industrial process. May involve net import or export of energy from the network
Contestable customer	Means a customer who is eligible to buy electricity from its local retailer, another retailer or through the wholesale market. A contestable customer is also known as a non-franchise customer.
CRNP	Cost reflective network pricing. Approach adopted by the NGMC for network pricing.
Cross subsidy	A measure of the variation between the cost of service provided and amount paid by a customer. The difference is funded by payments from other customers.
CSO	Community services obligations. Non-commercial activities which are undertaken by government agencies, and which meet social objectives identified by government, eg pensioner rebates.
COAG	Council of Australian Governments
DEA	Data envelopment analysis. A productivity measure often used in benchmarking. DEA examines the level of efficiency by comparing the various inputs and outputs of selected organisations. An efficient production frontier is then formed by selecting those utilities using the least combined quantity of inputs to produce a unit of output.

Developer charges	Charges payable by land developers for infrastructure provided by water suppliers including costs associated with connection to the water and sewerage systems
Distribution network	The network used to transport electricity from the high-voltage transmission grid to customers
Distributors	Businesses established to distribute and supply electricity. Includes network, or wire function and retail function
DSM	Demand side management. Actions of suppliers to affect the demand for utility services eg electricity, water and sewerage services.
DUOS	Distribution use of system charge. Component of network access charge which covers use of the distribution network
EBIT	Earnings before interest and tax
EBITD	Earnings before interest, tax and depreciation
Effluent	Liquid discharged from a sewage treatment plant after treatment
Embedded generator	Generator or cogenerator which is connected to the distribution network instead of transmission network
ESAA	Electricity Supply Association of Australia
EVA	Economic value added. A method to measure the performance of a company by measuring changes in economic value (or business value). EVA is the spread between the economic return on capital employed and the weighted average cost of capital.
Fair value	Method of measuring asset value by applying a discounted cash flow analysis
Franchise customer	Means a customer who may buy electricity only from the customer's local retailer. The prices are generally regulated by the Pricing Regulator. Franchise customers are also known as non-contestable customers.
Green pricing	Green pricing in electricity supply, means an agency offers its customers an opportunity to buy 'green electrons'. If a customer agrees to pay something extra his or her bill, the agency will, in turn, invest this money in renewable energy technologies, and meet a portion of customers' demand using these technologies.
GWh	Gigawatt hour
GTE	Government trading enterprises

HWC	Hunter Water Corporation
IC	Industry Commission
kL	Kilolitre
KVA	Kilovolt ampere
kWh	Kilowatt hour
Load Profile	A customer's electricity consumption as measured periodically over a length of time such as a day, a week or a year.
Marginal costs	The additional cost associated with consuming an additional unit
MWh	Megawatt hour
Network use of system charge	Access charge for use of the transmission, sub-transmission and distribution system from the supply of electricity
NGMC	National Grid Management Council
ODV	Optimised deprival value. Method of valuing assets based on eliminating stranded assets and adjusting for technological and construction cost changes
Pollution tax	Charges placed on users who pollute the environment
Retailer	Means a company which is licensed to sell electricity. A retailer may be the retail arm of a distribution business or an independent retailer
Ring fencing	Clear accounting and cost separation of subsidiaries or divisions of an organisation
RONA	Return on net assets. Method of measuring the profitability of a company, ie profit/(total assets - total liabilities)
ROR	Rate of return. Measure of profits as a percentage of the value of assets, defined as the ratio of earnings before interest and tax to assets
RRM	Regulated retail margin
Safety net	Mechanism(s) to ensure consumers can afford to consume their required level of services
Service availability charge	A charge to recover the costs of providing the service, payable by all customers, and it is not related to usage.
SEQEC	South East Queensland Electricity Corporation

Sewerage discharge factor	An estimate of the percentage of water returned to the sewage system
SWC	Sydney Water Corporation
The Commission	The ACT Energy and Water Charges Commission
The Tribunal	Independent Pricing and Regulatory Tribunal of NSW
Transmission Grid	The component of a distribution business which distributes (transports) electricity from the transmission grid to customers across a distribution network. A wires business is operated under a distribution licence.
TUOS	Transmission use of system charge. Component of network access charge which covers use of the transmission network.
Usage charge	Charge placed on customers for each unit consumed
Vesting contracts	Regulated contracts between wholesalers and distributors covering some proportion of wholesale electricity sales at regulated prices.
WACC	Weighted average cost of capital. Measure of required return on assets based on assessment of the cost of debt and equity
WDRC	Written down replacement cost. Depreciated asset value based on replacement cost.

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