



ELECTRICITY, GAS, WATER AND WASTE SERVICES

AUSTRALIA

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INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Phillip Lui on Sydney (02) 9268 4269.

NOTES

ABOUT THIS PUBLICATION

This publication presents estimates of the economic and financial performance in 2006–07 of these industries: electricity supply; gas supply; water supply, sewerage and drainage services; and waste collection, treatment and disposal services. The estimates are compiled from the ABS Economic Activity Survey and from business tax data reported to the Australian Taxation Office. For convenience, these industries in total are referred to as the Electricity, Gas, Water and Waste Services industry throughout this publication.

CHANGES TO THIS PUBLICATION

Data in previous issues are based on the 1993 version of the ANZSIC. ANZSIC 2006 was adopted to provide a more contemporary industrial classification system, taking into account issues such as changes in the structure and composition of the economy, changing user demands, and compatibility with major international classification standards.

The methodology used to produce these estimates has also substantially changed, notably, the way in which business tax data are used.

For these reasons, a new statistical series has commenced with the 2006-07 collection.

This publication includes key data from 2004–05 and 2005–06 compiled using the new methodology and on a 2006 ANZSIC basis, as an aid to analysis.

For further details see paragraph 26 of the Explanatory notes.

As a result of changes to the ABS economic surveys work program, this publication will not be produced for the 2007–08 reference year. Future estimates for these industries will continue to be available in *Australian Industry*, (ABS cat. no. 8155.0). In addition, more detailed estimates for the electricity supply and gas supply industries will be available from a new Energy Supply Survey to be conducted by the ABS for 2007–08 and will be available as a data cube.

INFORMATION AVAILABLE ON-LINE

The text components of this publication are available free on-line. A PDF publication and extended data spreadsheets are also available free on-line. Further information on the ABS and its products and services is available on the ABS website.

Susan Linacre
Acting Australian Statistician

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ABBREVIATIONS

'000	thousand
\$b	billion (thousand million) dollars
\$m	million dollars
ABN	Australian Business Number
ABR	Australian Business Register
ABS	Australian Bureau of Statistics
ABSBR	Australian Bureau of Statistics Business Register
ANZSIC	Australian and New Zealand Standard Industrial Classification
ATO	Australian Taxation Office
Aust.	Australia
BAS	Business Activity Statement
cat. no.	Catalogue number
EAS	Economic Activity Survey
EBITDA	earnings before interest, tax, depreciation and amortisation
FRC	full retail contestability
GST	goods and services tax
GWh	gigawatt hour
IVA	industry value added
n.e.c.	not elsewhere classified
no.	number
NEM	National Electricity Market
OPBT	operating profit before tax
RSE	relative standard error
SISCA	Standard Institutional Sector Classification of Australia
TAU	type of activity unit
TNTS	The New Tax System
UJV	unincorporated joint venture

INTRODUCTION

This publication presents estimates of the economic and financial performance of these industries: electricity supply; gas supply; water supply, sewerage and drainage services; and waste collection, treatment and disposal services. The estimates are compiled from the ABS Economic Activity Survey and from business tax data reported to the Australian Taxation Office.

These industries are specified in Division D ELECTRICITY, GAS, WATER AND WASTE SERVICES of the Australian and *New Zealand Standard Industrial Classification (ANZSIC)*, 2006 edition. Please see paragraphs 1–6 of the Explanatory Notes for a full definition.

All value data are shown at current prices.

KEY DATA

Table 1.1 presents a time series for selected variables, from 2004–05 to 2006–07.

In all eight aggregate measures presented, the electricity, gas, water and waste services industry overall showed growth during 2006–07. Sales and service income increased by 11% (\$6.2b) and industry value added (IVA) by 4% (\$1.0b). As in 2005–06, growth in wages and salaries (11%, or \$0.8b) outpaced that of employment (which increased by 4%, or 3,400 persons).

The ELECTRICITY SUPPLY subdivision continues to dominate in the industry division. Its share of key aggregates ranged from 44% to 66%.

For information about survey methodology, see Technical Note 1.

The Glossary provides definitions for terms used.

LABOUR COSTS

Table 1.2 provides estimates of labour costs.

The electricity, gas, water supply and waste services industry incurred \$8.4b in total labour costs during 2006–07. ELECTRICITY SUPPLY accounted for \$498b (58%), followed by WATER SUPPLY with \$1.9b (22%).

Wages and salaries represented 88% of total labour costs for the industry overall.

INDUSTRY VALUE ADDED

Table 1.3 presents the components of industry value added.

Of the \$24.4b of industry value added produced by the electricity, gas, water supply and waste services industry in 2006–07, \$14.6b (or 60%) is attributable to ELECTRICITY SUPPLY. ELECTRICITY SUPPLY dominates all the major components of industry value added.

1.1 KEY DATA

	<i>Employment at end of June(a)</i>	<i>Wages and salaries(b)</i>	<i>Sales and service income(c)</i>	<i>Total income</i>	<i>Total expenses</i>	<i>Operating profit before tax</i>	<i>Earnings before interest, tax, depreciation and amortisation</i>	<i>Industry value added</i>
	no.	\$m	\$m	\$m	\$m	\$m	\$m	\$m
ELECTRICITY SUPPLY								
2004-05	38 441	3 099	32 195	33 967	30 445	3 622	9 883	13 643
2005-06	41 424	3 821	34 320	37 909	33 232	4 783	9 477	14 170
2006-07	43 902	4 350	39 516	43 593	38 796	5 066	9 417	14 564
GAS SUPPLY								
2004-05	1 928	83	5 849	5 908	5 294	615	1 104	1 216
2005-06	2 238	100	5 220	5 335	4 698	659	1 140	1 273
2006-07	2 001	124	5 204	5 791	4 594	1 201	1 362	^ 1 528
WATER SUPPLY, SEWERAGE AND DRAINAGE SERVICES								
2004-05	22 033	1 297	8 089	9 695	7 333	2 388	3 507	5 088
2005-06	25 510	1 524	9 033	11 420	8 530	2 866	3 711	5 517
2006-07	25 826	1 627	9 446	11 705	9 069	2 653	3 782	5 703
WASTE COLLECTION, TREATMENT AND DISPOSAL SERVICES								
2004-05	26 617	1 200	^ 6 088	6 216	5 659	645	925	2 333
2005-06	26 492	1 184	6 285	6 351	5 776	579	1 015	2 393
2006-07	27 347	1 290	6 893	7 156	6 331	^ 860	1 075	2 607
ELECTRICITY, GAS, WATER AND WASTE SERVICES								
2004-05	89 019	5 679	52 222	55 785	48 731	7 270	15 419	22 280
2005-06	95 664	6 630	54 858	61 014	52 236	8 886	15 343	23 353
2006-07	99 076	7 392	61 058	68 245	58 790	9 779	15 636	24 402

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

(c) Includes rent, leasing and hiring income.

1.2 LABOUR COSTS

	<i>Electricity supply</i>	<i>Gas supply</i>	<i>Water supply, sewerage and drainage services</i>	<i>Waste collection, treatment and disposal services</i>	<i>Electricity, gas, water and waste services</i>
	\$m	\$m	\$m	\$m	\$m
Wages and salaries(a)	4 350	124	1 627	1 290	7 392
Employer contributions into superannuation	277	10	122	107	516
Workers' compensation premiums/costs	26	1	23	47	97
Selected labour costs	4 653	136	1 772	1 445	8 005
Fringe benefits tax	35	2	13	15	65
Payroll tax	194	6	82	44	325
Total labour costs	4 881	143	1 867	1 503	8 395

(a) Excludes the drawings of working proprietors.

1.3 INDUSTRY VALUE ADDED

	<i>Electricity supply</i>	<i>Gas supply</i>	<i>Water supply, sewerage and drainage services</i>	<i>Waste collection, treatment and disposal services</i>	<i>Electricity, gas, water and waste services</i>
	\$m	\$m	\$m	\$m	\$m
Sales and service income(a)	39 516	5 204	9 446	6 893	61 058
Plus					
Funding from government for operational costs	612	6	860	—	1 478
Capital work done for own use	4 344	8	1 068	23	5 442
Change in inventories	268	4	16	35	324
Less					
Purchases of goods and materials	20 434	2 197	2 252	2 037	26 920
Other intermediate input expenses	9 742	1 497	3 435	2 307	16 981
Industry value added	14 564	^ 1 528	5 703	2 607	24 402

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

— nil or rounded to zero (including null cells)

(a) Includes rent, leasing and hiring income.

INTRODUCTION

Statistics in this chapter relate to the electricity supply industry as defined by the *Australian and New Zealand Standard Industrial Classification (ANZSIC)*, 2006 edition. ANZSIC defines the electricity supply industry as consisting of those businesses mainly engaged in electricity generation and/or transmission and/or distribution and/or the on-selling of electricity via power distribution systems operated by others.

The data presented include all activities of the businesses classified to this industry, some of which may be activities other than electricity supply. (See Explanatory Notes paragraphs 13–22 for further details.)

The commentary refers mainly to the tables in this chapter, and to the tables in Chapter 1, preceded by some industry background material.

Definitions of terms used are shown in the Glossary.

INDUSTRY BACKGROUND

Since 1991, governments in Australia have been undertaking restructuring and reform of the electricity industry. State owned utilities have been disaggregated into separate generation, transmission, distribution and retail supply entities, corporatised and, in some jurisdictions, sold to the private sector. In 1994, the introduction of competitive wholesale and retail electricity markets resulted in trading across state borders and, over time, the concept of state bounded entities has continued to lose relevance. The central element of the reforms was the establishment in December 1998 of the National Electricity Market (NEM), which now links the Australian Capital Territory, New South Wales, Victoria, South Australia, Queensland and Tasmania. (Please see <<http://www.nemmco.com.au>>, the website of NEMMCO, the National Electricity Market Management Company, for more details.) Western Australia is not part of the NEM, for reasons of geography. It has, however, established the Wholesale Electricity Market (WEM), which commenced energy trading on 21 September 2006.

In April 2007, the Council of Australian Governments agreed to establish an industry-funded National Energy Market Operator (NEMO) for both electricity and gas, scheduled to commence operations in July 2009. The new body will replace the functions of NEMMCO and the gas market operators. It will also undertake a national transmission planning role. The governments of Western Australia and the Northern Territory will consider participation in NEMO at their discretion, under terms of the *Australian Energy Market Agreement*.

Another continuing trend has been the diversification of energy businesses with the aim of providing their customers with a wider range of energy services. This has seen electricity businesses enter the gas market and, conversely, gas businesses enter the electricity market as opportunities expand within these markets. Because each business unit reporting in ABS surveys is classified to one industry, based on its predominant activity, such diversification can affect the statistics in this chapter and those in Chapter 3

INDUSTRY BACKGROUND

continued

Gas Supply Industry. The ABS attempts to minimise the impact of this as described in paragraph 14 of the Explanatory Notes.

Deregulation has allowed new entities to come into the market and compete for customers. It has also resulted in a number of long established entities being dismantled or sold off. The effect of disaggregation on industry structure has been to change single entities wholly classified to the electricity supply industry into a number of smaller entities, some of which may be classified to industries other than electricity supply. Those entities classified to other industries do not contribute to the statistics for the electricity supply industry. Examples of activities formerly carried out by businesses classified to the electricity supply industry, but which are now largely carried out by specialist businesses classified to other industries, are network construction, repair and maintenance of electricity transmission towers, and power pole inspection.

Effect on these data

These changes to business structures have a direct impact on the data presented in this publication, but not all impacts are in the same direction. Where several smaller specialist business units wholly classified to the electricity supply industry have been created from one vertically integrated business, transactions between these businesses are recorded in the statistics (such as sales from the generating business to the distributing business). Previously, such transactions were internal to a single business and generally were not recorded in the statistics. This situation tends to increase sales and purchases values for the industry, but should have little direct effect on statistics for industry value added, operating profits or capital expenditure. On the other hand, the estimates of several data items (wages and salaries and capital expenditure in particular) for the electricity supply industry will be reduced if activities such as those mentioned in the previous paragraph are now carried out by businesses classified to other industries.

Generally, private sector businesses which are engaged in the electricity supply industry and conduct their own construction and maintenance operations tend to do so through separate business units (typically classified to ANZSIC Division E, CONSTRUCTION), which employ most of the staff engaged in those activities. Government owned businesses in this industry, by contrast, are more likely to employ these staff in a business unit which is classified to the electricity supply industry.

Ownership changes and restructuring in both the public and private sectors of the electricity supply industry continued during 2006–07. Queensland privatised most of its retail energy operations, and merger, dermerger and acquisition activity occurred in the private sector. The Australian Energy Regulator reports a tendency to greater specialisation in ownership, with primary focus on either network infrastructure or the non-network (generation, production and retail) sector.

In 2006–07 electricity generated in Australia increased by less than 1% (cat. no. 8301.0.55.001, *Manufacturing Production, Australia, December 2007*), while the *Consumer Price Index* relating to electricity (weighted average of eight capital cities) indicates that prices for household consumers were 3.3% higher than in 2005–06. However, wholesale prices of electricity sent out through the NEM increased significantly in 2006–07. NEMMCO reported that, whereas the volume of electricity traded increased by 1%, the value traded (\$11.4b) was 60% higher, than in the previous year.

<i>Effect on these data continued</i>	In particular, sustained high prices occurred in the latter part of the year, largely as a result of drought, record demand and capacity constraints.
SUMMARY	The major indicators for the Australian electricity supply industry of wages and salaries, sales and service income, industry value added and net capital expenditure all showed increases, in current price terms, from 2005–06 to 2006–07. Employment also increased.
INDUSTRY VALUE ADDED	The electricity supply industry's \$14.6b of industry value added in 2006–07 represented an increase of \$395m (or 3%) over the preceding year.
EMPLOYMENT	<p>Employment in the electricity supply industry at the end of June 2007 was 43,900 persons.</p> <p>ELECTRICITY DISTRIBUTION accounted for 62% of employment in ELECTRICITY SUPPLY at the end of June 2007, followed by ELECTRICITY GENERATION (with 22%).</p>
LABOUR COSTS	<p>In percentage terms, the increase in wages and salaries paid by the electricity supply industry in 2006–07 exceeded its increase in employment. Wages and salaries rose by 14% (\$529m) in 2006–07.</p> <p>Of the \$4.9b in total labour costs incurred by the electricity supply industry in 2006–07, 89% consisted of wages and salaries.</p>
PROFITABILITY AND EARNINGS	<p>Major indicators of profitability showed limited movement during the year. Earnings before interest, tax, depreciation and amortisation (EBITDA) of the electricity supply industry in 2006–07 was virtually stable, at \$9.4b. Operating profit before tax (OPBT) increased by 6% (or \$184m).</p> <p>ELECTRICITY GENERATION and ELECTRICITY DISTRIBUTION made similar contributions, 41% (\$3.8b) and 40% (\$3.7b) respectively, to the electricity supply industry's EBITDA. In terms of OPBT, ELECTRICITY DISTRIBUTION accounted for 59% (\$3.0b) and ELECTRICITY GENERATION 29% (\$1.5b).</p> <p>The electricity supply industry returned a profit margin of 12.8% in 2006–07. Profit margins within the industry ranged from 1.2% in ON SELLING ELECTRICITY AND ELECTRICITY MARKET OPERATION to 22.2% in ELECTRICITY DISTRIBUTION.</p>
CAPITAL EXPENDITURE	<p>Net capital expenditure for the electricity supply industry was \$9.4b in 2006–07.</p> <p>Of the electricity supply industry's net capital expenditure in 2006–07, businesses engaged in electricity distribution outlaid 48% and those in electricity generation 30%.</p> <p>Expenditure on plant, machinery and equipment accounted for 54% of the industry's total acquisitions of assets in 2006–07.</p>

2.1 INDUSTRY PERFORMANCE

		<i>Electricity generation</i>	<i>Electricity transmission</i>	<i>Electricity distribution</i>	<i>On selling electricity and electricity market operation</i>	<i>Electricity supply</i>
Employment at end of June(a)	no.	9 487	2 572	27 223	4 620	43 902
Income						
Sales of goods	\$m	10 494	351	7 361	12 966	31 172
Service income	\$m	263	1 812	6 124	87	8 285
Rent, leasing and hiring income	\$m	19	17	22	—	59
Funding from government for operational costs	\$m	205	6	96	305	612
Interest income	\$m	266	25	280	90	661
Other income	\$m	151	150	2 445	59	2 805
<i>Total income</i>	\$m	11 399	2 361	16 327	13 507	43 593
Expenses						
Wages and salaries(b)	\$m	971	282	2 758	339	4 350
Employer contributions into superannuation	\$m	96	25	140	17	277
Workers' compensation premiums/costs	\$m	7	1	16	2	26
<i>Selected labour costs</i>	\$m	1 074	307	2 914	358	4 653
Purchases of goods and materials	\$m	3 973	948	6 299	9 214	20 434
Rent, leasing and hiring expenses	\$m	50	10	86	21	168
Freight and cartage expenses	\$m	43	19	25	224	311
Motor vehicle running expenses	\$m	15	8	107	3	132
Repair and maintenance expenses	\$m	283	30	230	19	562
Other contract, sub-contract and commission expenses	\$m	396	103	889	211	1 599
Other selected expenses	\$m	1 703	321	2 335	2 814	7 174
<i>Purchases and selected expenses</i>	\$m	6 463	1 438	9 972	12 507	30 380
Depreciation and amortisation	\$m	1 439	496	1 669	184	3 789
Interest expenses	\$m	1 351	488	1 790	400	4 028
Insurance premiums	\$m	88	18	44	8	158
Natural resource royalties expenses	\$m	29	2	—	7	38
Bad and doubtful debts	\$m	2	—	31	60	93
Less						
Capitalised purchases	\$m	391	757	1 829	7	2 984
Capitalised wages and salaries	\$m	50	85	1 206	19	1 360
<i>Total expenses</i>	\$m	10 005	1 906	13 386	13 498	38 796
Opening inventories	\$m	531	90	300	81	1 002
Closing inventories	\$m	600	86	357	227	1 270
Cost of sales	\$m	6 003	684	8 086	12 355	27 128
Trading profit	\$m	4 774	1 496	5 420	698	12 388
Earnings before interest, tax, depreciation and amortisation	\$m	3 835	1 259	3 733	589	9 417
Operating profit before tax	\$m	1 462	451	2 999	154	5 066

— nil or rounded to zero (including null cells)

(b) Excludes the drawings of working proprietors.

(a) Includes working proprietors.

2.2 INDUSTRY VALUE ADDED

	<i>Electricity generation</i>	<i>Electricity transmission</i>	<i>Electricity distribution</i>	<i>On selling electricity and electricity market operation</i>	<i>Electricity supply</i>
	\$m	\$m	\$m	\$m	\$m
Sales and service income(a)	10 776	2 180	13 506	13 053	39 516
Plus					
Funding from government for operational costs	205	6	96	305	612
Capital work done for own use	441	842	3 035	26	4 344
Change in inventories	69	-3	57	145	268
Less					
Purchases of goods and materials	3 973	948	6 299	9 214	20 434
Other intermediate input expenses	2 444	482	3 538	3 279	9 742
Industry value added	5 075	1 595	6 857	1 036	14 564

(a) Includes rent, leasing and hiring income.

2.3 ACQUISITION AND DISPOSAL OF ASSETS

	<i>Electricity generation</i>	<i>Electricity transmission</i>	<i>Electricity distribution</i>	<i>On selling electricity and electricity market operation</i>	<i>Electricity supply</i>
	\$m	\$m	\$m	\$m	\$m
Capital expenditure(a)					
Plant, machinery and equipment	2 118	90	2 894	59	5 161
Dwellings, other buildings and structures	565	1 087	1 501	181	3 333
Other (including land and intangible assets)	195	557	287	106	1 145
<i>Total acquisitions</i>	<i>2 878</i>	<i>1 734</i>	<i>4 681</i>	<i>347</i>	<i>9 639</i>
Total disposals	53	31	152	2	238
Net capital expenditure	2 825	1 703	4 529	344	9 401
Gross fixed capital formation	2 662	1 175	4 371	321	8 528

(a) Items listed include the value of capital work done for own use reported in table 2.2.

2.4 INDUSTRY RATIOS

		<i>Electricity generation</i>	<i>Electricity transmission</i>	<i>Electricity distribution</i>	<i>On selling electricity and electricity market operation</i>	<i>Electricity supply</i>
Profitability						
Profit margin	%	13.6	20.7	22.2	1.2	12.8
Debt						
Interest coverage	times	1.8	1.6	1.2	1.0	1.4
Capital expenditure						
Investment rate (value added)	%	56.7	108.7	68.3	33.5	66.2
Labour^(a)						
Industry value added to selected labour costs	times	4.8	5.2	2.4	2.9	3.2
Selected labour costs per person employed	\$'000	111	119	106	77	105
Sales and service income per person employed	\$'000	1 136	847	496	2 825	900
Industry value added per person employed	\$'000	535	620	252	224	332

(a) See Explanatory Notes paragraphs 29 and 40.

INTRODUCTION

Statistics in this chapter relate to the gas supply industry as defined by the *Australian and New Zealand Standard Industrial Classification (ANZSIC)*, 2006 edition.

The data presented include all activities of the businesses classified to this industry, some of which may be activities other than gas supply. (See Explanatory Notes paragraphs 13–22 for further details.)

The commentary refers mainly to the tables in this chapter, and to the data presented in Chapter 1, preceded by some industry background material.

Definitions of terms used are shown in the Glossary.

INDUSTRY BACKGROUND

The current gas supply industry reflects the results of the restructuring which began in the early 1990s. The terms of the *1997 National Gas Pipelines Access Agreement* required that legal restrictions to full retail contestability (FRC) be removed in order to give all gas users their choice of supplier. On 1 July 2007 Queensland introduced FRC, with the result that now all states and territories, except the Northern Territory, permit all customers to enter a supply contract with a retailer of their choice. There are no immediate plans for introduction of FRC in the Northern Territory, given that there is no household distribution network and the low number of business customers.

In April 2007, the Council of Australian Governments agreed to establish a National Energy Market Operator (NEMO) by June 2009. As for electricity, the NEMO will become the operator of the wholesale gas market and will be responsible for national transmission planning.

As in the electricity supply industry, vertically integrated businesses have formed separate business units to undertake various stages of distribution and other activities. Increasingly, competition has been introduced along the various stages of the distribution chain with the entry of new businesses.

These changes to business structures have a direct impact on the data presented in this publication, but not all impacts are in the same direction. Where several smaller specialist business units wholly classified to the gas supply industry have been created from one vertically integrated business, transactions between these businesses are recorded in the statistics (such as sales from the distributing business to the retail business). Previously, such transactions were internal to a single business and generally were not recorded in the statistics.

Over time, as the market continues to develop, businesses have gradually rationalised and restructured their operations. This has resulted in several businesses widening their networks through corporate takeovers to include activities not previously undertaken by gas supply businesses. Conversely, some activities previously undertaken by gas supply

INDUSTRY BACKGROUND
continued

businesses are now being undertaken by businesses classified to other industries, in particular, electricity supply and pipeline transport.

The volume of gas (natural and manufactured) available for issue through mains increased, by 6.3% between 2005–06 and 2006–07, from 796 to 846 Petajoules. (*Manufacturing Production, Australia, June 2007*, ABS cat. no. 8301.0.55.001). The *Consumer Price Index* relating to Gas and Other Household Fuels (weighted average of eight capital cities) indicates that prices for household consumers were 4.3% higher in 2006–07 than in 2005–06.

SUMMARY

Most major indicators for the Australian gas supply industry showed increases, in current price terms, from 2005–06 to 2006–07. Sales and service income was stable over this period.

LABOUR COSTS

Wages and salaries paid by the gas supply industry amounted to \$124m in 2006–07, or 87% of its total labour costs. The gas supply industry's selected labour costs were \$67,000 per person employed at the end of June 2007.

PROFITABILITY AND
EARNINGS

The gas supply industry earned \$1.2b in operating profit before tax in 2006–07, which represented a profit margin of 23.1%. Trading profit was \$1.5b, and earnings before interest, tax, depreciation and amortisation (EBITDA) were \$1.4b.

CAPITAL EXPENDITURE

Net capital expenditure by the gas supply industry in 2006–07 was \$789m, and was equivalent to 52% of its industry value added.

3.1 INDUSTRY PERFORMANCE

Employment at end of June(a)	no.	2 001
Income		
Sales of goods	\$m	4 106
Service income	\$m	1 095
Rent, leasing and hiring income	\$m	3
Funding from government for operational costs	\$m	6
Interest income	\$m	122
Other income	\$m	459
Total income	\$m	5 791
Expenses		
Wages and salaries(b)	\$m	124
Employer contributions into superannuation	\$m	10
Workers' compensation premiums/costs	\$m	1
<i>Selected labour costs</i>	\$m	136
Purchases of goods and materials	\$m	2 197
Rent, leasing and hiring expenses	\$m	10
Freight and cartage expenses	\$m	410
Motor vehicle running expenses	\$m	15
Repair and maintenance expenses	\$m	41
Other contract, sub-contract and commission expenses	\$m	32
Other selected expenses	\$m	993
<i>Purchases and selected expenses</i>	\$m	3 698
Depreciation and amortisation	\$m	317
Interest expenses	\$m	425
Insurance premiums	\$m	15
Natural resource royalties expenses	\$m	5
Bad and doubtful debts	\$m	6
Less		
Capitalised purchases	\$m	4
Capitalised wages and salaries	\$m	4
<i>Total expenses</i>	\$m	4 594
Opening inventories	\$m	39
Closing inventories	\$m	43
Cost of sales	\$m	3 690
Trading profit	\$m	1 514
Earnings before interest, tax, depreciation and amortisation	\$m	1 362
Operating profit before tax	\$m	1 201

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

3.2 ACQUISITION AND DISPOSAL OF ASSETS

	\$m
.....	
Capital expenditure(a)	
Plant, machinery and equipment	369
Dwellings, other buildings and structures	409
Other (including land and intangible assets)	14
<i>Total acquisitions</i>	792
Total disposals	3
Net capital expenditure	789
Gross fixed capital formation	^ 780

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

(a) Items listed include the value of capital work done for own use reported in table 1.3.

3.3 INDUSTRY RATIOS

.....		
Profitability		
Profit margin	%	23.1
Debt		
Interest coverage	times	2.5
Capital expenditure		
Investment rate (value added)	%	51.8
Labour(a)		
Industry value added to selected labour costs	times	11
Selected labour costs per person employed	\$'000	67
Sales and service income per person employed	\$'000	2 600
Industry value added per person employed	\$'000	763

(a) See Explanatory Notes paragraphs 29 and 40.

CHAPTER 4

WATER SUPPLY, SEWERAGE AND DRAINAGE SERVICES INDUSTRY

INTRODUCTION

This chapter presents statistics about the water supply, sewerage and drainage services industry as defined by the *Australian and New Zealand Standard Industrial Classification (ANZSIC)*, 2006 edition.

The data presented include all activities of the businesses classified to this industry, some of which may be activities other than water supply, sewerage and drainage services. (See Explanatory Notes paragraphs 13–22 for further details.)

Both private and government units are included in the scope of the survey. In a manner similar to the electricity and gas supply industries, the water supply, sewerage and drainage services industry is also undergoing a process of reform. The commentary refers mainly to the table in this chapter, and to the data presented in Chapter 1, preceded by some industry background material.

INDUSTRY BACKGROUND

The National Water Commission was established in December 2004 as an independent statutory agency responsible for overseeing national water reform, by assisting to implement the *National Water Initiative* and investment in the *Australian Water Fund*.

The Water Services Association of Australia reports that, although the population of Australia's capital cities grew by 1.1% in 2006–07, water consumed by households was almost 3% less than in 2005–06. The decline in water use is largely the result of ongoing drought conditions, associated water restrictions and conservation efforts.

The *Consumer Price Index* relating to water and sewerage (weighted average of eight capital cities) indicates that prices for household consumers were 6.0% higher in 2006–07 than in 2005–06.

SUMMARY

Most major indicators for the Australian water supply, sewerage and drainage services industry showed small increases, in current price terms, from 2005–06 to 2006–07. Sales and service income declined, and employment was virtually unchanged.

INDUSTRY VALUE ADDED

The \$5.7b of industry value added produced by the water supply, sewerage and drainage services industry in 2006–07 was 3% (or \$186m) higher than in 2005–06.

EMPLOYMENT

At the end of June 2007, 25,800 persons were employed in the water supply, sewerage and drainage services industry.

LABOUR COSTS

Wages and salaries paid by the water supply, sewerage and drainage services industry amounted to \$1.6b in 2006–07, or 87% of its total labour costs. The industry's selected labour costs were \$68,300 per person employed at the end of June 2007.

PROFITABILITY AND
EARNINGS

The water supply, sewerage and drainage services industry earned \$2.7b in operating profit before tax in 2006–07, which represented a profit margin of 28.1%. Trading profit was \$4.6b, and earnings before interest, tax, depreciation and amortisation (EBITDA) were \$3.8b.

CAPITAL EXPENDITURE

Net capital expenditure by the water supply, sewerage and drainage services industry in 2006–07 was \$4.1b, 35% higher than in 2005–06, and amounted to 72% of its industry value added. This reflected increased investment in infrastructure as a response to addressing water shortages.

4.1 INDUSTRY PERFORMANCE AND CAPITAL EXPENDITURE

Employment at end of June(a)	no.	25 826
Income		
Sales of goods	\$m	7 913
Income from services	\$m	1 451
Rent, leasing and hiring income	\$m	81
Funding from government for operational costs	\$m	860
Interest income	\$m	181
Other income	\$m	1 218
<i>Total income</i>	\$m	<i>11 705</i>
Expenses		
Selected labour costs(b)	\$m	1 772
Cost of sales	\$m	4 846
Depreciation and amortisation	\$m	1 637
Interest expenses	\$m	892
Other operating expenses	\$m	121
Less		
Capitalised wages and salaries	\$m	198
<i>Total expenses</i>	\$m	<i>9 069</i>
Change in inventories	\$m	16
Trading profit	\$m	4 600
Earnings before interest, tax, depreciation and amortisation	\$m	3 782
Operating profit before tax	\$m	2 653
Industry ratios		
Profit margin	%	28.1
Interest coverage	times	2.4
Investment rate (value added)	%	72.4
Industry value added to selected labour costs	times	3.2
Selected labour costs per person employed(c)	\$'000	68
Sales and service income per person employed(c)	\$'000	366
Industry value added per person employed(c)	\$'000	221
Capital expenditure(d)		
Plant, machinery and equipment	\$m	1 425
Dwellings, other buildings and structures	\$m	2 437
Other (including land and intangible assets)	\$m	265
<i>Total acquisitions</i>	\$m	<i>4 128</i>
Total disposals	\$m	59
Net capital expenditure	\$m	4 069
Gross fixed capital formation	\$m	3 934

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

(c) See Explanatory Notes paragraphs 29 and 40.

(d) Items listed include the value of capital work done for own use reported in table 1.3.

CHAPTER 5

WASTE COLLECTION, TREATMENT AND DISPOSAL SERVICES INDUSTRY

INTRODUCTION

This chapter presents statistics about the waste collection, treatment and disposal services industry, as defined by the Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006 edition. Under the 1993 edition of ANZSIC, this industry was not included in the same division as electricity, gas and water supply. Because of this, previous editions of this publication did not include estimates for the waste collection, treatment and disposal services industry.

The data presented include all activities of the businesses, some of which may be activities other than waste collection, treatment and disposal services. (See Explanatory Notes paragraphs 4–22 for further details.)

The commentary refers mainly to the table in this chapter, and to the key data presented in table 1.1, preceded by some industry background material.

INDUSTRY BACKGROUND

National and state/territory governments have adopted differing policies concerning waste disposal services over time and have introduced different legislation and regulation for similar activities. The main method of waste disposal in Australia is landfill. This can cause detrimental impacts on the environment through leachate discharges, gaseous emissions and harbouring of disease-carrying pests. The main alternative is incineration which, if not properly controlled, can produce toxic emissions.

SUMMARY

Most major indicators for the Australian waste collection, treatment and disposal services industry showed increases, in current price terms, from 2005–06 to 2006–07. Net capital expenditure fell, and employment declined marginally.

INDUSTRY VALUE ADDED

At \$2.6b, industry value added of the waste collection, treatment and disposal services industry in 2006–07 increased from its 2005–06 value by 9% (or \$214m).

EMPLOYMENT

At the end of June 2007, 27,300 persons were employed in the waste collection, treatment and disposal services industry.

LABOUR COSTS

Wages and salaries paid by the waste collection, treatment and disposal services industry amounted to \$1.3b in 2006–07, or 86% of its total labour costs. At \$52,800, the industry's selected labour costs per person employed at the end of June 2007 were the lowest for any industry for which data are presented in this publication.

PROFITABILITY AND EARNINGS

The waste collection, treatment and disposal services industry reported a profit margin of 12.5%. Trading profit was \$2.6b, and earnings before interest, tax, depreciation and amortisation (EBITDA) were \$1.1b. This industry exhibits the highest value for interest coverage (EBITDA being 7.7 times interest expenses) of any of the industries shown.

CAPITAL EXPENDITURE

Net capital expenditure by the waste collection, treatment and disposal services industry in 2006–07 was \$106m. Disposal of assets were \$449m during 2006–07.

5.1 INDUSTRY PERFORMANCE AND CAPITAL EXPENDITURE

Employment at end of June(a)	no.	27 347
Income		
Sales and service income	\$m	6 893
Interest income	\$m	29
Other income	\$m	234
<i>Total income</i>	\$m	7 156
Expenses(b)		
Selected labour costs	\$m	1 445
Cost of sales	\$m	4 324
Depreciation and amortisation	\$m	388
Interest expenses	\$m	90
Other operating expenses	\$m	95
Less		
Capitalised wages and salaries	\$m	11
<i>Total expenses</i>	\$m	6 331
Change in inventories	\$m	35
Trading profit	\$m	2 568
Earnings before interest, tax, depreciation and amortisation	\$m	1 075
Operating profit before tax	\$m	^ 860
Industry ratios		
Profit margin	%	12.5
Interest coverage	times	7.7
Investment rate (value added)	%	21.3
Industry value added to selected labour costs	times	1.8
Selected labour costs per person employed(c)	\$'000	53
Sales and service income per person employed(c)	\$'000	252
Industry value added per person employed(c)	\$'000	95
Capital expenditure(d)		
Plant, machinery and equipment	\$m	398
Dwellings, other buildings and structures	\$m	47
Other (including land and intangible assets)	\$m	111
<i>Total acquisitions</i>	\$m	555
Total disposals	\$m	449
Net capital expenditure	\$m	106
Gross fixed capital formation	\$m	^ 416

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

(a) Includes working proprietors.

(b) Excludes the drawings or working proprietors.

(c) See Explanatory Notes paragraphs 29 and 40.

(d) Listed items include the value of capital work done for own use reported in table 1.3.

EXPLANATORY NOTES

INTRODUCTION

1 This publication, *Electricity, Gas, Water and Waste Services, Australia, 2006–07* (cat. no. 8226.0), presents estimates of the economic and financial performance of these industries.

2 These industries, as specified in Division D ELECTRICITY, GAS, WATER AND WASTE SERVICES of the Australian and New Zealand Standard Industrial Classification (ANZSIC) (cat.no.1292.0), 2006 edition ('ANZSIC06'), comprise:

- ELECTRICITY SUPPLY (ANZSIC Subdivision 26), which relates to the generation, transmission or distribution of electricity, and the on selling of electricity via power distribution systems operated by others
- GAS SUPPLY (ANZSIC Subdivision 27), which relates to the distribution of gas, such as natural gas or liquefied petroleum gas, through mains systems
- WATER SUPPLY, SEWERAGE AND DRAINAGE SERVICES (ANZSIC Subdivision 28), which relates to the bulk storage, purification or distribution of water, or the operation of sewerage or drainage systems, including sewage treatment plants
- WASTE COLLECTION, TREATMENT AND DISPOSAL SERVICES (ANZSIC Subdivision 29), which relates to the collection and haulage (except long distance) of domestic, commercial or industrial solid, liquid or other waste (except through sewerage systems).

3 This publication represents the first release of these estimates using the 2006 edition of ANZSIC. Because of the combined effect of this new classification and methodological changes, a new series has commenced with the 2006–07 data. See Technical Note 1 for further details.

SCOPE

4 The electricity, gas, water and waste services industry collection is conducted annually as a component of the ABS's Economic Activity Survey (EAS). The scope of the 2006–07 electricity, gas, water and waste services industry collection comprises all businesses (including non-employing businesses) on the ABS Business Register (ABSBR) at time of selection, whose industry is classified to ANZSIC (2006 edition) Division D ELECTRICITY, GAS, WATER AND WASTE SERVICES. For most industries, entities classified to the general government institutional sector are excluded. However, such entities are included in the scope of the survey of the WATER SUPPLY, SEWERAGE AND DRAINAGE SERVICES subdivision. However, some categories of business are excluded. The ABSBR includes information supplied from the Australian Taxation Office (ATO) which assists in determining the scope of ABS collections. Using this, businesses in the following two categories have been excluded from the scope of this collection with effect from 2006–07 (although they were included in previous years):

- businesses which have an Income Tax Instalment Provision (ITIP) taxation 'role' but no other taxation role;
- long term non-remitters of Business Activity Statement (BAS) data.

5 In addition, entities classified to the general government institutional sector are included in the scope of the survey of the water supply industry only. They are excluded for all other industries.

SCOPE *continued*

6 Division D comprises the following subdivisions and their component groups and classes:

- 26 Electricity Supply
 - 261 Electricity Generation
 - 2611 Fossil Fuel Electricity Generation
 - 2612 Hydro–Electricity Generation
 - 2619 Other Electricity Generation
 - 262 Electricity Transmission
 - 2620 Electricity Transmission
 - 263 Electricity Distribution
 - 2630 Electricity Distribution
 - 264 On Selling Electricity and Electricity Market Operations
 - 2640 On Selling Electricity and Electricity Market Operations
- 27 Gas Supply
 - 270 Gas Supply
 - 2700 Gas Supply
- 28 Water Supply, Sewerage and Drainage Services
 - 281 Water Supply, Sewerage and Drainage Services
 - 2811 Water Supply
 - 2812 Sewerage and Drainage Services
- 29 Waste Collection, Treatment and Disposal Services
 - 291 Waste Collection Services
 - 2911 Solid Waste Collection Services
 - 2919 Other Waste Collection Services
 - 292 Waste Treatment, Disposal and Remediation Services
 - 2921 Waste Treatment and Disposal Services
 - 2922 Waste Remediation and Materials Recovery Services

7 Statistics in this publication are presented by chapter for each of ANZSIC Subdivisions 26 ELECTRICITY SUPPLY, 27 GAS SUPPLY, 28 WATER SUPPLY, SEWERAGE AND DRAINAGE SERVICES, and 29 WASTE COLLECTION, TREATMENT AND DISPOSAL SERVICES.

STATISTICAL UNITS USED

8 Statistical units are those entities from which statistics are collected, or compiled. In ABS economic statistics, the statistical unit is generally the business. All businesses are recorded on the ABS Business Register (ABSBR).

9 The ABS uses an economic statistics units model on the ABSBR to describe the characteristics of businesses, and the structural relationships between related businesses. Within large and diverse business groups, the units model is used also to define reporting units that can provide data to the ABS at suitable levels of detail.

10 This units model allocates businesses to one of two sub-populations:

- Most businesses and organisations in Australia need to obtain an Australian Business Number (ABN). The vast majority of these businesses are simple in structure and are allocated to the population which is maintained by the ATO. These are termed (by the ABS) ABN units.
- The remaining businesses are in the ABS maintained population, and are termed type of activity units, or TAUs.

11 Together these two sub-populations (of ABN units and TAUs) make up the ABSBR population, from which the samples are taken.

12 For details about the ABSBR and how ABN units and TAUs contribute to the industry statistics in this publication, see Technical Note 1.

COVERAGE

13 The frame used for the survey of the electricity, gas, water and waste services industry, like most ABS economic surveys, was taken from the ABS Business Register. The ABS Business Register is updated monthly to take account of new businesses and businesses which have ceased operating.

14 The ANZSIC-based industry statistics presented in this publication are compiled differently from activity statistics. Each ABN unit or TAU on the ABSBR has been classified (by the ATO and the ABS respectively) to a single industry irrespective of any diversity of activities undertaken. The industry class allocated is the one which relates to those activities that provide the main source of income. For example, a business which derives most of its income from electricity generation activities would have all operations included in the aggregates and ratios for ELECTRICITY SUPPLY, even if significant secondary activities (such as water supply, coal mining, or retailing) are also undertaken. However, where a business makes a significant economic contribution to different ANZSIC industries, the ABS includes the business in the ABS maintained population, and 'splits' the TAU's reported data between the industries involved. Significance is determined using total income.

15 Some electricity is generated by businesses mainly engaged in other activities (e.g. manufacturing) solely, or in part, to provide power for those activities. Such electricity generation is not treated as part of the electricity supply industry and, therefore, does not contribute to these statistics.

16 Businesses mainly engaged in the distribution of liquefied petroleum gas in bulk or in containers are not treated as part of the gas supply industry, as they are classified to ANZSIC Division F WHOLESALE TRADE.

17 The ABS maintained population of the ABSBR includes all organisations classified to the general government sector according to the *Standard Institutional Sector Classification of Australia (SISCA)*. Where a general government authority operates a number of business units, each coinciding with a 'division' or 'line of business' with separate and comprehensive accounts, then each of these business units is recorded as a separate TAU on the ABSBR. Each TAU is then classified by industry according to its predominant activity. Such TAUs classified to the WATER SUPPLY, SEWERAGE AND DRAINAGE SERVICES subdivision are then in scope of the electricity, gas, water and waste services industry collections. For example, a local government council might be recorded on the ABSBR as comprising four separate TAUs covering its general services, electricity supply, water supply, and sewerage operations. The water and sewerage TAUs are in scope of the collection, but the other TAUs are not.

18 Prior to recent industry reforms, the electricity supply industry was largely vertically integrated, i.e. the activities of generation, transmission and distribution of electricity were conducted within a single business. After restructuring following the industry reforms, these activities are now more often conducted by separate businesses. This means, for example, that the sale of electricity may be recorded by both the generator and the distributor. The gas supply industry has undergone similar reform and restructuring.

19 Unincorporated joint ventures (UJVs) are arrangements which allow the sharing of expertise, resources and risk associated with specific projects. This occurs through the participation of a number of organisations (by investment) in a specific operation (e.g. a power station). Some of these organisations may not otherwise be involved in that industry.

20 The electricity, gas, water and waste services industry collection includes such businesses which are operators and/or participants in any UJVs. Generally, each participant supplies data of its share of income, while the operator reports all expenses and employment.

COVERAGE *continued*

21 The ABS attempts to maintain a current understanding of the structure of the large, complex and diverse business groups that form the ABS maintained population on the ABSBR, through direct contact with those businesses. Resultant changes in their structures on the ABSBR can affect:

- the availability of such businesses (or units within them) for inclusion in the annual economic collections
- the delineation of the units, within those groups, for which data are to be reported.

22 The ABS attempts to obtain data for those businesses which ceased operation during the year, but it is not possible to obtain data for all of them.

IMPROVEMENTS TO
COVERAGE

23 Data in this publication have been adjusted to allow for lags in processing new businesses to the ABSBR. The effects of these adjustments on Australian estimates of sales and service income are:

- for ELECTRICITY SUPPLY, an increase of 0.2%
- for GAS SUPPLY, an increase of 0.1%
- for WATER SUPPLY, SEWERAGE AND DRAINAGE SERVICES, an increase of 0.3%
- for WASTE COLLECTION, TREATMENT AND DISPOSAL SERVICES, an increase of 1.6%.

ANZSIC93 AND ANZSIC06

24 The estimates in this publication are based on ANZSIC06. Data in previous issues were based on the 1993 version of the ANZSIC (ANZSIC93). ANZSIC06 was adopted to provide a more contemporary industrial classification system, taking into account issues such as changes in the structure and composition of the economy, changing user demands and compatibility with international classification standards.

25 All businesses formerly coded to ANZSIC93 Division D ELECTRICITY, GAS AND WATER SUPPLY are classified to ANZSIC06 Division D, named ELECTRICITY, GAS, WATER AND WASTE SERVICES. In addition, WASTE COLLECTION, TREATMENT AND DISPOSAL SERVICES, which was not in scope of the 2005–06 survey, is in scope of the 2006–07 survey, as these services are now classified to ANZSIC06 Division D. Activities covered by ANZSIC06 Subdivision 29 were previously classified to ANZSIC93 Classes 9634 WASTE DISPOSAL SERVICES (Division Q) and 4259 CONSTRUCTION SERVICES (Division E), and were in scope and collected as part of the economy wide Economic Activity Survey.

HISTORICAL COMPARISONS

26 To provide comparability with the 2006–07 estimates, the historical estimates presented in Table 1.1 take into account the various changes in collection design, estimation methodology and scope, as well as the introduction of ANZSIC06. Data collected for 2004–05 and 2005–06 (under ANZSIC93) have been updated to take account of any revisions to the data since they were published in the previous issue of this publication. The data so revised have then been mapped to ANZSIC06, and further adjusted to incorporate the scope changes outlined in paragraph 4 above and the methodological changes described in Technical Note 1 (paragraphs 9–20). This process is known as 'bridging'.

SURVEY SAMPLE DETAILS

27 The electricity, gas, water and waste services industry collection is conducted annually as a component of the ABS's Economic Activity Survey:

- A sample of 628 electricity, gas, water and waste services industry businesses were asked by the ABS to provide employment details and data obtained from their financial statements, mainly via mail out questionnaires. (The sample comprised all businesses classified to the electricity and gas supply industries and which were above certain cutoffs (see Technical Note 1); and a sample of businesses classified to the water and waste services industries.)

SURVEY SAMPLE DETAILS

continued

- Auxiliary information about wages and salaries and turnover for 5,706 electricity, gas, water and waste services industry businesses, sourced from Australian Tax Office (ATO) Business Activity Statement (BAS) data, were used to improve the estimates produced from the survey data. Some of these businesses were among those selected in the survey. Section 16(4)(ga) of the *Income Tax Assessment Act 1936* provides for the ATO to pass information to the Australian Statistician for the purposes of the *Census and Statistics Act 1905*.

REFERENCE PERIOD

28 The period covered by each collection is, in general, the 12 months ended 30 June. Where businesses are unable to supply information on this basis, an accounting period for which data can be provided is used for data other than that relating to employment. Such businesses make a substantial contribution to some of the estimates presented in this publication. As a result, the estimates can reflect trading conditions that prevailed in periods outside the twelve months ended June in the relevant year.

29 It should be noted that, although financial data estimates relate to the full twelve months, employment estimates relate to the last pay period ending in June of the given year. As such, estimates of wages and salaries per person employed will be affected by any fluctuations in employment during the reference period.

30 Financial data presented incorporate all units in scope of the particular electricity, gas, water and waste services industry collection that were in operation at any time during the year. They also include any temporarily inactive units, i.e. those units which were in the development stage or which were not in production, but which still existed and held assets and liabilities and/or incurred some non-operating expenses (e.g. depreciation, administration costs).

RELIABILITY OF ESTIMATES

31 Two types of error are possible in an estimate based on a sample survey: sampling error and non-sampling error.

32 Sampling error occurs because a sample, rather than the entire population, is surveyed. One measure of the likely difference resulting from not including all businesses in the survey is given by the standard error. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all businesses had been included in the survey, and about nineteen chances in twenty that the difference will be less than two standard errors. Standard errors for the current estimates of key variables are shown in Technical Note 2.

33 Non-sampling error arises from inaccuracies in collecting, recording and processing the data. The most significant of these errors are: misreporting of data items; deficiencies in coverage; non-response; and processing errors. Every effort is made to minimise reporting error by the careful design of questionnaires and efficient data processing procedures.

34 For more detailed information about this subject, see Technical Note 2.

QUALITY INDICATORS

35 In the 2006–07 survey of the electricity, gas, water and waste services industries, there was a 92.6% response rate from all businesses that were surveyed and found to be operating during the reference period. Data were imputed for the remaining 7.4% of operating businesses. This imputation contributed 1.5% to the estimate of sales and service income for the electricity, gas, water and waste services industries.

INDUSTRY PERFORMANCE MEASURES

36 This publication presents a wide range of data that can be used to analyse business and industry performance.

37 Differences in accounting policy and practices across businesses and industries can lead to some inconsistencies in the data input to the statistics. Although much of the accounting process is subject to standards, there is still a great deal of flexibility left to

INDUSTRY PERFORMANCE
MEASURES *continued*

individual managers and accountants in the accounting policies and practices that they adopt. For example, the way profit is measured is affected by management policy about such issues as depreciation rates, bad debt provisions and write off, and goodwill write off. The varying degree to which businesses consolidate their accounts may also affect any industry performance measures calculated.

38 A range of performance measures, usually expressed as ratios, can be produced from the data available from businesses' financial statements. Others, relating to labour inputs, can be derived by expressing financial or economic variables on a per person employed basis. The performance measures presented in this publication comprise:

- profitability ratios, which measure the rate of profit on sales
- debt ratios, which indicate the ability of businesses to meet the cost of debt financing
- labour measures, which relate output, labour costs and employment
- capital expenditure ratios, which indicate the extent of business investment in capital assets.

39 A further explanation of each ratio can be found in the Glossary.

40 Those ratios compiled from a combination of flow (whole period) and level (beginning or end of period) items need to be treated with additional caution. Ratios which include both level and flow items in their derivation may be volatile due to the timing differences involved. It may, therefore, be preferable to base any analysis on a range of data presented rather than focusing on one variable.

41 The above limitations are not meant to imply that analysis based on these data should be avoided, only that they should be borne in mind when interpreting the data presented in this publication.

INTERNATIONAL FINANCIAL
REPORTING STANDARDS

42 The new Australian equivalents to International Financial Reporting Standards (AIFRS) began to be progressively implemented in Australia from 1 January 2005. As a result, a number of items in the financial accounts of Australian businesses have been affected by changed definitions, which have in turn affected both Income Statements and Balance Sheets. A range of ABS economic collections source data from financial accounts of businesses, and use those data to derive economic statistics. There have been no changes in the associated economic definitions.

43 After monitoring data items since March quarter 2005 it has been concluded that most affected published data series have been affected by data breaks, but that the magnitude of such breaks cannot be determined without imposing disproportionate load upon data providers to ABS surveys and other administratively collected data.

ACKNOWLEDGMENT

44 ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued co-operation is very much appreciated: without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the *Census and Statistics Act 1905*.

RELATED PUBLICATIONS

45 The ABS produces industry estimates for a range of selected industries (including ELECTRICITY, GAS, WATER AND WASTE SERVICES) and these results will be available in *Australian Industry, 2006–07* (cat. no. 8155.0), expected to be released in September 2008. National estimates of income, output, expenditure and associated ratios will be available at the ANZSIC division level (with a greater range of data available via the ABS web site in spreadsheet form). Some data presenting greater detail are considered experimental at this stage, while the methodology used to produce them is reviewed and improved.

46 The following publications and electronic releases also contain information about the electricity, gas, water and waste services industries; for a list of those that present

RELATED PUBLICATIONS

continued

data about these industries using ANZSIC93, please refer to the 2005–06 edition of this publication:

Household Expenditure Survey, Australia: Summary of Results, 2003–04 Reissue,

cat. no. 6530.0, released on 15 February 2006 – Quinquennial publication

Manufacturing Production, Australia, cat. no. 8301.0.55.001

– Quarterly electronic publication

Water Use on Australian Farms, 2005–06, cat. no. 4618.0, released on 13 March 2008

– Annual publication

Year Book Australia, 2008, cat. no. 1301.0, released on 7 February 2008

– Annual publication.

47 Current publications and other products released by the ABS are available from the Statistics View on the ABS web site. The ABS also issues a daily Release Advice on the web site which details products to be released in the week ahead.

NON-ABS DATA

48 There are a number of external organisations that collect and present data about these industries. Users requiring further information should contact:

Energy Supply Association of Australia Ltd., Melbourne (03) 9670 0188

website <<http://www.esaa.com.au>>

(for key data, see the ESAA's annual publication *Electricity Gas Australia*)

Australian Energy Regulator, Melbourne (03) 9290 1444

website <<http://www.aer.gov.au>>

(for key data, see *State of the Energy Market 2007*)

Water Services Association of Australia, Melbourne (03) 9606 0678

website <<http://www.wsaa.asn.au>>

(for key data, see the annual publication

National Performance Report Urban Water Utilities)

National Water Commission, Canberra (02) 6102 6000

website <<http://www.nwc.gov.au>>

(for key data see the annual publication

National Performance Report Urban Water Utilities)

Australian Water Association Ltd., Sydney 1300 361 426

website <<http://www.awa.asn.au>>

Waste Management Association of Australia, Sydney (02) 8746 5000

website <<http://www.wmaa.asn.au>>

Productivity Commission, Melbourne (03) 9653 2100 and Canberra (02) 6240 3200

website <<http://www.pc.gov.au>>

Australian Bureau of Agricultural and Resource Economics (ABARE)

Canberra, (02) 6272 2000

website <<http://www.abare.gov.au>>.

ABS DATA AVAILABLE ON REQUEST

49 As well as the statistics included in this and related publications, the ABS may have other relevant data available on request and for a charge. Inquiries should be made to the National Information and Referral Service on 1300 135 070.

ROUNDING

50 Where figures have been rounded, discrepancies may occur between totals and the sums of the component items. Due to data being adjusted for lags in processing new businesses to the ABS Business Register (see paragraph 23), this 'rounding rule' also applies to employment estimates.

51 Proportions, ratios and other calculated figures shown in this publication have been calculated using unrounded estimates and may be different from, but are more accurate than, calculations based on the rounded estimates.

TECHNICAL NOTE 1 **METHODOLOGY**

INTRODUCTION

1 The industry estimates in this publication are produced using a combination of ABS directly collected data and Business Activity Statement (BAS) tax data sourced from the Australian Taxation Office (ATO).

2 The directly collected data have been reported by a sample of electricity, gas, water and waste services industry businesses, as recorded on the ABS Business Register (ABSBR). The ABS uses an economic statistics units model on the ABSBR to describe the characteristics of businesses, and the structural relationships between related businesses. Within large and diverse business groups, the units model is used also to define reporting units that can provide data to the ABS at suitable levels of detail.

STATISTICAL UNITS DEFINED
ON THE ABS BUSINESS
REGISTER

3 The current economic statistics units model was introduced in mid 2002, to better use the information available as a result of The New Tax System (TNTS). This units model allocates businesses to one of two sub-populations. The vast majority of businesses are in what is called the ATO maintained population, while the remaining businesses are in the ABS maintained population. Together, these two sub-populations make up the ABSBR population.

ATO MAINTAINED
POPULATION

4 Most businesses and organisations in Australia need to obtain an Australian Business Number (ABN). They are then included on the whole-of-government register of businesses, the Australian Business Register (ABR), which is maintained by the ATO. Most of these businesses have simple structures; therefore, the unit registered for an ABN will satisfy ABS statistical requirements. For these businesses, the ABS has aligned its statistical units structure with the ABN unit. The businesses with simple structures constitute the ATO maintained population, and the ABN unit is used as the statistical unit for all ABS economic collections.

ABS MAINTAINED
POPULATION

5 For the population of businesses where the ABN unit is not suitable for ABS statistical requirements, the ABS maintains its own units structure through direct contact with the business. These businesses constitute the ABS maintained population. This population consists typically of large, complex and diverse businesses. The statistical units model described below caters for such businesses.

Enterprise group: This is a unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law (as amended by the *Corporations Legislation Amendment Act 1991*), including legal entities such as companies, trusts and partnerships. Majority ownership is not required for control to be exercised.

Enterprise: An institutional unit comprising:

- (i) a single legal entity or business entity, or
- (ii) more than one legal entity or business entity within the same enterprise group and in the same institutional sub-sector (i.e. they are all classified to a single Standard Institutional Sector Classification of Australia (SISCA) sub-sector).

ABS MAINTAINED
POPULATION *continued*

Type of activity unit (TAU): The TAU comprises one or more business entities, sub-entities or branches of a business entity within an enterprise group that can report production and employment data for similar economic activities. When a minimum set of data items are available, a TAU is created which covers all the operations within an industry subdivision (and the TAU is classified to the relevant subdivision of the ANZSIC). Where a business cannot supply adequate data for each industry, a TAU is formed which contains activity in more than one industry subdivision.

CONTRIBUTION OF THE
STATISTICAL UNITS TO THE
ESTIMATES

6 The following paragraphs outline the way in which these categories of statistical units contribute to the estimates of financial and economic variables presented in this publication. Estimates of employment are derived in a different manner; see paragraph 20 below.

TAUs

7 All units in the ABS maintained population (i.e. TAUs) classified to the electricity, gas, water and waste services industries were eligible to be selected for direct collection. Direct collection of data from these units is necessary because:

- many large and complex employing businesses have more than one legal entity, making it difficult to identify all legal entities for that business in the BAS data.
- BAS data does not include the range of detailed information that the ABS requires from large and complex businesses.
- 'tax exempt' businesses that are not required to complete business activity statements would otherwise not contribute to the statistics.

ABN units

8 The balance of units on the ABSBR classified to these industries were ABN units, from the ATO maintained population.

COLLECTION DESIGN

9 In order to decrease the statistical reporting load placed on providers while maintaining the range and quality of information available to users of statistical data, the strategy for this survey was to adopt the use of directly collected data from a smaller sample of businesses, in combination with information sourced from the ATO. The frame (from which the direct collect sample was selected) was stratified using information held on the ABS Business Register. Businesses eligible for selection in the direct collect sample were then selected from the frame using stratified random sampling techniques.

10 Businesses were selected to participate in the survey (the direct collect sample) only if they met two criteria: their turnover exceeded a threshold level and the business was identified as having been an employing business (based on ATO information) during the reference period. Turnover thresholds were set for each ANZSIC class so that the contribution of surveyed businesses accounted for 97.5% of total industry class turnover as determined by ATO Business Activity Statement data.

11 Businesses which met neither of these criteria are referred to as 'micro non-employing businesses'. These businesses were not eligible for selection in the sample. For these units, BAS data were obtained and annualised, then added to the directly collected estimates to produce the statistics in this publication. The total estimated value of annual turnover of micro non-employing businesses during the 2006–07 reference year, as determined by ATO Business Activity Statement data, was \$223m.

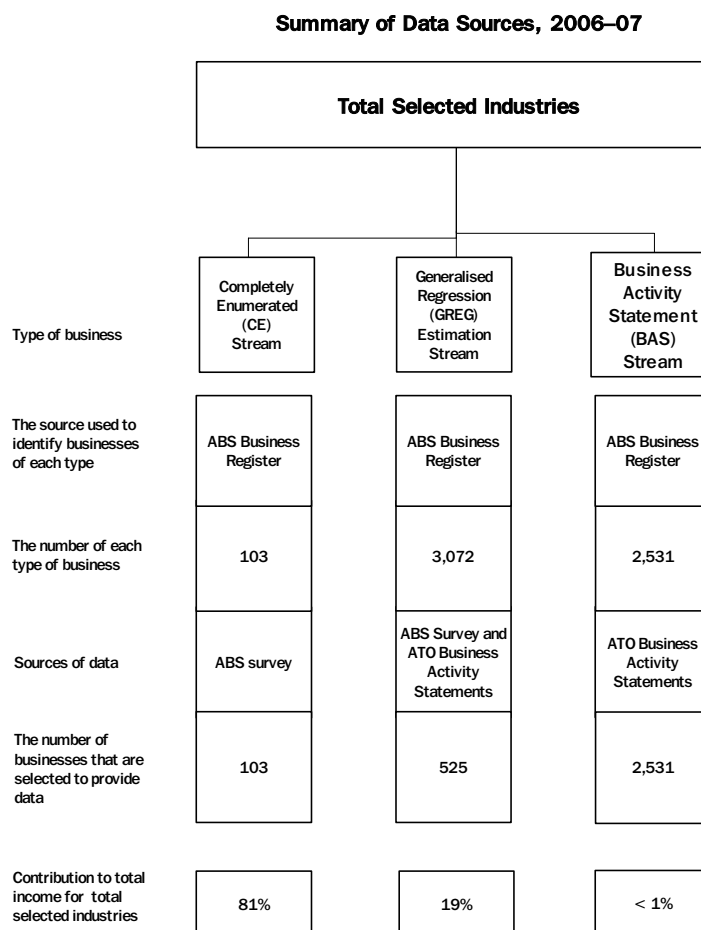
ESTIMATION METHODOLOGY

12 Estimates from previous iterations of this survey were produced using number raised estimation methodology. The 2006–07 survey used generalised regression estimation. This estimation method enables maximum use of observed linear relationships between data directly collected from businesses in the survey and auxiliary information. When the auxiliary information is strongly correlated with data items collected in a survey, the generalised regression estimation methodology will improve

the accuracy of the estimates. The auxiliary variables used in this survey were turnover and wages sourced from ATO Business Activity Statement data.

PRODUCING ESTIMATES

13 The following diagram illustrates the ways in which Australian businesses contribute to the estimates in this publication.



DATA STREAMING

14 For the purpose of compiling the estimates in this publication, data for businesses as recorded on the ABSBR contribute via one of three categories (or 'streams') in accordance with significance and collection-related characteristics.

Completely Enumerated (CE) Stream:

15 The CE stream consists of directly collected survey data for those units recorded on the ABSBR as having employment greater than 300, plus additional 'significant' units in the ABS maintained population.

Generalised regression (GREG) estimation Stream:

16 The GREG stream comprises directly collected data for those sampled units which are not in the CE stream and have turnover, in aggregate, above the bottom 2.5 percentile of BAS sales for that industry. The accuracy of the estimates produced from this data is then improved by using wages and turnover data sourced from businesses' BAS data.

Business Activity Statement (BAS) Stream:

17 The BAS stream comprises data for those businesses in the ATO maintained population whose turnover, in aggregate, is below the bottom 2.5 percentile of BAS sales for that industry.

PRODUCING INDUSTRY ESTIMATES

18 Estimates for each of the selected industries were produced by aggregating the contributing data streams.

PRODUCING INDUSTRY
ESTIMATES *continued*

19 An indication of the importance of these populations to the data can be gained from their contribution to the national estimate of sales and service income. The following table shows their proportional contributions to this estimate for each of these industries.

CONTRIBUTION TO SALES AND SERVICE INCOME

	<i>ABN unit</i>	<i>TAU</i>	<i>Total</i>
	<i>%</i>	<i>%</i>	<i>%</i>
26 Electricity supply	5.1	94.9	100.0
27 Gas supply	7.7	92.3	100.0
28 Water supply, sewerage and drainage services	11.1	88.9	100.0
29 Waste collection, treatment and disposal services	40.1	59.9	100.0

EMPLOYMENT ESTIMATES

20 One implication of the use of BAS data in these statistics is that no direct measure of employment is available for those units which contribute to the estimates solely through the BAS source. This is because the ATO does not collect information about employment numbers. Unlike financial variables, which have a direct relationship to the data available from the BAS files, employment data are not amenable to being modelled using the same techniques. Hence a different methodology is used in order to estimate employment for those units whose data are sourced solely from the BAS files. For each such business, the number of employees is assumed to be zero. For each unincorporated business, an estimate of its number of working proprietors or partners is used as the estimate of its total employment. These estimates are then aggregated to the directly collected data to produce the estimates in this publication.

TECHNICAL NOTE 2 DATA RELIABILITY

INTRODUCTION **1** For 2006–07, the electricity, gas, water and waste services industries collection was a sample survey designed primarily to deliver national estimates at the industry subdivision and group level.

SAMPLING ERROR **2** The majority of data in this publication have been obtained from a sample of electricity, gas, water and waste services businesses. As such, these data are subject to sampling variability; that is, they may differ from the figures that would have been produced if the data had been obtained from all electricity, gas, water and waste services businesses in the population. One measure of the likely difference is given by the standard error, which indicates the extent to which an estimate might have varied by chance because the data were obtained from only a sample of units.

3 There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if the data had been obtained from all units, and about 19 chances in 20 that the difference will be less than two standard errors.

4 The standard error can also be expressed as a percentage of the estimate, and this is known as the relative standard error (RSE). RSEs at the industry subdivision and group level for selected data items representing the full range of data contained in this publication are shown in the table below. Detailed RSEs can be made available on request.

RELATIVE STANDARD ERRORS

		<i>Employment at end of June</i>	<i>Sales and service income</i>	<i>Wages and salaries</i>	<i>Industry value added</i>
		%	%	%	%
26	Electricity supply	0.4	0.3	0.3	0.2
261	Electricity generation	1.7	1.1	1.2	0.6
262	Electricity transmission	—	—	—	—
263	Electricity distribution	—	—	—	—
264	On selling electricity and electricity market operation	0.7	0.1	0.5	0.6
27	Gas supply	3.5	4.4	2.7	10.4
28	Water supply, sewerage and drainage services	3.4	4.2	3.1	3.2
29	Waste collection, treatment and disposal services	5.4	4.3	4.5	6.0
26–29	Electricity, gas, water and waste services	1.7	0.9	1.1	1.2

— nil or rounded to zero (including null cells)

5 To illustrate the above, the estimate of sales and service income for the Australian electricity supply industry in 2006–07 was \$39,516m. The RSE of the estimate is shown as 0.3%, giving a standard error of approximately \$118m (rounded). This implies that there are two chances in three that, if all units had been included in the survey, an estimate in the range of \$39,397m to \$39,635m would have been obtained. Similarly, it implies that

SAMPLING ERROR *continued*

there are 19 chances in 20 (i.e., a confidence interval of 95%) that the estimate would have been within the range of \$39,278m to \$39,754m.

6 Note that RSEs for ANZSIC Subdivisions 26 ELECTRICITY SUPPLY (and its constituent ANZSIC Groups) are generally very small. This is because there is very little sampling variability, due to the large number of units sampled from the population.

7 The size of the RSE may be a misleading indicator of the reliability of some of the estimates for trading profit, OPBT, EBITDA and IVA. Estimates of these variables may legitimately include positive and negative values, reflecting the financial performance of individual businesses. In these cases, the aggregated estimate can be small relative to the contribution of individual businesses, resulting in a standard error which is large relative to the estimate.

NON-SAMPLING ERROR

8 All data presented in this publication are subject to non-sampling error.

9 The imprecision due to sampling variability, which is measured by the standard error, should not be confused with inaccuracies that may occur because of inadequacies in available sources from which the population frame was compiled, imperfections in reporting by providers, errors made in collection such as in recording and coding data, and errors made in processing data. Inaccuracies of this kind are referred to collectively as non-sampling error and may occur in any enumeration, whether a full census or a sample.

10 For the purpose of compiling the estimates in this publication, businesses in the ATO maintained population (see Technical Note 1) are coded to ANZSIC industry classes on the basis of the activity reported to the ATO when they registered for an ABN. There are a number of reasons why a business classified to any given ANZSIC industry on the ABS Business Register may not have been mainly engaged in activities associated with that industry during the 2006–07 reference year. This may be because of inaccurate or incomplete information at the time the business was registered or it may be because the business has changed activity, either temporarily or permanently.

11 Although it is not possible to quantify non-sampling error, every effort is made to reduce it to a minimum. Collection forms are designed to be easy to complete and assist businesses to report accurately. Efficient and effective operating procedures and systems are used to compile the statistics. The ABS compares data from different ABS (and non-ABS) sources relating to the one industry, to ensure consistency and coherence.

GLOSSARY

Data presented in this publication have been compiled from the standard financial accounts of businesses; therefore, the definition of each reported item aligns closely with that adopted in standard business accounting practice. Definitions of particular terms, as used in this publication, are also included.

ABN unit	The statistical unit used by the ABS to represent businesses, and for which statistics are reported, in most cases. The ABN unit is the business unit which has registered for an ABN, and thus appears on the ATO administered Australian Business Register. In most cases, the ABN unit represents the legal entity. This unit is suitable for ABS statistical needs when the business is simple in structure. For more significant and diverse businesses where the ABN unit is not suitable for ABS statistical needs, the statistical unit used is the type of activity unit (TAU).
Acquisitions	See the various capital expenditure entries.
Bad and doubtful debts	Represents the amount of bad and doubtful debts written-off, net of bad and doubtful debts previously written-off but recovered.
Business	<p>A business is generally considered to be a person, partnership, or corporation engaged in business or commerce; for example, an electricity generating business.</p> <p>In this publication, the term represents the ABN unit or type of activity unit (TAU), which are the two standard statistical units for the 2006–07 electricity, gas, water and waste services industries collection (these two units are explained under separate entries). For details, see Explanatory Notes paragraphs 8–12.</p>
Business Activity Statement (BAS) total sales	Represented by the form item G1 <i>Total sales</i> on businesses' Business Activity Statements, supplied by them to the ATO. This item comprises all payments and other consideration (including GST) received during the nominated tax period for supplies made in the course of business.
Business profitability	Business profitability refers to the proportion of businesses operating at the end of June that made a profit or loss, or broke even. Broke even is defined as those businesses incurring a profit or loss of less than \$500, including zero.
Capital expenditure on dwellings, other buildings and structures	Capital expenditure incurred acquiring dwellings, other buildings and structures, including roads, warehouses, offices, transmission lines, pipelines, mine development, pumping stations, dams and bridges. Represents expenditure before deduction of trade-in allowances, and includes expenses (except capitalised interest) incurred during the year in acquiring such assets.
Capital expenditure on other assets (including land and intangible assets)	Capital expenditure incurred acquiring other assets (including land and intangible assets). Intangible asset purchases may include items such as patents, licences and goodwill. Also included is computer software capitalised, including capitalised computer software licence fees, installation costs, the purchase or development of large databases, software developed in-house (but excluded is software maintenance expenditure), and capitalised payments to contractors and consultants for software development. Note that if the cost of software and hardware cannot be separated, the total cost is included in acquisition of plant, machinery and equipment.
Capital expenditure on plant, machinery and equipment	Capital expenditure incurred acquiring plant, machinery and other equipment, including motor vehicles. Includes expenses (except capitalised interest) incurred during the year in acquiring such assets.

Capital work done for own use	Capitalised work done by the employees or proprietors of a business in manufacturing, constructing, installing or repairing assets, in mineral and petroleum exploration activities, and the in-house development of computer software, for use by the business or for rental or lease. This work is valued at the capitalised costs of the materials and the wages and salaries involved.
Capitalised purchases	Goods drawn from inventories for use as fixed tangible assets in capital work done by the employees or proprietors of a business for use by the business or for rental or lease.
Capitalised wages and salaries	Capitalised payments for work done by employees of a business in manufacturing, constructing, installing or repairing assets, in mineral and petroleum exploration activities, and in the in-house development of computer software, for use by the business or for rental or lease.
Change in inventories	The value of total closing inventories less total opening inventories.
Closing inventories	The value of all inventories of finished goods (including mineral ores), work-in-progress (less progress payments billed), raw materials, fuels and containers, at the end of the reporting period.
Contract, subcontract and commission expenses	Payments to other businesses and self-employed persons for work done or sales made on a contract or commission basis. Payments to persons paid by commission without a retainer are also included. For the electricity supply industry, includes transmission fees, distribution fees, network charges and grid fees. (Pipeline charges are included in freight and cartage expenses.)
Cost of sales	The sum of purchases, selected expenses and opening inventories less closing inventories. Any capitalised purchases are excluded.
Current prices	Estimates at current prices are valued at the prices of the period to which the observation relates. For example, estimates for 2006–07 are valued using 2006–07 prices. This contrasts to chain volume measures, where the prices used in valuation refer to the prices of a previous period.
Depreciation and amortisation	Depreciation/amortisation allowed on tangible and intangible assets. Includes, for lessees only, depreciation/amortisation in respect of finance leases.
Disposal of assets	Proceeds from the sale of tangible assets (plant, machinery, equipment, land, dwellings, other buildings and structures), and intangible assets (such as patents, licences and goodwill). Includes the disposal of motor vehicles.
Earnings before interest, tax, depreciation and amortisation (EBITDA)	Profit prior to the deduction of net interest (interest income minus interest expenses), income tax, depreciation and amortisation. Items classifiable to other income are also excluded.
Electricity, gas, water and waste services	Businesses classified to ANZSIC Division D ELECTRICITY, GAS, WATER AND WASTE SERVICES. This industry comprises four industry subdivisions: 26 ELECTRICITY SUPPLY, 27 GAS SUPPLY, 28 WATER SUPPLY, SEWERAGE AND DRAINAGE SERVICES and 29 WASTE COLLECTION, TREATMENT AND DISPOSAL SERVICES. See Explanatory Notes paragraphs 4–7 for details.
Electricity supply industry	Comprises businesses classified to ANZSIC Subdivision 26 ELECTRICITY SUPPLY. This subdivision consists of units mainly engaged in the generation, transmission or distribution of electricity. Units mainly engaged in on selling electricity via power distribution systems operated by others, and those mainly engaged in providing services to the electricity market which facilitate the matching of supply and demand of electricity, are also included. Excluded are units mainly engaged in the construction, repair or maintenance of electricity transmission towers or lines, power station buildings or water storage dams; included in Division E CONSTRUCTION.

Employer contributions into superannuation	Includes all employer contributions to superannuation funds (including the employer productivity contribution) and provisions for employer contributions to superannuation funds. Also includes expenses relating to employer funded defined benefit schemes. Employee contributions and salary sacrifice contributions are excluded. Note that salary sacrifice contributions were included in estimates of this item in previous issues of this publication.
Employment at end of June	Number of persons working for electricity, gas and water supply businesses during the last pay period ending in June of the given year. Includes working proprietors and partners, employees absent on paid or prepaid leave, employees on workers' compensation who continue to be paid through the payroll, and contract miners paid through the payroll. Excludes persons paid by commission only, non-salaried directors, and self-employed persons such as consultants and contractors. For details of how employment estimates have been derived, see Technical Note 1 paragraph 20.
Enterprise	An institutional unit comprising: <ul style="list-style-type: none"> ■ a single legal entity or business entity, or ■ more than one legal entity or business entity within the same enterprise group and in the same institutional sub-sector (i.e. they are all classified to a single Standard Institutional Sector Classification of Australia (SISCA) sub-sector).
Enterprise group	A unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law (as amended by the <i>Corporations Legislation Amendment Act 1991</i>), including legal entities such as companies, trusts and partnerships. Majority ownership is not required for control to be exercised.
Freight and cartage expenses	Includes pipeline charges, and handling charges and payments to owner/drivers for delivery of minerals. Excludes the cost of delivery by own vehicles and employees, overseas freight and cartage on goods exported, and payments to couriers.
Funding from government for operational costs	Funding from federal, state and/or local government for operational costs (e.g. wages and salaries, rent, food). Includes bounties, subsidies, export grants, apprenticeship and traineeship schemes, community service obligation, and amounts reimbursed under the Australian Government's Energy Grants (Credits) Scheme.
Funding from government for specific capital items	Includes capital grants, and low interest or interest free loans made by government to businesses to encourage expenditure on specific equipment (e.g. environmental protection equipment).
Gas supply industry	Comprises businesses classified to ANZSIC Subdivision 27 and ANZSIC Group 270 Gas supply. This group consists of units mainly engaged in the distribution of gas such as natural gas or liquefied petroleum gas through mains systems. It excludes units mainly engaged in: <ul style="list-style-type: none"> ■ treating natural gas to produce purified natural gas or liquefied hydrocarbon gases, or operating natural gas absorption or separation plants; included in Division B MINING ■ manufacturing liquefied petroleum gases in conjunction with petroleum refining; included in Division C MANUFACTURING ■ construction, repair or maintenance of gas mains; included in Division E CONSTRUCTION ■ wholesaling or retailing liquefied petroleum gas in bottles or bulk (except through a mains system); included in Division F WHOLESALE TRADE ■ operating pipelines for the transport of gas on a contract or fee basis; included in Division I TRANSPORT, POSTAL AND WAREHOUSING.
Gross fixed capital formation (GFCF)	Gross fixed capital formation is measured by the total value of a producer's acquisitions, less disposals, of fixed assets during the reference period, plus certain additions to the value of non-produced assets realised by the productive activity of institutional units.

Gross fixed capital formation (GFCF) *continued* Fixed assets are tangible or intangible assets produced as outputs from processes of production that are themselves used repeatedly or continuously in other processes of production for more than one year.

The derivation of GFCF is as follows:

Acquisition of
 Road vehicles
plus Other transport equipment
 Industrial machinery and equipment
 Computer software capitalised
 Computers and computer peripherals
 Electronic equipment and electrical machinery
 Communications equipment
 Other plant and equipment
 Dwellings, other buildings and structures
 Computer software expensed
 Mining exploration expenditure expensed
 Mining exploration expenditure written-off
less Disposal of plant, machinery and equipment (including motor vehicles)
 Disposal of dwellings, other buildings and structures
equals GFCF

Industry value added (IVA) IVA represents the value added by an industry to the intermediate inputs used by the industry. IVA is the measure of the contribution by electricity, gas and water supply businesses to gross domestic product.

The derivation of IVA is as follows:

Sales and service income
plus Funding from federal, state and/or local government
 for operational costs
plus Capital work done for own use
plus Closing inventories
less Opening inventories
less Purchases of goods and materials
less Other intermediate input expenses
 (for details, see the entry for total expenses)
equals IVA

However, it should be noted that IVA is a measure of economic activity and is not equivalent to operating profit before tax (OPBT). Wage and salary expenses and most other labour costs are not taken into account in its calculation, and nor are most insurance premiums, interest expenses or depreciation and a number of lesser expenses (see the entry for total expenses for further detail). On the income side, OPBT includes total income whereas IVA only includes sales and service income.

The industry value added variable is related to, but different from, the national accounting variable gross value added.

For national accounts purposes, gross value added is calculated by adjusting industry value added to include General Government units and to also account for some other effects.

Industry value added per person employed IVA of electricity, gas, water and waste services businesses which operated during the year ended 30 June 2007 divided by the number of persons employed by electricity, gas, water and waste services businesses during the last pay period ending in June of that same year.

Industry value added to selected labour costs IVA of electricity, gas, water and waste services businesses which operated during the year ended 30 June 2007 divided by their selected labour costs, i.e. industry value added/selected labour costs.

Insurance premiums	Premiums for fire, general, accident, public liability, optional third-party and comprehensive motor vehicle insurance, professional indemnity insurance, and common law liability. Excludes workers' compensation insurance premiums/costs (included in labour costs), compulsory third party motor vehicle insurance premiums (included in motor vehicle running expenses), and reinsurance premiums paid.										
Interest coverage	The number of times that businesses can meet their interest expenses from their earnings before net interest, tax, depreciation and amortisation (EBITDA) i.e. earnings before interest, tax, depreciation and amortisation / interest expenses.										
Interest expenses	Includes interest paid on loans from banks, finance companies, partners, and related or unrelated businesses, and in respect of finance leases. Also includes interest equivalents such as hedging costs, and expenses associated with discounted bills. Excludes bank charges other than interest, and capital repayments.										
Interest income	Includes interest received from deposits in banks and non-bank financial institutions, loans, advances, finance leases and earnings on discounted bills. Excludes capital payments received, and charges between companies in the same TAU.										
Intermediate input expenses	For details, see the entry for total expenses.										
Intermediate inputs	Intermediate inputs consist of materials and certain services which are used up in the production process. The calculation is: <table border="0" style="margin-left: 40px;"> <tr> <td></td> <td style="text-align: right;">Intermediate input expenses</td> </tr> <tr> <td></td> <td style="text-align: right;">(for details, see the entry for total expenses)</td> </tr> <tr> <td style="text-align: right;"><i>plus</i></td> <td style="text-align: right;">Opening inventories</td> </tr> <tr> <td style="text-align: right;"><i>less</i></td> <td style="text-align: right;">Closing inventories</td> </tr> <tr> <td style="text-align: right;"><i>equals</i></td> <td style="text-align: right;">Intermediate inputs</td> </tr> </table>		Intermediate input expenses		(for details, see the entry for total expenses)	<i>plus</i>	Opening inventories	<i>less</i>	Closing inventories	<i>equals</i>	Intermediate inputs
	Intermediate input expenses										
	(for details, see the entry for total expenses)										
<i>plus</i>	Opening inventories										
<i>less</i>	Closing inventories										
<i>equals</i>	Intermediate inputs										
Inventories – opening/closing	The value of all inventories of finished goods (including mineral ores), work-in-progress (less progress payments billed), raw materials, fuels and containers at the beginning and end of the reporting period respectively.										
Investment rate (value added)	The proportion of industry value added (IVA) used to acquire capital, i.e. (capital expenditure / IVA) x 100.										
Motor vehicle running expenses	Includes expenditure on registration fees, compulsory third-party insurance premiums, fuel, and repair and maintenance expenses. Excludes expenses for off-road motor vehicles (e.g. fork lifts, mobile plant), and lease payments, optional third party and comprehensive motor vehicle insurance premiums, and depreciation.										
Natural resource royalties expenses	Includes payments under mineral lease arrangements, and resource rent taxes and royalties. Excludes payments for royalties from intellectual property (e.g. patents and copyrights) and expensed computer software licence fees (both of which are included under other operating expenses), and capitalised computer software licence fees (included under capital expenditure). See the entry for total expenses for the definition of other operating expenses.										
Net capital expenditure	The value of total capital expenditure less proceeds received from the disposal of assets.										
Opening inventories	The value of all inventories of finished goods (including mineral ores), work-in-progress (less progress payments billed), raw materials, fuels and containers, at the beginning of the reporting period.										
Operating profit before tax (OPBT)	Profit before extraordinary items are brought to account and prior to the deduction of income tax and appropriations to owners (e.g. dividends paid), i.e. total income – total expenses + change in inventories.										

Other income	Includes natural resource royalties income, dividend income and other income such as net profit (or loss) on the sale of fixed tangible assets, net profit (or loss) resulting from variations in foreign exchange rates/transactions, and funding from federal, state and/or local government for specific capital items. It excludes extraordinary profits or losses, i.e. those not associated with the normal operations of the business and of a non-recurring nature.
Other intermediate input expenses	Comprises intermediate input expenses less current purchases of goods, materials and services used in production (i.e. excludes any capitalised purchases). Further detail is included in the entry for total expenses.
Other selected expenses	Includes expenditure on management fees/charges paid to related and unrelated businesses, bank charges other than interest, audit and other accounting expenses, legal fees, advertising expenses, postal and telecommunication expenses, office supplies and printing expenses, travelling, accommodation and entertainment expenses, staff training, payments for royalties from intellectual property (e.g. patents and copyrights), payments to employment agencies for staff, payroll tax, fringe benefits tax, land tax, land rates, and computer software expenses not capitalised. Some of these expense items are treated as intermediate input expenses in the calculation of industry value added. For details, see the entry for total expenses.
Profit margin	The percentage of sales and service income available as operating profit before tax (OPBT), i.e. $(OPBT / \text{sales and service income}) \times 100$.
Purchases and selected expenses	Purchases of goods and materials, rent, leasing and hiring expenses, freight and cartage expenses, motor vehicle running expenses, repair and maintenance expenses, contract, subcontract and commission expenses, and other selected expenses.
Purchases of goods and materials	Purchases of materials, components, explosives, containers, packaging materials, fuels, electricity and water, and purchases of other goods for resale (including water for distribution). Also includes capitalised purchases. Excludes purchases of parts and fuels for motor vehicles, but includes fuels for off-road vehicles, such as forklifts and mobile plant.
Reference period	For each collection year, businesses are asked to report data for the financial year ended 30 June. However, if a business has a different financial year, it is asked to report (apart from employment) for the 12 month period which ends between 1 October of the previous year and 30 September of the current year. This period is then used as a substitute for the financial year ended 30 June. For example, for the 2006–07 collection, a business may have reported data for the year ended 31 December 2006.
Rent, leasing and hiring expenses	Payments for the rent, leasing and hiring of land, dwellings, other buildings and structures, motor vehicles, plant, machinery and other equipment (including telecommunication equipment). Includes operating lease payments; excludes finance lease payments.
Rent, leasing and hiring income	For details, see the entry for sales and service income.
Repair and maintenance expenses	Includes computer and communication software and hardware maintenance, and repair and maintenance of off-road motor vehicles. Excludes wages and salaries of own employees and the repair and maintenance costs of on-road motor vehicles.

Sales and service income	<p>Includes:</p> <p><i>Sales of goods</i></p> <ul style="list-style-type: none"> ■ whether or not produced by the business (including goods produced for the business on a commission basis). Includes sales or transfers to related businesses or to overseas branches of the business, progress payments relating to long term contracts if they are billed in the period, delivery charges not separately invoiced to customers, and sales of goods produced by the business from crude materials purchased. Excludes excise and duties received on behalf of the Government, sales of assets, royalties income, interest income, and delivery charges separately invoiced to customers. Exports are valued free on board (f.o.b.) (i.e. export freight charges are excluded). ■ includes income from 'specific' rates (e.g. water, sewerage, irrigation and drainage rates). <p><i>Income from services</i></p> <ul style="list-style-type: none"> ■ includes income from consulting services, repair, maintenance and service income and fees, contract, subcontract and commission income, management fees/charges from related and unrelated businesses, installation charges, delivery charges separately invoiced to customers and royalties from intellectual property (e.g. patents and copyrights). For the electricity supply and gas supply industries, also includes transmission and distribution income. Excludes natural resource royalties income, interest income, and delivery charges not separately invoiced to customers. Under current international standards, rent, leasing and hiring income (except from finance leases) is also classified as service income. <p><i>Rent, leasing and hiring income</i></p> <ul style="list-style-type: none"> ■ derived from the ownership of land, dwellings, buildings and other structures, motor vehicles, plant, machinery and other equipment. Excludes royalties from mineral leases, income from finance leases and payments received under hire purchase arrangements. This item is included in sales and service income, but is not separately published. ■ These are valued net of discounts given and exclusive of goods and services tax (GST). Extraordinary items are also excluded.
Sales and service income per person employed	The value of sales and service income of electricity, gas, water and waste services businesses which operated during the year ended 30 June 2007, divided by the number of persons employed by electricity, gas, water and waste services during the last pay period ending in June of that same year.
Selected expenses	See the entry for purchases and selected expenses.
Selected labour costs	See the entry for total expenses.
Selected labour costs per person employed	The value of selected labour costs paid by electricity, gas, water and waste services businesses which operated during the year ended 30 June 2007, divided by the number of persons employed by electricity, gas, water and waste services businesses during the last pay period ending in June of that same year.
Standard Institutional Sector Classification of Australia (SISCA)	The SISCA is the central classification among ABS Standard Economic Sector Classifications. It is based on the System of National Accounts 1993 (SNA93) institutional sector classification, and includes the sectors: non-financial corporations, financial corporations, general government, households, non-profit institutions serving households, and rest of the world (which includes only non-resident units, these being excluded from all other sectors). For more information, please refer to <i>Standard Economic Sector Classifications of Australia (SESCA)</i> (cat. no. 1218.0).
Superannuation	See the entry for employer contributions into superannuation.

Total expenses For the purposes of calculating economic and accounting variables, expenses incurred by businesses are divided into several categories. However, some expenses are excluded entirely from all such calculations: excluded are capital repayments, costs associated with the transfer of real estate, dividends, donations, export freight charges, extraordinary losses, foreign exchange losses, goods and services tax (GST), excise and duties payable to governments, income tax and other direct taxes, losses on asset sales, and unrealised gains/losses from revaluations of assets.

Those expenses used for calculations are categorised as follows:

Intermediate input expenses

This category covers the major expenses incurred by businesses in producing and distributing goods and services (except labour costs), and comprises two sub-categories of operating expenses:

Purchases of goods, materials and services used in production, which include:

- purchases of materials, components, explosives, containers and packaging materials, electricity, fuels and water
- purchases of goods, including electricity, gas and water for distribution, for resale
- motor vehicle running expenses
- freight and cartage expenses
- repair and maintenance expenses
- rent, leasing and hiring expenses (excluding finance lease payments)
- contract, subcontract and commission expenses.

Expenses related to the sale of goods and administrative expenses, which include:

- management fees/charges paid to related and unrelated businesses
- bank charges other than interest
- audit and other accounting expenses
- legal fees
- advertising expenses
- postal and telecommunication expenses
- office supplies and printing expenses
- travelling, accommodation and entertainment expenses
- staff training
- payments for royalties from intellectual property (e.g. patents and copyrights)
- payments to employment agencies for staff.

Excluded from intermediate input expenses are selected labour costs and other operating expenses as detailed below:

Selected labour costs

- wages and salaries (including provisions for employee entitlements, salary sacrificed earnings, share based payments and stock options)
- employer contributions into superannuation
- workers' compensation premiums/costs.

Other expenses

Some expenses are excluded from the calculation of intermediate input expenses and selected labour costs, but are included in the calculation of the accounting variable operating profit before tax (OPBT).

For the ELECTRICITY SUPPLY and GAS SUPPLY industries, these expense items are included in tables 2.1 and 3.1 as:

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Total expenses <i>continued</i>	<p>individually listed items:</p> <ul style="list-style-type: none"> ■ depreciation and amortisation ■ interest expenses ■ insurance premiums (except workers' compensation and compulsory third party motor vehicle insurance premiums) ■ natural resource royalties expenses ■ bad and doubtful debts <p>part of <i>other selected expenses</i>:</p> <ul style="list-style-type: none"> ■ computer software expenses not capitalised by businesses ■ land tax and land rates ■ mineral/petroleum exploration expenses not capitalised by businesses ■ other expenses not capitalised by businesses ■ payroll tax and fringe benefits tax.
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For the WATER SUPPLY, SEWERAGE AND DRAINAGE SERVICES and WASTE COLLECTION, TREATMENT AND DISPOSAL SERVICES, these items are included in tables 4.1 and 5.1 as:

individually listed items

- depreciation and amortisation
- interest expenses

part of *cost of sales*:

- computer software expenses not capitalised by businesses
- land tax and land rates
- mineral/petroleum exploration expenses not capitalised by businesses
- other expenses not capitalised by businesses
- payroll tax and fringe benefits tax

part of *other operating expenses*:

- insurance premiums (except workers' compensation and compulsory third party motor vehicle insurance premiums)
- natural resource royalties expenses
- bad and doubtful debts.

Total income	Comprises sales and service income, interest income, funding from government for operational costs, and other income (for details, see the entries for these items).
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Trading profit	A measure of profit directly attributable to trading in goods and services. It is derived by subtracting the cost of sales from the value of sales and service income.
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It should not be inferred that all of this profit is available as surplus, as other expenses such as selected labour costs, depreciation, insurance premiums, royalties, bad debts and interest have not been taken into account. Also, other income items such as funding from government and interest income have not been included.

Type of activity unit (TAU)	The TAU is the statistical unit used by the ABS to represent businesses, and for which statistics are reported, in cases where the ABN unit is not suitable for ABS statistical needs.
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The TAU comprises one or more business entities, sub-entities or branches of a business entity within an enterprise group that can report production and employment data for similar economic activities. When a minimum set of data items are available, a TAU is created which covers all the operations within an industry subdivision (and the TAU is classified to the relevant subdivision of the ANZSIC). Where a business cannot supply adequate data for each industry, a TAU is formed which contains activity in more than one industry subdivision.

Wages and salaries	<p>The gross wages and salaries (including capitalised wages and salaries) of all employees of the business. The item includes severance, termination and redundancy payments, salaries and fees of directors and executives, retainers and commissions of persons who received a retainer, bonuses, and annual and other types of leave. Provision expenses for employee entitlements (e.g. provisions for annual leave and leave bonus, long service leave, sick leave, and severance, termination and redundancy payments) are also included, as are salary sacrificed earnings and remuneration of employees in the form of share based payments and stock options. (Note that in previous issues of this publication, salary sacrificed earnings and remuneration of employees in the form of share based payments and stock options were reported under related expense items. For example, salary sacrificed for superannuation was included in employer contributions into superannuation.)</p> <p>Payments to self-employed persons such as consultants, contractors and persons paid solely by commission without a retainer are excluded. The drawings of working proprietors are also excluded.</p>
Wages and salaries per person employed	<p>The value of wages and salaries paid by electricity, gas, water and waste services businesses which operated during the year ended 30 June 2007, divided by the number of persons employed by electricity, gas, water and waste services businesses during the last pay period ending in June of the same year.</p>
Waste collection, treatment and disposal services industry	<p>Comprises businesses classified to ANZSIC Subdivision 29, which consists of ANZSIC Groups 291 WASTE COLLECTION SERVICES and 292 WASTE TREATMENT, DISPOSAL AND REMEDIATION SERVICES.</p> <p>Group 291 comprises two classes:</p> <ul style="list-style-type: none"> ■ 2911 SOLID WASTE COLLECTION SERVICES ■ 2919 OTHER WASTE COLLECTION SERVICES. <p>Excluded from Group 291 are:</p> <ul style="list-style-type: none"> ■ long distance haulage of waste; included in Division I TRANSPORT, POSTAL AND WAREHOUSING ■ road sweeping or street cleaning; included in Division N ADMINISTRATIVE AND SUPPORT SERVICES ■ repair and maintenance of septic tanks; included in Division E CONSTRUCTION. <p>Group 292 comprises two classes:</p> <ul style="list-style-type: none"> ■ 2921 WASTE TREATMENT AND DISPOSAL SERVICES ■ 2922 WASTE REMEDIATION AND MATERIALS RECOVERY SERVICES. <p>Excluded from group 292 are:</p> <ul style="list-style-type: none"> ■ repair and maintenance of septic tanks; included in Division E CONSTRUCTION ■ providing cleaning services; included in Division N ADMINISTRATIVE AND SUPPORT SERVICES ■ cutting peat as a result of overburden from brown coal; included in Division B MINING ■ undertaking mine site preparation and removal of overburden done on contract or fee; included in Division E CONSTRUCTION.
Water supply, sewerage and drainage services industry	<p>Comprises businesses classified to ANZSIC Subdivision 28 and ANZSIC Group 281 WATER SUPPLY, SEWERAGE AND DRAINAGE SERVICES. This group comprises two classes:</p> <ul style="list-style-type: none"> ■ 2811 WATER SUPPLY <p>This class consists of units mainly engaged in the bulk storage or distribution of water. It also includes units mainly engaged in the treatment of water prior to or during distribution to the water supply system. The water supply system may include pumping stations, aqueducts and/or distribution mains.</p> <p>This class excludes units mainly engaged in:</p> <ul style="list-style-type: none"> ■ operating irrigation systems concerned with the distribution of water on farms; included in Division A AGRICULTURE, FORESTRY AND FISHING ■ the construction or repair of water storage dams, mains or pumping stations; included in Division E CONSTRUCTION.

**Water supply, sewerage and
drainage services industry**
continued

- the purification and bottling of water for retail sale; included in Division C
MANUFACTURING.

- 2812 SEWERAGE AND DRAINAGE SERVICES

This class consists of units mainly engaged in operating sewerage or drainage systems or sewerage treatment plants. It excludes units mainly engaged in the construction or repair of sewerage or storm water drainage systems; included in Division E
CONSTRUCTION.

**Workers' compensation
premiums/costs**

Workers' compensation is a compulsory insurance cover to be taken out by all employers, except for self-insured workers, according to legislative schemes to cover employees suffering injury or disease in the course of or arising out of employment.

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