

**Victorian Third Party Access Code  
for Natural Gas Pipeline Systems:  
Access Arrangement Information for  
Distribution Pipeline by  
Stratus Networks Pty Ltd and  
Stratus Networks (Assets) Pty Ltd**

**Final as at 30 November 1998**

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## **ACCESS ARRANGEMENT INFORMATION FOR DISTRIBUTION PIPELINE BY STRATUS NETWORKS PTY LTD AND STRATUS NETWORKS (ASSETS) PTY LTD**

### **1. INTRODUCTION**

Energy Projects Division of the Victorian Department of Treasury and Finance (“EPD”) on behalf of Stratus Networks Pty Ltd and Stratus Networks (Assets) Pty Ltd (together “Stratus”) submitted to the Office of the Regulator General (the “ORG”):

- on 3 November 1997 Access Arrangement Information (“original AAI”); and
- on 16 March 1998 supplementary Access Arrangement Information (“supplementary AAI”).

On 5 October 1998, the ORG issued its Final Decision (“Final Decision 1”) on the Access Arrangement for Stratus.

This Access Arrangement Information (“final AAI”) is submitted together with the revised Access Arrangement for Stratus as required by Final Decision 1.

The final AAI must be read together with the original AAI and supplementary AAI.

The final AAI updates all relevant tables contained in the original AAI and supplementary AAI having regard to Final Decision 1.

Words and phrases defined in the revised Access Arrangement, original AAI and supplementary AAI, as the case may be, have the meaning given to them in those documents unless the context otherwise requires.

Except as varied by Final Decision 1, or except where expressly set out in the final AAI or revised Access Arrangement, as the case may be, the statements of methodology contained in the original AAI or supplementary AAI apply to the tables contained in the final AAI.

All financial values in the tables are in nominal terms unless otherwise stated.

## 2. TARGET REVENUE

**Table 1: Asset Life**

<b>Asset Type</b>	<b>Economic Life Years</b>	<b>Minimum RL Years</b>
Mains and Services		
• Cast Iron	50-120	5
• Steel - Low Pressure (unprotected)	30-60	5
• Steel - Medium & High Pressure (protected)	120	5
• PE/PVC	60	5
Transmission Pressure Pipeline	60	5
Domestic Meters	25	5
Meter/Regulators		
• Commercial	30	5
• System	30	5
• Transmission Pressure	45	5
Field Regulators	50	5
City Gates	50	5
Other Regulators	50	5
SCADA	5-7	5

Note: Formerly table 2.2(c)(4) in the original AAI

**Table 2: Asset Valuation**

<b>Asset Type as at 1 July 1997</b>	<b>RC \$m</b>	<b>DRC \$m</b>	<b>ORC \$m</b>	<b>ODRC \$m</b>	<b>Allocated ODRC \$m</b>
Mains	500.1	362.2	362.5	257.9	245.2
Security of Supply	-	-	24.5	17.4	17.4
Services	267.4	208.9	267.4	208.9	200.4
Transmission Pressure	72.6	41.9	66.7	39.2	32.4
Domestic Meters	75.8	53.9	75.8	53.9	52.0
Meter/Regulators					
• Commercial	20.1	12.2	20.1	12.2	11.8
• System	12.8	7.8	12.8	7.8	7.6
Field Regulators	15.0	9.1	13.0	7.9	7.6
City Gates	8.7	6.6	7.3	5.4	5.4
Other Regulators	9.3	4.6	-	3.5	3.5
SCADA	3.0	2.2	3.0	2.2	2.5
<b>Total</b>	<b>984.8</b>	<b>709.4</b>	<b>853.1</b>	<b>616.3</b>	<b>585.8</b>

Note: Formerly table 2.2(d)(1) in the original AAI

**Table 3: Asset Remaining Lives**

<b>Total Asset Categories as at 1 January 1998</b>	<b>Post Asset Write Down \$m</b>	<b>Weighted Average RL yrs</b>
Land and Buildings	10.2	36
Mains and Services	499.2	42
Meters - Domestic	45.7	17
Meters - Other	19.6	18
Equipment and Vehicles and other	5.3	5
<b>Total</b>	<b>580.0</b>	

Note: Formerly table 2.4 in the original AAI

**Table 4: Asset Values Stratus Networks**

<b>Asset Categories as at 1 January 1998</b>	<b>Pre Asset Write Down \$m</b>	<b>Post Asset Write Down \$m</b>
Land and Buildings	10.2	10.2
Mains and Services	516.4	499.2
Meters - Domestic	51.7	45.7
Meters - Other	19.6	19.6
Equipment and Vehicles and other	5.3	5.3
<b>Total</b>	<b>603.2</b>	<b>580.0</b>

Note: Formerly table 8 of supplementary AAI as replacing tables 2.2(d)(2) and 2.3(b) of the original AAI

**Table 5: Asset Values Stratus Central Zone**

<b>Asset Categories as at 1 January 1998</b>	<b>Pre Asset Write Down \$m</b>	<b>Post Asset Write Down \$m</b>
Land and Buildings	7.0	7.0
Mains and Services	446.3	446.3
Meters - Domestic	45.7	45.7
Meters - Other	17.3	17.3
Equipment and Vehicles and other	3.6	3.6
<b>Total</b>	<b>519.9</b>	<b>519.9</b>

Note: Formerly table 9 of supplementary AAI

**Table 6: Asset Values Stratus North Zone**

<b>Asset Categories as at 1 January 1998</b>	<b>Pre Asset Write Down \$m</b>	<b>Post Asset Write Down \$m</b>
Land and Buildings	3.2	3.2
Mains and Services	66.9	49.7
Meters - Domestic	6.0	-
Meters - Other	2.3	2.3
Equipment and Vehicles	1.7	1.7
<b>Total</b>	<b>80.1</b>	<b>56.9</b>

Note: Formerly table 10 of supplementary AAI

**Table 7: Asset Values Stratus Murray Valley Zone**

<b>Asset Categories as at 1 January 1998</b>	<b>Asset Value \$m</b>
Land and Buildings	0.0
Mains and Services	3.2
Meters - Domestic	0.0
Meters - Other	0.0
Equipment and Vehicles	0.0
<b>Total</b>	<b>3.2</b>

Note: Formerly table 11 of supplementary AAI

**Table 8: Total Capital Expenditure**

<b>Nature of Capital Expenditure</b>	<b>Year Ending 31 December</b>				
	<b>1998 \$m</b>	<b>1999 \$m</b>	<b>2000 \$m</b>	<b>2001 \$m</b>	<b>2002 \$m</b>
New Resident Investment	14.9	15.9	16.1	15.6	16.0
New Commercial & Industrial Investment	2.0	2.3	2.4	2.5	2.7
Renewal of Mains	1.5	1.5	1.6	1.6	1.7
Renewal of Services	2.3	2.4	2.5	2.6	2.7
Other	6.5	5.3	4.0	4.7	5.1
Equipment and Vehicles	5.3	5.4	3.6	1.5	0.4
<b>Total</b>	<b>32.5</b>	<b>32.8</b>	<b>30.2</b>	<b>28.5</b>	<b>28.6</b>

Note: Formerly table 17 of supplementary AAI, as replacing table 2.5(b) of the original AAI

**Table 9: Total Capital Expenditure Stratus Central Zone**

Nature of Capital Expenditure	Year Ending 31 December				
	1998 \$m	1999 \$m	2000 \$m	2001 \$m	2002 \$m
New Residential Investment	11.6	12.9	12.8	13.6	14.6
New Commercial & Industrial Investment	1.8	2.0	2.1	2.3	2.5
Renewal of Mains	1.4	1.4	1.5	1.5	1.6
Renewal of Services	2.2	2.3	2.3	2.4	2.5
Other	2.8	3.2	3.1	3.8	4.7
Equipment and Vehicles	5.2	5.3	3.6	1.5	0.4
<b>Total</b>	<b>25.0</b>	<b>27.1</b>	<b>25.4</b>	<b>25.1</b>	<b>26.3</b>

Note: Formerly table 18 of supplementary AAI

**Table 10: Total Capital Expenditure Stratus North Zone**

Nature of Capital Expenditure	Year Ending 31 December				
	1998 \$m	1999 \$m	2000 \$m	2001 \$m	2002 \$m
New Residential Investment	1.1	1.2	1.3	1.3	1.4
New Commercial & Industrial Investment	0.1	0.2	0.2	0.2	0.2
Renewal of Mains	0.1	0.1	0.1	0.1	0.1
Renewal of Services	0.1	0.1	0.2	0.2	0.2
Other	0.2	0.2	0.2	0.3	0.4
Equipment and Vehicles	0.1	0.1	0.0	0.0	0.0
<b>Total</b>	<b>1.7</b>	<b>1.9</b>	<b>2.0</b>	<b>2.1</b>	<b>2.3</b>

Note: Formerly table 19 of supplementary AAI

**Table 11: Total Capital Expenditure Stratus Murray Valley Zone**

Nature of Capital Expenditure	Year Ending 31 December				
	1998 \$m	1999 \$m	2000 \$m	2001 \$m	2002 \$m
New Resident Investment	2.2	1.8	2.0	0.7	0.0
New Commercial & Industrial Investment	0.1	0.1	0.1	0.0	0.0
Renewal of Mains	0.0	0.0	0.0	0.0	0.0
Renewal of Services	0.0	0.0	0.0	0.0	0.0
Other	3.5	1.9	0.7	0.6	0.0
Equipment	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>5.8</b>	<b>3.8</b>	<b>2.8</b>	<b>1.3</b>	<b>0.0</b>

Note: Formerly table 20 of supplementary AAI

**Table 12: Major Capital Expenditure Projects**

Capital Expenditure - Major Projects	Year Ending 31 December				
	1998 \$m	1999 \$m	2000 \$m	2001 \$m	2002 \$m
<i>Stratus Central Zone</i> Portsea	0.8	-	-	-	-

Note: Formerly table 21 of supplementary AAI

**Table 13: Total Current Cost Depreciation**

Asset Category	Year Ending 31 December				
	1998 \$m	1999 \$m	2000 \$m	2001 \$m	2002 \$m
Land and Buildings	0.3	0.3	0.3	0.3	0.3
Mains and Services	12.3	13.2	14.0	14.8	15.7
Meters - Domestic	2.8	3.0	3.3	3.5	3.7
Meters - Other	1.1	1.2	1.2	1.2	1.2
Equipment and Vehicles	1.6	2.8	3.8	4.4	4.7
<b>Total</b>	<b>18.1</b>	<b>20.5</b>	<b>22.6</b>	<b>24.2</b>	<b>25.6</b>

Note: Formerly table 13 of supplementary AAI

**Table 14: Current Cost Depreciation Stratus Central Zone**

Asset Category	Year Ending 31 December				
	1998 \$m	1999 \$m	2000 \$m	2001 \$m	2002 \$m
Land and Buildings	0.3	0.3	0.3	0.3	0.3
Mains and Services	11.3	12.0	12.7	13.4	14.2
Meters - Domestic	2.6	2.8	3.0	3.2	3.4
Meters - Other	1.0	1.1	1.1	1.1	1.1
Equipment and Vehicles	1.5	2.6	3.5	4.1	4.4
<b>Total</b>	<b>16.7</b>	<b>18.8</b>	<b>20.6</b>	<b>22.1</b>	<b>23.4</b>

Note: Formerly table 14 of supplementary AAI

**Table 15: Current Cost Depreciation Stratus North Zone**

Asset Category	Year Ending 31 December				
	1998 \$m	1999 \$m	2000 \$m	2001 \$m	2002 \$m
Land and buildings	0.0	0.0	0.0	0.0	0.0
Mains and services	0.9	1.0	1.0	1.1	1.1
Meters - domestic	0.2	0.2	0.3	0.3	0.3
Meters - other	0.1	0.1	0.1	0.1	0.1
Equipment and vehicles	0.1	0.2	0.3	0.3	0.4
<b>Total</b>	<b>1.3</b>	<b>1.5</b>	<b>1.7</b>	<b>1.8</b>	<b>1.9</b>



Note: Formerly table 15 of supplementary AAI

**Table 16: Current Cost Depreciation Stratus Murray Valley Zone**

Asset Category	Year Ending 31 December				
	1998 \$m	1999 \$m	2000 \$m	2001 \$m	2002 \$m
Land and buildings	0.00	0.00	0.00	0.00	0.00
Mains and services	0.13	0.22	0.29	0.33	0.36
Meters - domestic	0.00	0.00	0.00	0.00	0.00
Meters - other	0.00	0.00	0.00	0.00	0.00
Equipment and vehicles	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>0.13</b>	<b>0.22</b>	<b>0.29</b>	<b>0.33</b>	<b>0.36</b>

Note: Formerly table 16 of supplementary AAI

**Table 17: Total O&M**

Total O&M costs	Year ending 31 December				
	1998 \$m	1999 \$m	2000 \$m	2001 \$m	2002 \$m
Labour	11.3	7.9	7.5	7.1	6.6
Materials	0.9	2.1	2.3	2.5	2.5
Outside Services (including CTM costs)	8.3	7.3	8.0	8.7	8.9
Alliance Partner Costs	9.4	6.2	6.5	7.3	7.5
Computer and Office Equipment	1.4	0.8	0.9	0.9	0.9
Other Costs	10.6	8.4	8.6	8.1	7.9
Contracted Services	6.2	3.3	3.2	2.4	2.6
Transmission Connection Costs	3.2	3.9	4.1	4.2	4.3
Less Capitalised Labour and Overheads	(10.5)	(7.6)	(7.8)	(7.2)	(6.7)
<b>Total Costs</b>	<b>40.8</b>	<b>32.3</b>	<b>33.3</b>	<b>34.0</b>	<b>34.5</b>

Note: Formerly table 22 of supplementary AAI

**Table 18: Property Taxes**

	Year Ending 31 December				
	1998 \$m	1999 \$m	2000 \$m	2001 \$m	2002 \$m
Property Taxes	0.5	0.5	0.5	0.5	0.5

Note: Formerly table 23 of supplementary AAI

**Table 19: O&M Stratus Central Zone**

<b>O&amp;M Costs</b>	<b>Year ending 31 December</b>				
	<b>1998 \$m</b>	<b>1999 \$m</b>	<b>2000 \$m</b>	<b>2001 \$m</b>	<b>2002 \$m</b>
Labour	9.9	6.9	6.6	6.2	5.8
Materials	0.8	1.8	2.0	2.2	2.2
Outside Services (including CTM costs)	7.3	6.4	7.0	7.6	7.8
Alliance Partner Costs	8.2	5.4	5.7	6.4	6.6
Computer and Office Equipment	1.2	0.7	0.8	0.8	0.8
Other Costs	9.4	7.5	7.5	7.1	6.9
Contracted Services	5.4	2.9	2.8	2.1	2.3
Transmission Connection Costs	2.8	3.4	3.6	3.7	3.8
Less Capitalised Labour and Overheads	(9.2)	(6.7)	(6.8)	(6.3)	(5.9)
<b>Total Costs</b>	<b>35.8</b>	<b>28.3</b>	<b>29.2</b>	<b>29.8</b>	<b>30.3</b>

Note: Formerly table 25 of supplementary AAI

**Table 20: O&M Stratus North Zone**

<b>O&amp;M Costs</b>	<b>Year Ending 31 December</b>				
	<b>1998 \$m</b>	<b>1999 \$m</b>	<b>2000 \$m</b>	<b>2001 \$m</b>	<b>2002 \$m</b>
Labour	1.4	1.0	0.9	0.9	0.8
Materials	0.1	0.3	0.3	0.3	0.3
Outside Services (including CTM costs)	1.0	0.9	1.0	1.1	1.1
Alliance Partner Costs	1.2	0.8	0.8	0.9	0.9
Computer and Office Equipment	0.2	0.1	0.1	0.1	0.1
Other Costs	1.2	0.9	1.1	1.0	1.0
Contracted Services	0.8	0.4	0.4	0.3	0.3
Transmission Connection Costs	0.4	0.5	0.5	0.5	0.5
Less Capitalised Labour and Overheads	(1.3)	(0.9)	(1.0)	(0.9)	(0.8)
<b>Total Costs</b>	<b>5.0</b>	<b>4.0</b>	<b>4.1</b>	<b>4.2</b>	<b>4.2</b>

Note: Formerly table 26 of supplementary AAI

**Table 21: O&M Stratus Murray Valley Zone**

<b>Total O&amp;M Costs</b>	<b>Year Ending 31 December</b>				
	<b>1998 \$m</b>	<b>1999 \$m</b>	<b>2000 \$m</b>	<b>2001 \$m</b>	<b>2002 \$m</b>
Appliance Repairs and Maintenance	0.00	0.00	0.00	0.00	0.00
Main Repairs and Maintenance	0.00	0.02	0.02	0.02	0.02
Services Repairs and Maintenance	0.00	0.01	0.01	0.02	0.02
Meters Repairs and Maintenance	0.00	0.00	0.00	0.00	0.00
Plumbing	0.00	0.01	0.01	0.01	0.01
Account Investigation	0.00	0.01	0.01	0.01	0.01
Customer Service	0.00	0.02	0.02	0.02	0.02
<b>Total Costs</b>	<b>0.00</b>	<b>0.07</b>	<b>0.07</b>	<b>0.08</b>	<b>0.08</b>

Note: Formerly table 27 of supplementary AAI

**Table 22: Overhead and Marketing Costs**

<b>Total Overhead and Marketing Costs</b>	<b>Year Ending 31 December</b>				
	<b>1998 \$m</b>	<b>1999 \$m</b>	<b>2000 \$m</b>	<b>2001 \$m</b>	<b>2002 \$m</b>
Overhead Costs	11.8	8.9	9.3	8.3	8.4
Marketing Costs	4.9	4.1	4.1	4.5	4.3
Operational Costs	24.1	19.3	19.9	21.2	21.8
<b>Total O&amp;M Costs</b>	<b>40.8</b>	<b>32.3</b>	<b>33.3</b>	<b>34.0</b>	<b>34.5</b>

Note: Formerly table 32 of supplementary AAI

**Table 23: Overhead and Marketing Costs Stratus Central Zone**

<b>Overhead and Marketing Costs</b>	<b>Year ending 31 December</b>				
	<b>1998 \$m</b>	<b>1999 \$m</b>	<b>2000 \$m</b>	<b>2001 \$m</b>	<b>2002 \$m</b>
Overhead Costs	10.3	7.8	8.1	7.3	7.4
Marketing Costs	4.3	3.6	3.6	3.9	3.8
Operational Costs	21.2	16.9	17.5	18.6	19.1
<b>Total O&amp;M Costs</b>	<b>35.8</b>	<b>28.3</b>	<b>29.2</b>	<b>29.8</b>	<b>30.3</b>

Note: Formerly table 33 of supplementary AAI

**Table 24: Overhead and Marketing Costs Stratus North Zone**

Overhead and Marketing Costs	Year Ending 31 December				
	1998 \$m	1999 \$m	2000 \$m	2001 \$m	2002 \$m
Overhead Costs	1.4	1.1	1.1	1.0	1.0
Marketing Costs	0.6	0.5	0.5	0.6	0.5
Operational Costs	3.0	2.4	2.5	2.6	2.7
<b>Total O&amp;M Costs</b>	<b>5.0</b>	<b>4.0</b>	<b>4.1</b>	<b>4.2</b>	<b>4.2</b>

Note: Formerly table 34 of supplementary AAI

**Table 25: Overhead and Marketing Costs Stratus Murray Valley Zone**

Overhead and Marketing costs	Year Ending 31 December				
	1998 \$m	1999 \$m	2000 \$m	2001 \$m	2002 \$m
Overhead Costs	0.00	0.02	0.02	0.02	0.02
Marketing Costs	0.00	0.01	0.01	0.01	0.01
Operational Costs	0.00	0.04	0.04	0.05	0.05
<b>Total O&amp;M Costs</b>	<b>0.00</b>	<b>0.07</b>	<b>0.07</b>	<b>0.08</b>	<b>0.08</b>

Note: Formerly table 35 of supplementary AAI

**Table 26: Cost Allocation between Regulated and Unregulated Costs**

Cost Allocation	Gross Cost \$m	% to Stratus	Energy 21 Cost \$m	Stratus Cost \$m
Management Costs		50.0		
Accounting Services		64.2		
Human Resources Costs		71.6		
Legal & Regulatory		93.1		
Communications		44.8		
Dispatch Operations		24.8		
<b>Total</b>	<b>8.9</b>		<b>1.9</b>	<b>6.0</b>

Note: Formerly table 36 of supplementary AAI

**Table 27: Excluded Service Revenue**

	Year Ending 31 December				
	1998 \$m	1999 \$m	2000 \$m	2001 \$m	2002 \$m
Revenue - Excluded Services	4.6	2.1	2.3	2.4	2.4

Note: Formerly table 2.8(c) of the original AAI

**Table 28: UAFG Benchmark**

	<b>Small Customers (&lt;250,000 GJ p.a.)</b>	<b>Large Customers (&gt;250,000 GJ p.a.)</b>
Proposed Benchmarks	2.9%	0.3%

Note: Formerly table 2.10 of original AAI.

**Table 29: Adjustment of Leakage Rates to GASCOR Network**

<b>Pipe</b>	<b>Recommended Leakage Rates m3/hr/km at 30 mb</b>	<b>GASCOR Leakage Low Pressure m3/hr/km at 1.8kPa</b>	<b>GASCOR Leakage Medium Pressure m3/hr/km at 50 kPa</b>
Steel <=3 inch	0.0657	0.0509	0.2499
Steel >=4 inch	0.4694	0.3636	0.2449
Spun CI<=5 inch	0.2635	0.2041	0.5977
Spun CI 6-7 inch	0.1895	0.1468	0.4299
Spun CI>=8 inch	0.3879	0.3005	0.8798
Pit Cast <=3 inch	0.9819	0.7606	n/a
Pit Cast 4-5 inch	0.7022	0.5439	1.5926
Pit Cast 6-7 inch	0.3951	0.3060	0.8961
Pit Cast 8-11 inch	1.4612	1.1319	3.3142
Pit Cast >=12 inch	3.0631	2.3726	6.9472
PVC	n/a	0.1000	n/a
Ductile iron<=5 inch	0.1987	0.1539	n/a
Ductile iron>=6 inch	0.1215	0.0941	n/a
All PE	0.0208	0.0161	0.0849

Note: Formerly table 28 of supplementary AAI

**Table 30 Distribution Leakage Allocation**

<b>Company</b>	<b>Low Pressure 1.8kPa</b>		<b>Medium Pressure 50 kPa</b>		<b>High Pressure 250 kPa</b>		<b>Totals</b>	
	<b>length km</b>	<b>TJ</b>	<b>length km</b>	<b>TJ</b>	<b>length km</b>	<b>TJ</b>	<b>length km</b>	<b>TJ</b>
Multinet	3473	440	1112	140	4016	220	8601	800
Stratus	1720	200	127	90	5467	300	7314	590
Westar	2151	210	782	70	4252	230	7185	510
<b>Totals</b>	<b>7344</b>	<b>850</b>	<b>2021</b>	<b>300</b>	<b>13735</b>	<b>750</b>	<b>23100</b>	<b>1900</b>

Note: Formerly table 29 of supplementary AAI

**Table 31: Left Over Allocation**

<b>Company</b>	<b>Billed Sales PJ</b>	<b>Percent of Billed Sales %</b>	<b>Left Over TJ</b>
Multinet	56.1	32	361
Stratus	54.3	31	350
Westar	64.4	37	417
<b>Totals</b>	<b>174.8</b>	<b>100</b>	<b>1128</b>

Note: Formerly table 30 of supplementary AAI

**Table 32: Total UAFG Allocation**

<b>Company</b>	<b>Issues PJ</b>	<b>Issues PJ</b>	<b>Leakage PJ</b>	<b>Leftover exc PFF TJ</b>	<b>Total UAFG TJ</b>	<b>UAFG %</b>
Multinet		49	800	361	1161	2.4
Stratus		36	590	350	940	2.6
Westar		38	510	417	927	2.5
Multinet Distribution Transmission	56				64	0.1
Stratus Distribution Transmission	54				54	0.1
Westar Distribution Transmission	64				40	0.1
TPA					367	0.2
<b>Total</b>	<b>174</b>	<b>123</b>	<b>1900</b>	<b>1128</b>	<b>3553</b>	

Note: Formerly table 31 of supplementary AAI

**Table 33: Target Revenue**

<b>Target Revenue Component</b>	<b>Year Ending 31 December</b>				
	<b>1998 \$m</b>	<b>1999 \$m</b>	<b>2000 \$m</b>	<b>2001 \$m</b>	<b>2002 \$m</b>
O&M Costs	40.8	32.3	33.3	34.0	34.5
Depreciation	18.2	20.4	22.5	24.2	25.6
Return on Assets	47.1	49.5	51.6	53.5	55.2
<b>Total</b>	<b>106.1</b>	<b>102.2</b>	<b>107.4</b>	<b>111.7</b>	<b>115.3</b>

Note: Formerly table 1 of supplementary AAI

**Table 34: Return on Assets**

Return on Assets	Year Ending 31 December				
	1998 \$m	1999 \$m	2000 \$m	2001 \$m	2002 \$m
Stratus Central Zone	42.5	44.3	46.0	47.6	49.0
Stratus North Zone	4.1	4.3	4.5	4.6	4.8
Murray Valley Zone	0.5	0.9	1.1	1.3	1.4
<b>Total</b>	<b>47.1</b>	<b>49.5</b>	<b>51.6</b>	<b>53.5</b>	<b>55.2</b>

Note: Formerly table 3 of supplementary AAI

**Table 35: WACC Parameters Table**

Variable	Value
Risk free rate	6% nominal 3.4% real
CPI	2.5%
Market Risk Premium	6%
Cost of Debt (margin over risk free rate)	120 basis points
Asset Beta	0.55
Equity Beta	1.2
Capital Structure	60% debt to total assets
Franking credit value	50%
Effective tax rate	36%
<b>Post tax equity cost from CAPM:</b>	
Nominal	13.2%
Real	10.4%
<b>Real pre tax WACC:</b>	7.75%

Note: Formerly table at page 219 of Final Decision 2



### 3. COST ALLOCATION AND TARIFF SETTING

**Table 36: DCOS Customer Groupings**

Group	Group Description	Approximate Customer Numbers
V1	Less than 500 GJ per annum	412,000
V2	500 GJ to 2,000 GJ per annum	2,000
V3	2,000 GJ to 5,000 GJ per annum	500
V4	5,000 GJ to 7,000 GJ per annum	100
V5	7,000 GJ to 10,000 GJ per annum	80
D1	Greater than 10,000 GJ per annum and less than 5 GJ MHQ	50
D2	Greater than 10,000 GJ per annum and 5 to 10 GJ MHQ	110
D3	10 to 50 GJ MHQ	90
D4	50 to 70 GJ MHQ	10
D5	70 to 130 GJ MHQ	15
D6	130 to 210 GJ MHQ	7
D7	210 to 440 GJ MHQ	2
D8	440 to 800 GJ MHQ	1
D9	Greater than 800 GJ MHQ	1

Note: Formerly table 3.3(b) in the original AAI

**Table 37: Simplified Tariff D Data - Initial Rate Estimate**

Group MHQ	No. of Customers	Group Demand MHQ	Target Revenue \$'000	Tariff Rates \$/GJ /MHQ	Revenue Recovered \$'000	Over (Under) Recovery \$'000 %	Squared Error Millions
D1: 0 to 10	100	600	750	1,000	600	(150) (20)	22,500
D2: 10 to 50	115	2,600	2,500	1,000	2,600	100 4	10,000
D3: >50	5	300	250	1,000	300	50 20	2,500
			3,500		3,500	0 0	35,000

Note: Formerly table 5 of supplementary AAI

**Table 38: Simplified Tariff D Data - Final Rates**

Group MHQ	No. of Customers	Group Demand MHQ	Target Revenue \$'000	Tariff Rates \$/GJ/MHQ	Revenue Recovered \$'000	Over (Under) Recovery \$'000 %	Squared Error Millions
D1: 0 to 10	100	600	750	1,251	751	-1 -0	0
D2: 10 to 50	115	2,600	2,500	736	2,503	3 0	11
D3: >50	5	300	250	736	247	-3 -1	12
			3,500		3,500	0 0	23

Note: Formerly table 6 of supplementary AAI

**Table 39: Tariff D Billing Example One**

Months	Metered Quantity (GJ)	GJ/MHQ Assumption (a)	Annual Bill Assumption (b)=(a)*1,200 (\$)	Paid to Date (c <sub>n</sub> )=(c <sub>n-1</sub> )+(f <sub>n-1</sub> ) (\$)	To Pay (d)=(b)-(c) (\$)	Months to Bill (e)	Bill (f)=(d)/(e) (\$)
Jan	4	10	12,000	0	12,000	12	1,000
Feb	8	10	12,000	1,000	11,000	11	1,000
Mar	10	10	12,000	2,000	10,000	10	1,000
Apr	12	12	14,400	3,000	11,400	9	1,267
May	10	12	14,400	4,267	10,133	8	1,267
Jun	8	12	14,400	5,533	8,867	7	1,267
Jul	14	14	16,800	6,800	10,000	6	1,667
Aug	10	14	16,800	8,467	8,333	5	1,667
Sep	8	14	16,800	10,133	6,667	4	1,667
Oct	15	15	18,000	11,800	6,200	3	2,067
Nov	6	15	18,000	13,867	4,133	2	2,067
Dec	7	15	18,000	15,933	2,067	1	2,067
<b>Total Paid</b>	<b>18,000</b>						

Note: Formerly table 3.4(b)(1) in the original AAI

**Table 40: Tariff D Billing Example Two**

Months	Metered Quantity (GJ)	GJ/MHQ Assumption (a)	Annual Bill Assumption (b)=(a)*1,200 (\$)	Paid to Date (c <sub>n</sub> )=(c <sub>n-1</sub> )+(f <sub>n-1</sub> ) (\$)	To Pay (d)=(b)-(c) (\$)	Months to Bill (e)	Bill (f)=(d)/(e) (\$)
Jan	4	10	12,000	0	12,000	12	1,000
Feb	8	10	12,000	1,000	11,000	11	1,000
Mar	7	10	12,000	2,000	10,000	10	1,000
Apr	8	10	12,000	3,000	9,000	9	1,000
May	8	10	12,000	4,000	8,000	8	1,000
Jun	7	10	12,000	5,000	7,000	7	1,000
Jul	9	10	12,000	6,000	6,000	6	1,000
Aug	4	10	12,000	7,000	5,000	5	1,000
Sept	6	9	10,800	8,000	2,800	4	700
Oct	9	9	10,800	8,700	2,100	3	700
Nov	6	9	10,800	9,400	1,400	2	700
Dec	7	9	10,800	10,100	700	1	700
Total Paid	10,800						

Note: Formerly table 3.4(b)(2) in the original AAI

#### 4. SYSTEM CAPACITY AND VOLUME ASSUMPTIONS

**Table 41: Tariff V Forecast Volumes (TJ)**

	1998	1999	2000	2001	2002
Central	24,410	25,215	26,024	26,819	27,061
North	2,758	2,863	2,972	3,071	3,103
Murray Valley	18	73	120	161	200
<b>Total</b>	<b>27,186</b>	<b>28,151</b>	<b>29,116</b>	<b>30,051</b>	<b>30,364</b>

Note: Formerly table 5.2(a) in the original AAI

**Table 42: Forecast Customer Numbers**

	1998	1999	2000	2001	2002
Central	355	365	376	386	397
North	49	51	52	54	55
Murray Valley	0.4	1.5	2.6	3.6	4.5
<b>Total</b>	<b>404.4</b>	<b>417.5</b>	<b>430.6</b>	<b>443.6</b>	<b>456.5</b>

Note: Formerly table 5.2(b) in the original AAI

**Table 43: Annual Volume Forecast**

TJ	1998	1999	2000	2001	2002
Injection on 5 peak days					
• Tariff V	869	898	927	956	985
• Tariff D	493	512	512	515	518
• <b>Total</b>	<b>1,362</b>	<b>1,410</b>	<b>1,439</b>	<b>1,471</b>	<b>1,503</b>
Anytime Volume					
• Tariff V	27,186	28,151	29,116	30,051	30,364
• Tariff D	29,957	28,672	28,699	28,821	28,965
• <b>Total</b>	<b>57,143</b>	<b>56,823</b>	<b>57,815</b>	<b>58,872</b>	<b>59,329</b>
Peak Demand (Tariff D) 5 peak days	493	512	512	515	518
MHQ (Tariff D)	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>

Note: Formerly table 37 of supplementary AAI

**Table 44: Tariff V Consumption by Rate Block 1998**

Tariff V Rate Block GJ/day	North Zone		Central Zone		Murray Valley		Total	
	Peak Volume TJ	Off Peak Volume TJ	Peak Volume TJ	Off Peak Volume TJ	Peak Volume TJ	Off Peak Volume TJ	Peak Volume TJ	Off Peak Volume TJ
<0.1	534	855	4,026	6,526	4	4	4,564	7,387
>0.1 - 0.2	332	184	2,802	2,079	2	1	3,136	2,264
>0.2 - 1.4	373	183	3,951	1,962	3	1	4,227	2,146
>1.4	132	165	1,393	1,671	2	2	1,527	1,838
<b>Total</b>	<b>1,371</b>	<b>1,387</b>	<b>12,172</b>	<b>12,238</b>	<b>10</b>	<b>8</b>	<b>13,454</b>	<b>13,635</b>

Note: Formerly table 5.2(c) in the original AAI

**Table 45: Tariff D Demand by Rate Block 1998**

Tariff D Rate Block (GJ MHQ)	MHQ GJ
>0 - 10	2,226
>10 - 50	2,118
>50	3,578
<b>Total</b>	<b>7,922</b>

Note: Formerly table 5.2(d) in the original AAI

**Table 46: System Load Profile**

System Load Profile % of Annual Volumes	Months					
	Jan Feb	Mar Apr	May Jun	Jul Aug	Sept Oct	Nov Dec
Stratus Central						
Tariff V	7.9%	11.1%	23.8%	28.6%	18.6%	9.9%
Tariff D	15.0%	16.3%	17.3%	17.9%	17.6%	15.9%
Stratus North						
Tariff V	7.9%	11.2%	23.8%	28.5%	18.6%	10.0%
Tariff D	15.0%	16.3%	17.3%	17.9%	17.6%	15.9%

Note: Formerly table 38 of supplementary AAI

## 5. KEY PERFORMANCE INDICATORS

**Table 47: Comparable Operational KPIs**

Company	Gascor	Alinta	AGL	Envestra	Envestra
State	Victoria	W.A.	N.S.W.	S.A.	QLD
Year	94/95	95/96	95/96	96/97	96/97
\$m	244.50	48.50	167.90	40.50	11.30
\$m/1000 km	10.78	5.06	8.67	6.44	6.28
\$/customer	184.00	133.00	250.00	126.00	158.00
\$/GJ	1.40	1.03	1.78	1.00	3.14

Note: Formerly table 6.2(a) in the original AAI

**Table 48: Stratus Operational KPIs**

Real 1998 \$	1998	1999	2000	2001	2002
\$m	40.80	31.52	31.70	31.58	31.35
\$m/1000 km	5.24	3.90	3.82	3.73	3.65
\$/customer number	100.89	75.51	73.62	71.19	68.68
\$m/GJ	74.99	55.48	54.84	53.64	52.84

Note: Formerly table 6.2(b) in the original AAI

**Table 49: Stratus KPIs by Zone**

Operational Costs KPIs Real 1998 \$	Year Ending 31 December				
	1998	1999	2000	2001	2002
<b>Stratus Central Zone</b>					
Operating Costs, \$m in 1998 dollars	35.78	27.59	27.75	27.64	27.44
Cost per Pipe Length, \$m / 1,000 km	5.68	4.24	4.16	4.06	3.97
Cost per Customer, \$ / Customer	100.78	75.59	73.80	71.60	69.12
Cost per Volume Delivered, \$ / GJ	76.82	58.02	57.49	56.22	55.40
<b>Stratus North Zone</b>					
Operating Costs, \$m in 1998 dollars	5.02	3.87	3.89	3.87	3.84
Cost per Pipe Length, \$m / 1,000 km	3.89	2.90	2.85	2.78	2.71
Cost per Customer, \$ / Customer	102.49	75.80	74.76	71.71	69.89
Cost per Volume Delivered, \$ / GJ	59.53	45.00	44.50	43.70	43.15
<b>Stratus Murray Valley Zone</b>					
Operating Costs, \$m in 1998 dollars	-	0.07	0.07	0.07	0.07
Cost per Pipe Length, \$m / 1,000 km	-	0.28	0.25	0.26	0.25
Cost per Customer, \$ / Customer	-	45.53	25.63	19.35	15.10
Cost per Volume Delivered, \$ / GJ	-	10.02	8.26	8.21	7.66

Note: Formerly table 39 of supplementary AAI

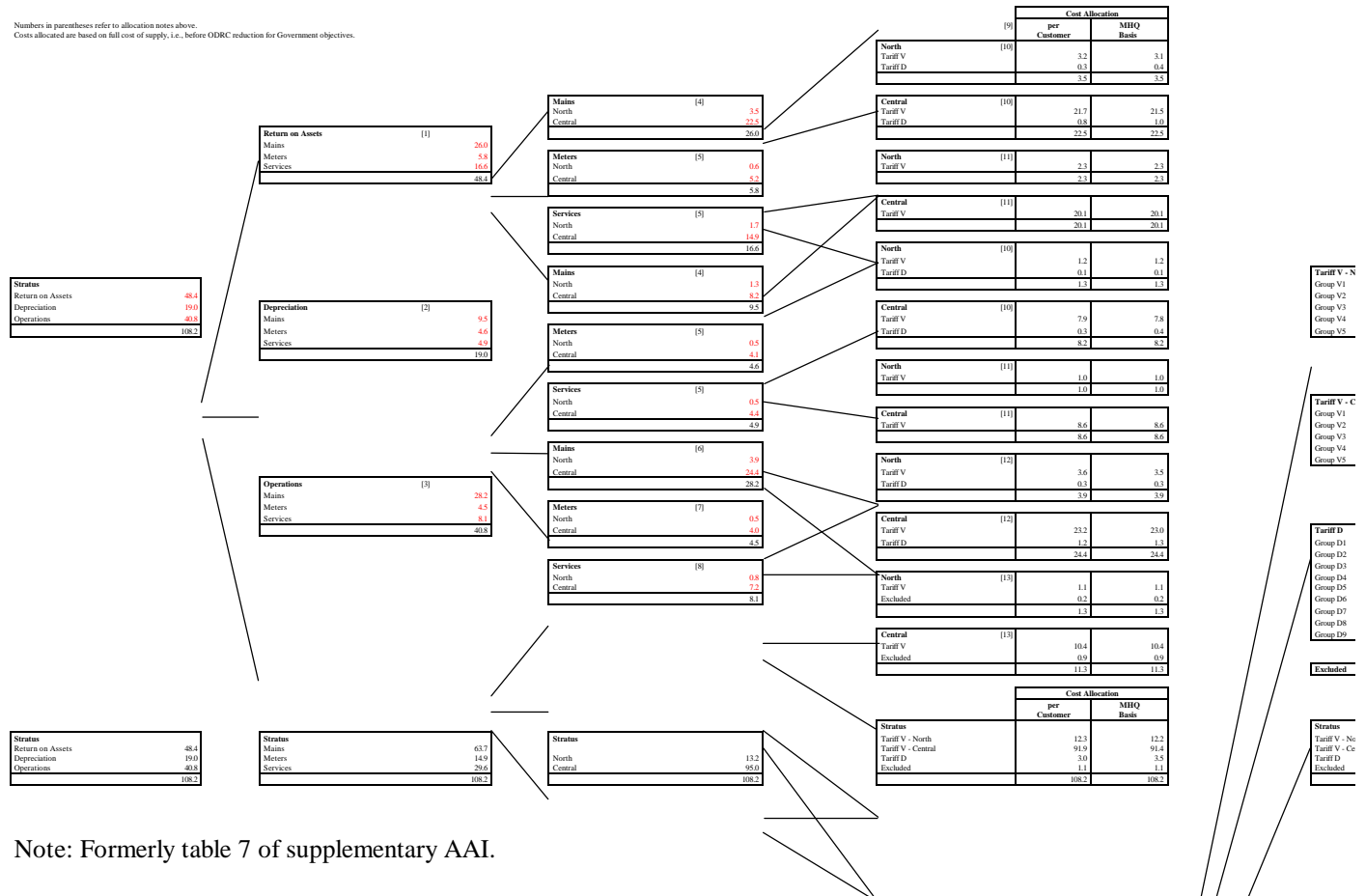
**Table 50: Comparison of Distribution Tariffs**

<b>Including Trunk Costs (\$/GJ actual)</b>	<b>10,000 GJ/year Customer</b>	<b>100,000 GJ/year Customer</b>	<b>1,000,000 GJ/year Customer</b>
<b>AGL Delivery Points</b>			
Horsely Park	0.552	0.412	0.361
Auburn	0.798	0.621	0.555
Flemington	0.888	0.697	0.625
Mortlake	1.555	1.261	1.149
Haberfield	1.268	1.019	0.924
Tempe	1.161	0.928	0.840
Mascot	1.375	1.109	1.008
Willoughby	4.471	3.729	3.441
<b>Victorian Distribution Business Charges</b>			
Multinet	0.722	0.272	0.039
Stratus	0.889	0.326	0.046
Westar	0.900	0.348	0.078

Note: Formerly table 6.3 in the original AAI

Table 51 Stratus North and Central Zones Cost Allocation Diagram

Numbers in parentheses refer to allocation notes above.  
Costs allocated are based on full cost of supply, i.e., before ODRC reduction for Government objectives.



Note: Formerly table 7 of supplementary AAI.