

LEGISLATIVE ASSEMBLY FOR THE AUSTRALIAN CAPITAL TERRITORY

REVIEW OF  
AUDITOR-GENERAL'S REPORT  
NUMBER 7, 1995

*ACTEW Benchmarked*

STANDING COMMITTEE ON PUBLIC ACCOUNTS  
Report Number 14

May 1996

## RESOLUTION OF APPOINTMENT

The Standing Committee on Public Accounts was appointed by the Legislative Assembly on 9 March 1995 with the following terms of reference:

- (a) examine:
  - (i) the accounts of the receipts and expenditure of the Australian Capital Territory;
  - (ii) the financial affairs of authorities of the Australian Capital Territory; and
  - (iii) all reports of the Auditor-General which have been laid before the Assembly;
- (b) report to the Assembly, with such comments as it thinks fit, any items or matters in those accounts, statements and reports, or any circumstances connected with them, to which the Committee is of the opinion that the attention of the Assembly should be directed;
- (c) inquire into any question in connection with the public accounts which is referred to it by the Assembly and to report to the Assembly on that question; and
- (d) inquire into and report on the implementation of the *Public Sector Management Act 1994* with particular reference to:
  - (i) the public interest; and
  - (ii) any other related matter.

## MEMBERSHIP OF THE COMMITTEE

Mr Bill Wood MLA (From 26 March 1996. Elected Committee Chair 3 April 1996)

Mr Trevor Kaine MLA (Deputy Committee Chair)

Ms Lucy Horodny MLA

Ms Rosemary Follett MLA (To 26 March 1996. Former Committee Chair)

Secretary: Bill Symington

# 1. INTRODUCTION

## *Background*

1.1. Auditor-General's Report No 7, 1995 was presented to the Assembly on 22 November 1995.

1.2. The purpose of the audit was to develop an opinion on whether the ACT Electricity and Water Authority (subsequently the Corporation) (ACTEW) is efficient and economical in the management of its resources. A large part of the audit was based on benchmarking and economic modelling undertaken by London Economics (Aust) on behalf of the Audit Office.

1.3. In evaluating whether ACTEW is efficient and economical in the management of its resources, the audit approach was to compare ACTEW with other organisations which undertake similar activities in Australia, New Zealand, the United Kingdom and the United States of America.<sup>1</sup>

1.4. The benchmarking methodology used is known as Data Envelopment Analysis (DEA) which the audit claimed is used extensively in the analysis of efficiency of utilities in Australia and overseas. DEA comprises two related components - technical and allocative efficiency.<sup>2</sup>

1.5. Technical efficiency refers to whether physical inputs (employees, raw materials etc) are being combined to minimise the resources used to produce each unit of output and is the ratio of the quantity of outputs to quantity of inputs expressed as the "efficiency frontier" in DEA analysis.<sup>3</sup>

1.6. Allocative efficiency refers to whether the mix or allocation of resources being used to produce the outputs result in the lowest costs of production. Allocative efficiency depends upon how resources are combined compared to their relative prices. The audit gives the example of a water utility with high labour and low capital costs being allocatively inefficient, and which should consider using less labour and more capital.<sup>4</sup> (However, the committee observes that the example given may be somewhat simplistic in that it does not factor in the relative costs of both labour and capital in producing the output).

1.7. The audit stated that a utility may be technically efficient but allocatively inefficient if it is not using the least costly mix of resources. On the other hand, the audit notes that a utility can be allocatively efficient yet be technically inefficient.<sup>5</sup>

1.8. The benchmarking approach did not identify specific causes within ACTEW as to why it may be more or less efficient than the utilities with which it was benchmarked, but the DEA

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<sup>1</sup> Audit report, p4

<sup>2</sup> *ibid*, p4 and p21

<sup>3</sup> *ibid*, p21

<sup>4</sup> *ibid*

<sup>5</sup> *ibid*

benchmarking approach did indicate the broad areas of inputs where efficiencies or inefficiencies in the application of resources exist.<sup>6</sup>

1.9. The audit noted that ACTEW is unique in that electricity, water and sewerage services are provided by the one organisation, and account was taken of this by the audit.<sup>7</sup>

1.10. The Committee sought comment on the audit report from the Minister for Urban Services, and the Minister's response has been considered by the committee in reaching its conclusions on this review.

## **2. AUDIT FINDINGS**

2.1. The audit found that taking account of factors presently out of ACTEW's management control and also environmental factors, the DEA results reveal that ACTEW's electricity and sewerage treatment functions are currently being successfully managed, but that the efficiency of its water supply and sewerage reticulation operations could be significantly improved.

2.2. With regard to future actions, the audit suggested that ACTEW would benefit by implementing a systematic review of the resources and methods used to deliver water supply and sewerage reticulation services, and identifying best practices as used by those utilities in the benchmarking sample.<sup>8</sup>

### ***Sewerage Treatment***

2.3. This was found to be the most efficient area of ACTEW operations, being close to the most efficient utility amongst those benchmarked.<sup>9</sup>

### ***Electricity Distribution***

2.4. DEA results indicated that ACTEW was very efficient in management of the quantity of resources used but not as efficient in ensuring the least expensive mix of resources. However, the audit noted that ACTEW was limited in the degree to which it could make improvements to the mix by various technical, regulatory and capital financing matters.<sup>10</sup>

2.5. The DEA results indicated that capital is relatively inexpensive for ACTEW compared with labour and other operating costs although extensive and large capital replacements are unlikely in the short term due to financing limitations and other constraints. Among other Australian electricity distributors, ACTEW was found to be relatively efficient overall, while the more efficient distributors were overseas utilities. The audit pointed to a strong indication that Australian wages and industrial relations practices have inhibited the ability of ACTEW

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<sup>6</sup> *ibid*, p5

<sup>7</sup> *ibid*

<sup>8</sup> *ibid*, p9

<sup>9</sup> *ibid*, p6

<sup>10</sup> *ibid*

and other Australian utilities from becoming as allocatively efficient as the sampled overseas utilities.<sup>11</sup>

### ***Water Supply***

2.6. The audit found that water supply operations were significantly less efficient compared with sewerage treatment and electricity distribution. DEA results indicated the main cause of this is that water supply uses more inputs - labour, non-labour operating costs and capital - than the most efficient water utilities in the benchmarking sample. The DEA results also indicate that ACTEW's efficiency is further affected by the use of a relatively expensive mix of resources.<sup>12</sup>

2.7. The audit considered that if ACTEW were to lift the efficiency of water operations minimum achievable annual savings in the short term would be about \$2.8million. Maximum potential cost savings over a longer period were assessed at about \$8.5million, although the audit accepted that some inefficiencies could be outside ACTEW control with real potential savings being somewhere between these figures.<sup>13</sup>

### ***Sewerage Reticulation***

2.8. Sewerage reticulation was found to be the most inefficient of ACTEW's operations. The DEA results were that significant improvements in efficiency should be achievable with annual savings of approximately \$4.7million in the short term lifting to \$6.4million over a longer period, but with real achievable savings lying somewhere between these figures.<sup>14</sup>

2.9. The audit noted that ACTEW is addressing the efficiency of sewerage reticulation by developing long term strategies in addition to investigating alternative technologies to improve the efficiency of its capital inputs.<sup>15</sup>

## **3. ACTEW VIEWS**

3.1. The audit reproduced the ACTEW response to its draft findings, and then commented upon that response.

3.2. In essence, ACTEW challenged the DEA analysis on the basis that the methodology applied in this audit does not allow the normal checking and balancing mechanisms to be reviewed. As a result, ACTEW contended that the raw results achieved in the study do not have the level of confidence, nor does the modelling appear to have the level of robustness necessary, to engender confidence in the results.<sup>16</sup>

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<sup>11</sup> *ibid*

<sup>12</sup> *ibid*, p7

<sup>13</sup> *ibid*

<sup>14</sup> *ibid*, p8

<sup>15</sup> *ibid*,p9

<sup>16</sup> *ibid*,p10

3.3. The audit commented that the DEA analysis is widely used, has been subject to considerable academic scrutiny, is now widely regarded as the most comprehensive measure of economic performance and that the underlying concepts of DEA as well as the procedures used to account for the impact of a range of operating environment conditions had been discussed with ACTEW.<sup>17</sup>

3.4. ACTEW also expressed concerns that the choice of inputs, the volatility of differing models, impact of population density, declining water consumption, sewerage reticulation labour productivity, and service quality had not been properly accounted for in the DEA analysis. In addition, ACTEW indicated its view that the DEA model had been swayed by the abnormal number of "one offs" met by ACTEW in its amalgamation, and further noted that the audit omitted controllable costs per customer, did not recognise ACTEW's capitalising on expertise and put the view that the audit had been "a little selective".<sup>18</sup>

3.5. The ACTEW concerns were addressed by the audit, which concluded that ACTEW should place at least equal weight on improving efficiency as well as enhancing services to best serve the interests of its customers.<sup>19</sup>

## 4. MINISTERIAL RESPONSE

4.1. The Minister for Urban Services provided the committee with an ACTION PLAN on the audit findings. In a preamble to the ACTION PLAN the Minister stated that one objective of the corporatisation of ACTEW on 1 July 1995 was to improve its efficiency by enabling it to act with greater commercial flexibility.

4.2. The Minister then provided strategy responses to the audit findings as indicated in the following paragraphs and advised that the Government will require ACTEW to demonstrate operational efficiencies in each of its business units. The Minister also advised that the independent pricing regulation mechanism, yet to be established, will take account of this requirement and the Government's pricing objectives for ACTEW. The Minister further advised that the forthcoming pricing regime should provide incentives for ACTEW to improve its efficiency.<sup>20</sup>

### *Sewerage Treatment*

4.3. The Minister advised that continued monitoring will be undertaken through the accountability framework for ACTEW.

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<sup>17</sup> *ibid*, p12

<sup>18</sup> *ibid*, pp10,11

<sup>19</sup> *ibid*, pp12-17

<sup>20</sup> Letter to the committee dated 21 December 1995

### ***Electricity Distribution***

4.4. The Minister advised that participation in the national electricity market, and in the NSW market from 1 March 1996, will strengthen the incentive for ACTEW to improve its efficiency and should address the relative position of Australian utilities to the sampled overseas utilities.

4.5. The Minister noted that ACTEW's performance in the national electricity market from 1 October 1996 will be monitored through annual reporting to the Legislative Assembly.

### ***Water Supply***

4.6. The Minister advised that the Government was committed to enabling ACTEW to pursue operational efficiencies in water supply, but noted ACTEW's commitment, as set out in its Future Water Supply Strategy to achieving full cost recovery for water supply in fulfilment of economic objectives for the ACT and commitments made at the Council of Australian Governments. The Minister advised *inter alia* that the Government will require the phasing in of full cost recovery for water.

### ***Sewerage Reticulation***

4.7. The Minister advised that the Government was committed to enabling ACTEW to pursue operational efficiencies in sewerage reticulation. However, the Minister advised that the Government is also committed to achieving full cost recovery for sewerage services in fulfilment of economic objectives for the ACT.

## **5. COMMUNITY OBLIGATIONS**

5.1. While the benchmarking audit was concerned with the efficient and economical management of ACTEW's resources, the committee notes that the Corporation has certain statutory objectives. These objectives require ACTEW to:<sup>21</sup>

- (a) operate at least as efficiently as any comparable business;
- (b) maximise the sustainable return to the Territory on its investment in the Company;
- (c) exhibit a sense of social responsibility by having regard to the interests of the community; and
- (d) conduct its operations in accord with the principles of ecologically sustainable development where its activities affect the environment.

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<sup>21</sup> Electricity and Water (Corporatisation) (Consequential Provisions) Act 1995

5.2. The committee observes that any savings which derive from improved efficiencies might well be used to support the attainment of those objectives which specifically relate to ACTEW's social responsibilities and environmental outcomes.

## **6. CONCLUSION AND RECOMMENDATION**

6.1. The committee accepts the audit and its findings as a valuable means of ensuring that ACTEW, as a public utility, strives to achieve optimal efficiency in the provision of water, sewerage and electricity services to the ACT.

6.2. The committee is encouraged that the audit, despite some reservations by ACTEW about the DEA methodology, has been accepted by both ACTEW and the Government as an appropriate measure of ACTEW's efficiency and that it is both the Government's and ACTEW's intention to address those relative deficiencies which have been revealed by the DEA analysis.

**6.3. Accordingly the committee recommends that the Government report to the Assembly in 12 months time on:**

- (i) progress by ACTEW in achieving demonstrated operational efficiencies in each of its business units; and**
- (ii) the role and actions taken by the independent pricing regulator in assisting the objective of increased operational efficiency for ACTEW in the context of the Government's pricing objectives for ACTEW.**



Bill Wood MLA  
Chair