



Australian Government

Department of Infrastructure and Regional Development

Bureau of Infrastructure, Transport and Regional Economics

STATISTICAL REPORT

bitre
Yearbook 2016

Australian infrastructure statistics

Bureau of Infrastructure, Transport and Regional Economics

Australian infrastructure statistics

yearbook 2016

Department of Infrastructure and Regional Development
Canberra, Australia

© Commonwealth of Australia 2016

ISSN: 1838-9244 (Print)

ISSN: 1838-9252 (Online)

ISBN: 978-1-925401-94-3

December 2016/INFRA3006

Ownership of intellectual property rights in this publication

Unless otherwise noted, copyright (and any other intellectual property rights, if any) in this publication is owned by the Commonwealth of Australia (referred to below as the Commonwealth).

Disclaimer

The material contained in this publication is made available on the understanding that the Commonwealth is not providing professional advice, and that users exercise their own skill and care with respect to its use, and seek independent advice if necessary.

The Commonwealth makes no representations or warranties as to the contents or accuracy of the information contained in this publication. To the extent permitted by law, the Commonwealth disclaims liability to any person or organisation in respect of anything done, or omitted to be done, in reliance upon information contained in this publication.

Creative Commons licence

With the exception of (a) the Coat of Arms; and (b) the Department of Infrastructure's photos and graphics, copyright in this publication is licensed under a Creative Commons Attribution 3.0 Australia Licence.

Creative Commons Attribution 3.0 Australia Licence is a standard form licence agreement that allows you to copy, communicate and adapt this publication provided that you attribute the work to the Commonwealth and abide by the other licence terms. A summary of the licence terms is available from <http://creativecommons.org/licenses/by/3.0/au/deed.en>. The full licence terms are available from <http://creativecommons.org/licenses/by/3.0/au/legalcode>.

Use of the Coat of Arms

The Department of the Prime Minister and Cabinet sets the terms under which the Coat of Arms is used. Please refer to the Department's Commonwealth Coat of Arms and Government branding web page <http://www.dpmc.gov.au/resource-centre/government-australian-government-branding-guidelines-use-australian-government-logo-australian-government-departments-and-agencies> and, in particular, the Guidelines on the use of the Commonwealth Coat of Arms publication.

An appropriate citation for this report is:

Bureau of Infrastructure, Transport and Regional Economics (BITRE), 2016, *Yearbook 2016: Australian Infrastructure Statistics, Statistical Report*, BITRE, Canberra ACT.

Contact us

This publication is available in PDF format. All other rights are reserved, including in relation to any Departmental logos or trade marks which may exist. For enquiries regarding the licence and any use of this publication, please contact:

Bureau of Infrastructure, Transport and Regional Economics (BITRE),
Department of Infrastructure and Regional Development,
GPO Box 501, Canberra ACT 2601, Australia

Telephone: (international) +61 2 6274 7210
Fax: (international) +61 2 6274 6855
Email: bitre@infrastructure.gov.au
Website: www.bitre.gov.au

Foreword

The aim of the Australian Infrastructure Statistics Yearbook is to provide a single, comprehensive annual source of infrastructure statistics for use by policymakers, industry leaders, transport analysts and the wider Australian community.

The publication is primarily a source of long-term, aggregate time series infrastructure statistics. In most cases the time series extend to 2014–15. Most statistics included in the publication are currently collected by BITRE or other Australian, state or territory government agencies.

The Yearbook is presented in five parts:

- Part I: Infrastructure and the Economy,
- Part T: Transport,
- Part E: Energy,
- Part C: Communications, and
- Part W: Water.

BITRE would like to acknowledge input from the Australian Bureau of Statistics, the Australian Communications and Media Authority, the Australian Energy Regulator, the Australian Institute of Health and Welfare, the Australian Taxation Office, the Australian Transport Safety Bureau, the Bureau of Meteorology, the Department of Communications, the Department of the Environment, the Department of Immigration and Border Protection, the Department of Industry and Science, the Energy Supply Association of Australia, Geoscience Australia, the Office of the National Rail Safety Regulator and the Treasury.

Natalie Fisher at the Bureau of Infrastructure, Transport and Regional Economics managed and coordinated the project. Simon O'Mahony undertook the update of the water chapter.

Gary Dolman
Head of Bureau
Bureau of Infrastructure, Transport and Regional Economics
December 2016

Contents

Foreword.....	iii
Introduction	I
PART I: INFRASTRUCTURE AND THE ECONOMY	9
Chapter 1 The economy.....	13
Chapter 2 Infrastructure construction.....	27
PART T: TRANSPORT	31
Chapter 1 Transport infrastructure.....	35
Chapter 2 Freight.....	53
Chapter 3 Passengers.....	65
Chapter 4 Road	81
Chapter 5 Rail.....	99
Chapter 6 Aviation.....	105
Chapter 7 Shipping	113
Chapter 8 Safety.....	127
Chapter 9 Energy and the environment.....	153
PART E: ENERGY	167
Chapter 1 Energy infrastructure.....	171
Chapter 2 Inputs to energy supply	187
Chapter 3 Energy production and usage	193
Chapter 4 Energy safety and emissions.....	249
PART C: COMMUNICATION.....	261
Chapter 1 Communication infrastructure	265
Chapter 2 Investment in information technology	267
Chapter 3 Subscribers and providers	271
Chapter 4 Price and activity	275
Chapter 5 Communications security.....	279
PART W: WATER.....	281

Chapter 1	Water infrastructure	285
Chapter 2	Water inputs.....	299
Chapter 3	Supply and use.....	305
Chapter 4	Health and emissions.....	333
	End notes and definitions.....	341
	References	377

List of tables

Table I 1.1a	Gross value added, major Australian infrastructure industries.....	13
Table I 1.1b	Gross value added, Australia's transport industry.....	14
Table I 1.2a	Australian employment, major infrastructure industries— transport and storage	15
Table I 1.2b	Australian employment, major infrastructure industries—energy	16
Table I 1.2c	Australian employment, major infrastructure industries—communication ...	17
Table I 1.2d	Australian employment, major infrastructure industries—water.....	18
Table I 1.3a	Australian average weekly earnings, transport industry (2014–15 prices, adjusted by CPI).....	19
Table I 1.3b	Australian average weekly earnings, energy industry (2014–15 prices, adjusted by CPI).....	19
Table I 1.3c	Australian average weekly earnings, communication industry (2014–15 prices, adjusted by CPI).....	19
Table I 1.3d	Australian average weekly earnings, water industry (2014–15 prices, adjusted by CPI).....	20
Table I 1.4a	Australian producer price indexes, transport industry.....	20
Table I 1.4b	Australian producer price indexes, communications industry.....	21
Table I 1.5a	Australian population, by state/territory—capital city	22
Table I 1.5b	Australian population, by state/territory—rest of state.....	23
Table I 1.5c	Australian population, by state/territory—total.....	24
Table I 1.6	Key indicators influencing Australian infrastructure	25
Table I 2.1a	Value of major infrastructure engineering construction work done, by the private sector for the private sector; adjusted by chain volume index	27
Table I 2.1b	Value of major infrastructure engineering construction work done, by the private sector for the public sector; adjusted by chain volume index	28
Table I 2.1c	Value of major infrastructure engineering construction work done, by the public sector; adjusted by chain volume index	29
Table I 2.1d	Total value of major infrastructure engineering construction work done, adjusted by chain volume index.....	30

Table T 1.1a	Value of transport infrastructure engineering construction work done by the private sector for the private sector, adjusted by chain volume index.....	35
Table T 1.1b	Value of transport infrastructure engineering construction work done by the private sector for the public sector, adjusted by chain volume index.....	36
Table T 1.1c	Value of transport infrastructure engineering construction work done by the public sector; adjusted by chain volume index.....	37
Table T 1.1d	Total value of transport infrastructure engineering construction work done, adjusted by chain volume index.....	38
Table T 1.2a	Road-related expenditure, by Commonwealth, 1998–99 to 2014–15 (constant 2014–15 prices, adjusted by ABS Consumer Price Index)	39
Table T 1.2b	Road-related expenditure, by State/Territory, 1998–99 to 2014–15 (constant 2014–15 prices, adjusted by ABS Consumer Price Index)	39
Table T 1.2c	Road-related expenditure, by Local, 1998–99 to 2014–15 (constant 2014–15 prices, adjusted by ABS Consumer Price Index)	40
Table T 1.2d	Road-related expenditure, by All Government, 1998–99 to 2014–15 (constant 2014–15 prices, adjusted by ABS Consumer Price Index)	40
Table T 1.2e	Road-related expenditure, by All Government and Private Sector, 1998–99 to 2014–15 (constant 2014–15 prices, adjusted by ABS Consumer Price Index).....	41
Table T 1.3	Road-related expenditure by jurisdictions, 1998–99 to 2014–15 (constant 2014–15 prices), adjusted by BITRE Road Construction and Maintenance Price Index 2016	41
Table T 1.4a	Selected road-related taxes and charges (Constant 2014–15 prices, adjusted by ABS Consumer Price Index).....	42
Table T 1.4b	Gross excise on petroleum products and fuel tax credits (Constant 2014–15 prices, adjusted by CPI)	43
Table T 1.4c	Road-related revenue (Constant 2014–15 prices, adjusted by CPI), by jurisdiction.....	43
Table T 1.4d	Road-related taxes and charges (Constant 2014–15 prices, adjusted by CPI), New South Wales.....	44
Table T 1.4e	Road-related taxes and charges (Constant 2014–15 prices, adjusted by CPI), Victoria.....	44
Table T 1.4f	Road-related taxes and charges (Constant 2014–15 prices, adjusted by CPI), Queensland	44
Table T 1.4g	Road-related taxes and charges (Constant 2014–15 prices, adjusted by CPI), South Australia.....	45

Table T 1.4h	Road-related taxes and charges (Constant 2014–15 prices, adjusted by CPI), Western Australia.....	45
Table T 1.4i	Road-related taxes and charges (Constant 2014–15 prices, adjusted by CPI), Tasmania.....	45
Table T 1.4j	Road-related taxes and charges (Constant 2014–15 prices, adjusted by CPI), Northern Territory.....	46
Table T 1.4k	Road-related taxes and charges (Constant 2014–15 prices, adjusted by CPI), Australian Capital Territory	46
Table T 1.5	Arterial road and bridge maintenance expenditure, constant 2014–15 prices, adjusted by BITRE Road Construction and Maintenance Price Index—Road maintenance sub-index.....	47
Table T 1.6a	Total road length by state/territory, by road type	48
Table T 1.6b	Toll road length.....	49
Table T 1.7	Selected road construction and maintenance price and cost indexes, for Australia and for states and territories.....	50
Table T 1.8a	Rail-related expenditure, by Commonwealth Government (constant 2014–15 prices, adjusted by ABS Consumer Price Index)	50
Table T 1.8b	Rail-related expenditure, by State/Territory Government (constant 2014–15 prices, adjusted by ABS Consumer Price Index)	51
Table T 1.8c	Rail-related expenditure, by All Government (constant 2014–15 prices, adjusted by ABS Consumer Price Index)	52
Table T 2.1a	Domestic freight, by transport mode—bulk.....	53
Table T 2.1b	Domestic freight by transport mode—non-bulk.....	54
Table T 2.1c	Domestic freight by transport mode—total bulk and non-bulk	55
Table T 2.2a	Total domestic freight by state/territory, by transport mode—road	56
Table T 2.2b	Total domestic freight by state/territory, by transport mode—rail.....	57
Table T 2.2c	Total domestic freight by state/territory, by transport mode—shipping.....	58
Table T 2.2d	Total domestic freight by state/territory, by transport mode—total	58
Table T 2.3a	Intrastate freight by state/territory, by transport mode—road.....	59
Table T 2.3b	Intrastate freight by state/territory, by transport mode—rail.....	60
Table T 2.3c	Intrastate freight by state/territory, by transport mode—shipping	60
Table T 2.4a	Interstate freight by state/territory, by transport mode—road.....	61
Table T 2.4b	Interstate freight by state/territory, by transport mode—shipping.....	62

Table T 2.5	Urban road freight by capital city.....	63
Table T 3.1	Total national passenger travel, by transport mode.....	65
Table T 3.2	Inter-capital city passenger travel by city pair.....	66
Table T 3.3a	Total passenger kilometres travelled by capital city—Sydney	67
Table T 3.3b	Total passenger kilometres travelled by capital city—Melbourne.....	68
Table T 3.3c	Total passenger kilometres travelled by capital city—Brisbane	69
Table T 3.3d	Total passenger kilometres travelled by capital city—Adelaide.....	70
Table T 3.3e	Total passenger kilometres travelled by capital city—Perth.....	71
Table T 3.3f	Total passenger kilometres travelled by capital city—Hobart.....	72
Table T 3.3g	Total passenger kilometres travelled by capital city—Darwin.....	73
Table T 3.3h	Total passenger kilometres travelled by capital city—Canberra.....	74
Table T 3.3i	Total passenger kilometres travelled by capital city—Australian capital cities.....	75
Table T 3.4a	Method of travel to work, by state/territory—New South Wales.....	76
Table T 3.4b	Method of travel to work, by state/territory—Victoria.....	76
Table T 3.4c	Method of travel to work, by state/territory—Queensland.....	76
Table T 3.4d	Method of travel to work, by state/territory—South Australia	77
Table T 3.4e	Method of travel to work, by state/territory—Western Australia.....	77
Table T 3.4f	Method of travel to work, by state/territory—Tasmania.....	77
Table T 3.4g	Method of travel to work, by state/territory—Northern Territory.....	78
Table T 3.4h	Method of travel to work, by state/territory—Australian Capital Territory..	78
Table T 3.4i	Method of travel to work by state/territory—total Australia.....	78
Table T 3.4j	Method of travel to work, by state/territory—total employed persons.....	79
Table T 4.1	Intercapital road distances	81
Table T 4.2	Total vehicle kilometres travelled, by vehicle type.....	82
Table T 4.3	Total vehicle kilometres travelled, by state/territory.....	83
Table T 4.4	Total vehicle kilometres travelled, by capital city.....	84
Table T 4.5	Total road freight, by vehicle type.....	85
Table T 4.6	Private vehicle ownership and operating cost indices.....	86
Table T 4.7	Stock of registered motor vehicles, by vehicle type.....	87

Table T 4.8	Stock of registered motor vehicles, by state/territory	88
Table T 4.9	New motor vehicles sales, excluding motor cycles, by vehicle type	89
Table T 4.10	New motor vehicles sales excluding motor cycles, by state/territory.....	89
Table T 4.11a	Licence holders, by age and gender—New South Wales	90
Table T 4.11b	Licence holders, by age and gender—Victoria.....	90
Table T 4.11c	Licence holders, by age and gender—Queensland	91
Table T 4.11d	Licence holders, by age and gender—South Australia.....	91
Table T 4.11e	Licence holders, by age and gender—Western Australia.....	92
Table T 4.11f	Licence holders, by age and gender—Tasmania.....	92
Table T 4.11g	Licence holders, by age and gender—Northern Territory.....	93
Table T 4.11h	Licence holders, by age and gender—Australian Capital Territory.....	93
Table T 4.11i	Licence holders, by age and gender—Australia.....	94
Table T 4.12a	Licensed vehicle operators, by vehicle type—New South Wales.....	94
Table T 4.12b	Licensed vehicle operators, by vehicle type—Victoria.....	95
Table T 4.12c	Licensed vehicle operators, by vehicle type—Queensland	95
Table T 4.12d	Licensed vehicle operators, by vehicle type—South Australia.....	96
Table T 4.12e	Licensed vehicle operators, by vehicle type—Tasmania.....	96
Table T 4.12f	Licensed vehicle operators, by vehicle type—Northern Territory.....	97
Table T 4.12g	Licensed vehicle operators, by vehicle type— Australian Capital Territory	97
Table T 5.1a	Intercapital rail distances—freight terminals.....	99
Table T 5.1b	Intercapital rail distances—passenger terminals	100
Table T 5.2a	Route-kilometres of open railway 2014–15, by jurisdiction and gauge	100
Table T 5.2b	Route-kilometres of open railway 2014–15, by jurisdiction and single or double (or more) trackage	100
Table T 5.2c	Route-kilometres of open railway 2014–15, by jurisdiction and overhead electrical system used	101
Table T 5.3	Network characteristics of heavy urban passenger railways.....	101
Table T 5.4	Interstate non-bulk rail freight by state/territory of origin.....	102
Table T 5.5a	Public transit patronage on heavy rail, Australian capital cities.....	103
Table T 5.5b	Public transit patronage on light rail, Australian capital cities.....	104

Table T 6.1	Intercapital air distances (great circle distances)	105
Table T 6.2	International airline activity.....	106
Table T 6.3	Domestic airline activity.....	107
Table T 6.4a	Activity at major airports—revenue passengers (thousand).....	108
Table T 6.4b	Activity at major airports—aircraft movements.....	109
Table T 6.5	Domestic on-time performance	110
Table T 6.6	BITRE airfare index	110
Table T 6.7	Number of Australian registered aircraft, by aircraft type	111
Table T 7.1	Intercapital sea distances	113
Table T 7.2a	Number of cargo ships involved in coastal or international voyages that made port calls, by state/territory	114
Table T 7.2b	Number of port calls made by ships involved in coastal or international voyages, by state/territory.....	114
Table T 7.3a	Number of ships involved in coastal or international voyages that made port calls, by major ports.....	115
Table T 7.3b	Number of port calls made by ships involved in coastal or international voyages, by major ports	115
Table T 7.4a	Cargo loaded (including exports) at Australian ports, by state/territory....	116
Table T 7.4b	Cargo discharged (including imports) at Australian ports, by state/territory.....	116
Table T 7.5a	Cargo loaded (including exports), by selected Australian ports.....	117
Table T 7.5b	Cargo discharged (including imports), by selected Australian ports.....	117
Table T 7.6a	Cargo loaded (including exports), by capital city ports.....	118
Table T 7.6b	Cargo discharged (including imports), by capital city ports	118
Table T 7.7	Containers exchanged, selected Australian ports.....	119
Table T 7.8a	Summary of the Australian trading fleet—number of vessels	119
Table T 7.8b	Summary of the Australian trading fleet—deadweight (tonnes)	120
Table T 7.8c	Summary of the Australian trading fleet—gross tonnage (tonnes)	120
Table T 7.8d	Summary of the Australian trading fleet—age distribution (percentage of total deadweight (tonnes)).....	121
Table T 7.9a	Ships in the major trading fleet—overseas trades, 2013–14—tankers	121

Table T 7.9b	Ships in the major trading fleet—overseas trades, 2013–14— bulk carriers.....	122
Table T 7.9c	Ships in the major trading fleet—overseas trades, 2013–14— container carriers.....	122
Table T 7.9d	Ships in the major trading fleet—overseas trades, 2013–14— livestock carriers.....	122
Table T 7.9e	Ships in the major trading fleet—overseas trades, 2013–14— general cargo ships	123
Table T 7.10a	Ships in the major trading fleet—coastal trades, 2013–14—tankers	123
Table T 7.10b	Ships in the major trading fleet—coastal trades, 2013–14— bulk carriers.....	124
Table T 7.10c	Ships in the major trading fleet—coastal trades, 2013–14— general cargo.....	125
Table T 8.1a	Number of fatal accidents, by transport mode.....	127
Table T 8.1b	Number of fatalities, by transport mode	128
Table T 8.2a	Fatality rate, by transport mode (per 100,000 population)	129
Table T 8.2b	Injury rate, by transport mode (per 100,000 population)	130
Table T 8.3a	Fatality rate, by transport mode (per billion passenger km travelled).....	131
Table T 8.3b	Injury rate, by transport mode (per billion passenger km travelled)	132
Table T 8.4a	Number of road accidents, by accident severity.....	133
Table T 8.4b	Number of road casualties, by severity	134
Table T 8.5a	Road accident rate, by accident severity (per 100,000 population)	135
Table T 8.5b	Road casualty rate, by severity (per 100,000 population).....	136
Table T 8.6a	Number of fatal road accidents, by state/territory.....	137
Table T 8.6b	Number of fatalities, by state/territory.....	138
Table T 8.6c	Number of fatalities, by road user type.....	139
Table T 8.6d	Number of fatalities, by age—group (years).....	139
Table T 8.6e	Number of fatalities, by gender	139
Table T 8.7a	Fatal road accident rate, by state/territory (per 100,000 population)	140
Table T 8.7b	Fatality rate, by state/territory (per 100,000 population).....	141
Table T 8.8	Number of persons with hospitalised injuries due to road accidents, by state/territory	142

Table T 8.9	Hospitalised road injury rate, by state/territory (per 100,000 population) ..	143
Table T 8.10	Number of rail casualties, by severity.....	144
Table T 8.11	Number of rail fatalities, by state/territory.....	145
Table T 8.12	Rail fatality rate per 100 000 population, by state/territory.....	145
Table T 8.13a	Number of aviation accidents, by accident severity	146
Table T 8.13b	Number of aviation casualties, by severity.....	147
Table T 8.14a	Aviation accident rate, by accident severity (per 100,000 population)	148
Table T 8.14b	Aviation casualty rate, by severity (per 100,000 population)	149
Table T 8.15a	Number of aviation accidents, by state/territory.....	150
Table T 8.15b	Number of aviation fatalities, by state/territory.....	151
Table T 9.1	Total transport petroleum sales, by fuel type.....	153
Table T 9.2a	Selected refined petroleum products—Australian production	154
Table T 9.2b	Selected refined petroleum products—imports to Australia.....	154
Table T 9.2c	Selected refined petroleum products—exports from Australia.....	155
Table T 9.3	Average retail petrol prices in Australia (nominal), by state/territory	155
Table T 9.4	Transport direct greenhouse gas (carbon dioxide equivalent) emissions, by transport mode, from energy end-use.....	156
Table T 9.5	Road transport direct greenhouse gas (carbon dioxide equivalent) emissions, by vehicle type, from energy end-use	157
Table T 9.6	Transport direct emissions, by transport mode, from energy end-use— carbon dioxide	158
Table T 9.7	Transport direct emissions, by transport mode, from energy end-use— methane	159
Table T 9.8	Transport direct emissions, from energy end-use, by transport mode, from energy end-use—nitrous oxide.....	160
Table T 9.9	Transport full fuel cycle greenhouse gas (carbon dioxide equivalent) emissions, by transport mode	161
Table T 9.10	Transport energy use, by transport mode.....	162
Table T 9.11	Road transport energy use, by vehicle type.....	163
Table T 9.12	Energy use of major land transport fuels.....	164
Table T 9.13	Other transport energy use.....	165

Table E 1.1a	Flow of new infrastructure—value of energy infrastructure engineering construction work done by the private sector for the private sector, adjusted by chain volume index.....	171
Table E 1.1b	Flow of new infrastructure—value of energy infrastructure engineering construction work done by the private sector for the public sector, adjusted by chain volume index.....	172
Table E 1.1c	Flow of new infrastructure—value of energy infrastructure engineering construction work done by the public sector, adjusted by chain volume index.....	173
Table E 1.1d	Flow of new infrastructure—total value of energy infrastructure engineering construction work done, adjusted by chain volume index	174
Table E 1.2a	Length of electricity transmission and distribution systems—overhead lines.....	175
Table E 1.2b	Length of electricity transmission and distribution systems—underground cables.....	176
Table E 1.3a	Infrastructure capacity—generation capacity, by type of plant—New South Wales	177
Table E 1.3b	Infrastructure capacity—generation capacity, by type of plant—Victoria....	178
Table E 1.3c	Infrastructure capacity—generation capacity, by type of plant—Queensland.....	179
Table E 1.3d	Infrastructure capacity—generation capacity, by type of plant—South Australia	180
Table E 1.3e	Infrastructure capacity—generation capacity, by type of plant—Western Australia	181
Table E 1.3f	Infrastructure capacity—generation capacity, by type of plant—Tasmania.	182
Table E 1.3g	Infrastructure capacity—generation capacity, by type of plant—Northern Territory.....	183
Table E 1.3h	Infrastructure capacity—generation capacity, by type of plant—Snowy Mountains Hydro Electric Authority.....	184
Table E 1.4a	Infrastructure quality—electricity distribution supply reliability measures, National Electricity Market, by state—System Average Interruption Duration Index (SAIDI)	185
Table E 1.4b	Infrastructure quality—electricity distribution supply reliability measures, National Electricity Market, by state—System Average Interruption Frequency Index (SAIFI)	185
Table E 2.1	Energy inputs—Australia's economic demonstrated mineral energy reserves	187

Table E 2.2a	Energy inputs—Australian electricity generation, input fuel—energy units.....	188
Table E 2.2b	Australian electricity generation, input fuel—physical units.....	189
Table E 2.3a	Energy inputs—Australian gas production and distribution, input fuel—energy units	190
Table E 2.3b	Australian natural gas production and distribution, input fuel—physical units.....	191
Table E 3.1a	Energy production and trade—Australian energy production (primary fuels), by fuel type—New South Wales	193
Table E 3.1b	Energy production and trade—Australian energy production (primary fuels), by fuel type—Victoria	194
Table E 3.1c	Energy production and trade—Australian energy production (primary fuels), by fuel type—Queensland.....	195
Table E 3.1d	Energy production and trade—Australian energy production (primary fuels), by fuel type—Western Australia.....	196
Table E 3.1e	Energy production and trade—Australian energy production (primary fuels), by fuel type—South Australia.....	197
Table E 3.1f	Energy production and trade—Australian energy production (primary fuels), by fuel type—Tasmania.....	198
Table E 3.1g	Energy production and trade—Australian energy production (primary fuels), by fuel type—Northern Territory	199
Table E 3.1h	Energy production and trade—Australian energy production (primary fuels), by fuel type—Australia	200
Table E 3.2	Energy production and trade—Australian energy imports, by fuel type....	201
Table E 3.3a	Energy production and trade—Australian energy exports, by fuel type—petroleum exports	202
Table E 3.3b	Energy production and trade—Australian energy exports, by fuel type—non-petroleum exports.....	203
Table E 3.4	Electricity usage—Australian electricity consumption, by state/territory.....	204
Table E 3.5a	Electricity usage—Australian electricity consumption, by industry—New South Wales.....	205
Table E 3.5b	Electricity usage—Australian electricity consumption, by industry—Victoria	206
Table E 3.5c	Electricity usage—Australian electricity consumption, by industry—Queensland.....	207

Table E 3.5d	Electricity usage—Australian electricity consumption, by industry—South Australia.....	208
Table E 3.5e	Electricity usage—Australian electricity consumption, by industry—Western Australia.....	209
Table E 3.5f	Electricity usage—Australian electricity consumption, by industry—Tasmania	210
Table E 3.5g	Electricity usage—Australian electricity consumption, by industry— Northern Territory	211
Table E 3.5h	Electricity usage—Australian electricity consumption, by industry—Australia.....	212
Table E 3.6a	Electricity usage—number of electricity customers, by state/territory—residential.....	213
Table E 3.6b	Electricity usage—number of electricity customers, by state/territory— business	214
Table E 3.6c	Electricity usage—number of electricity customers, by state/territory—other (including public lighting and traction)	215
Table E 3.6d	Electricity usage—number of electricity customers, by state/territory—total	216
Table E 3.7	Electricity usage—price index for residential electricity supply, by capital city.....	217
Table E 3.8a	Gas usage—Australian gas consumption, by industry—New South Wales...	218
Table E 3.8b	Gas usage—Australian gas consumption, by industry—Victoria.....	219
Table E 3.8c	Gas usage—Australian gas consumption, by industry—Queensland	220
Table E 3.8d	Gas usage—Australian gas consumption, by industry—South Australia.....	221
Table E 3.8e	Gas usage—Australian gas consumption, by industry—Western Australia..	222
Table E 3.8f	Gas usage—Australian gas consumption, by industry—Tasmania.....	223
Table E 3.8g	Gas usage—Australian gas consumption, by industry—Northern Territory .	224
Table E 3.8h	Gas usage—Australian gas consumption, by industry—Australia.....	225
Table E 3.9	Gas usage—price index for gas and other household fuels, by capital city.....	226
Table E 3.10a	Black coal usage—Australian black coal consumption, by industry—New South Wales	227
Table E 3.10b	Black coal usage—Australian black coal consumption, by industry—Victoria	228

Table E 3.10c	Black coal usage—Australian black coal consumption, by industry—Queensland.....	229
Table E 3.10d	Black coal usage—Australian black coal consumption, by industry—South Australia.....	230
Table E 3.10e	Black coal usage—Australian black coal consumption, by industry—Western Australia.....	231
Table E 3.10f	Black coal usage—Australian black coal consumption, by industry—Tasmania	232
Table E 3.10g	Black coal usage—Australian black coal consumption, by industry—Northern Territory	233
Table E 3.10h	Black coal usage—Australian black coal consumption, by industry—Australia.....	234
Table E 3.11	Black coal usage—coal prices (export)	235
Table E 3.12a	Brown coal usage—Australian brown coal consumption, by industry—New South Wales.....	236
Table E 3.12b	Brown coal usage—Australian brown coal consumption, by industry—Victoria	237
Table E 3.12c	Brown coal usage—Australian brown coal consumption, by industry—Australia.....	238
Table E 3.13a	Petroleum usage—Australian petroleum fuel consumption, by industry—New South Wales.....	239
Table E 3.13b	Petroleum usage—Australian petroleum fuel consumption, by industry—Victoria	240
Table E 3.13c	Petroleum usage—Australian petroleum fuel consumption, by industry—Queensland.....	241
Table E 3.13d	Petroleum usage—Australian petroleum fuel consumption, by industry—South Australia.....	242
Table E 3.13e	Petroleum usage—Australian petroleum fuel consumption, by industry—Western Australia.....	243
Table E 3.13f	Petroleum usage—Australian petroleum fuel consumption, by industry—Tasmania	244
Table E 3.13g	Petroleum usage—Australian petroleum fuel consumption, by industry—Northern Territory	245
Table E 3.13h	Petroleum usage—Australian petroleum fuel consumption, by industry—Australia.....	246
Table E 3.14	Petroleum usage—world crude oil prices, by region of origin	247

Table E 4.1a	Energy safety—number of hospital admissions (separations) due to exposure to electricity, radiation, extreme temperature/pressure—public hospitals.....	249
Table E 4.1b	Energy safety—number of hospital admissions (separations) due to exposure to electricity, radiation, extreme temperature/pressure—private hospitals.....	249
Table E 4.2	Energy emissions—public electricity and heat production greenhouse gas (carbon dioxide equivalent) emissions, by type of emissions	250
Table E 4.3a	Energy emissions—stationary energy, energy industries greenhouse gas (carbon dioxide equivalent) emissions—New South Wales	251
Table E 4.3b	Energy emissions—stationary energy, energy industries greenhouse gas (carbon dioxide equivalent) emissions—Victoria.....	252
Table E 4.3c	Energy emissions—stationary energy, energy industries greenhouse gas (carbon dioxide equivalent) emissions—Queensland.....	253
Table E 4.3d	Energy emissions—stationary energy, energy industries greenhouse gas (carbon dioxide equivalent) emissions—South Australia	254
Table E 4.3e	Energy emissions—stationary energy, energy industries greenhouse gas (carbon dioxide equivalent) emissions—Western Australia.....	255
Table E 4.3f	Energy emissions—stationary energy, energy industries greenhouse gas (carbon dioxide equivalent) emissions—Tasmania.....	256
Table E 4.3g	Energy emissions—stationary energy, energy industries greenhouse gas (carbon dioxide equivalent) emissions—Northern Territory.....	257
Table E 4.3h	Energy emissions—stationary energy, energy industries greenhouse gas (carbon dioxide equivalent) emissions—Australian external territories.....	258
Table E 4.4	Energy emissions—public electricity and heat production greenhouse gas (carbon dioxide equivalent) emissions, by type of fuel—Australia	259
Table E 4.5	Energy emissions—natural gas transmission greenhouse gas (carbon dioxide equivalent) emissions, by type of fuel—Australia.....	260
Table C 1.1	Flow of new infrastructure—value of telecommunications engineering construction work done by sector of construction and sector of ownership, adjusted by chain volume index.....	265
Table C 1.2a	Flow of new infrastructure—capital investment by selected communications industries—gross fixed capital formation	266
Table C 1.2b	Flow of new infrastructure—capital investment by selected communications industries—net capital expenditure.....	266
Table C 1.2c	Flow of new infrastructure—capital investment by selected communications industries—depreciation and amortisation	266

Table C 2.1	Investment in information technology—information media and telecommunications industry investment in information technology gross fixed capital formation, chain volume measures	267
Table C 2.2	Consumption of information technology—information media and telecommunications industry consumption of information technology fixed capital, chain volume measures.....	268
Table C 2.3	Stock of information technology—information media and telecommunications industry net capital stock of information technology assets, chain volume measures	269
Table C 3.1	Number of services, by communications medium	271
Table C 3.2	Total number of terrestrial mobile services.....	271
Table C 3.3a	Number of internet subscribers, by download speed—business and government subscribers (excluding mobile handset subscribers)	272
Table C 3.3b	Number of internet subscribers, by download speed—household subscribers (excluding mobile handset subscribers)	272
Table C 3.3c	Number of internet subscribers, by download speed—total all subscribers (excluding mobile handset subscribers)	273
Table C 3.4	Number of internet subscribers, by access connection (exlcuding mobile handset subscribers)	274
Table C 3.5	Communications providers—number of internet service providers (ISP), by size	274
Table C 4.1	Communications prices—consumer price index, telecommunication services, index numbers by capital city.....	275
Table C 4.2	Communication activity—internet domain names registered, excluding “.gov.au”.....	276
Table C 4.3	Communication activity—internet commerce	276
Table C 4.4	Internet use—volume of data downloaded by subscriber type, for ISPs with more than 1 000 active subscribers (excluding mobile handset subscribers)	277
Table C 5.1	Communication security—do not call register.....	279
Table C 5.2	Communication security—000 and 112 Emergency call services call handling.....	279
Table W 1.1a	Flow of new infrastructure—value of water infrastructure engineering construction work done by the private sector for the private sector, adjusted by chain volume index.....	285

Table W 1.1b	Flow of new infrastructure—value of water infrastructure engineering construction work done by the private sector for the public sector, adjusted by chain volume index.....	286
Table W 1.1c	Flow of new infrastructure—value of water infrastructure engineering construction work done by the public sector, adjusted by chain volume index	287
Table W 1.1d	Flow of new infrastructure—total value of water infrastructure engineering construction work done, adjusted by chain volume index	288
Table W 1.2a	Stock of infrastructure—current value of Australian Urban Water infrastructure, by state or territory—Urban Water infrastructure assets ...	289
Table W 1.2b	Stock of infrastructure—current value of Australian Urban Water infrastructure, by state or territory—waste water and sewerage infrastructure assets	289
Table W 1.3	Infrastructure capacity—major Australian water storage dams.....	290
Table W 1.4	Infrastructure capacity—water storage in major dams—actual holdings of major water storage dams, by state/territory.....	291
Table W 1.5a	Flow of new infrastructure—capital expenditure on Australian Urban Water infrastructure, by state or territory—Urban Water infrastructure assets	291
Table W 1.5b	Flow of new infrastructure—capital expenditure on Australian Urban Water infrastructure, by state or territory—waste water and sewerage infrastructure assets	292
Table W 1.6	Stock of infrastructure—number of Urban Water treatment plants providing full treatment, by state/territory	292
Table W 1.7	Stock of infrastructure—length of Urban Water mains, by state/territory.....	293
Table W 1.8	Urban Water infrastructure—Average number of properties served per kilometre of water main, by state/territory.....	293
Table W 1.9	Urban Water infrastructure quality—average number of water main breaks per 100 kilometres of water main, by state/territory.....	293
Table W 1.10	Stock of Urban Water infrastructure—number of sewage treatment plants providing full treatment, by state/territory.....	294
Table W 1.11	Stock of Urban Water infrastructure—length of sewerage mains and channels, by state/territory.....	294
Table W 1.12	Urban Water infrastructure—average number of properties served per kilometre of sewer main, by state/territory.....	294
Table W 1.13	Stock of Urban Water infrastructure—number of recycled water treatment plants, by state/territory	295

Table W 1.14	Infrastructure quality—average number of sewer main breaks and chokes per 100 kilometres of sewer main, by state/territory	295
Table W 1.15a	Stock of infrastructure—length of rural water supply and drainage networks, by asset type—New South Wales	295
Table W 1.15b	Stock of infrastructure—length of rural water supply and drainage networks, by asset type—Victoria	296
Table W 1.15c	Stock of infrastructure—length of rural water supply and drainage networks, by asset type—Queensland.....	296
Table W 1.15d	Stock of infrastructure—length of rural water supply and drainage networks, by asset type—South Australia	296
Table W 1.15e	Stock of infrastructure—length of rural water supply and drainage networks, by asset type—Western Australia.....	297
Table W 1.15f	Stock of infrastructure—length of rural water supply and drainage networks, by asset type—Australia	297
Table W 1.16	Stock of infrastructure—value of rural water supply and drainage networks, by state/territory—written down replacement cost of fixed assets	297
Table W 2.1	Inputs to water supply—total rainfall on Australian land, by state/territory.....	299
Table W 2.2	Inputs to Urban Water supply—volume of water sourced from surface water, by state/territory	299
Table W 2.3	Inputs to Urban Water supply—volume of water sourced from groundwater, by state/territory.....	300
Table W 2.4	Inputs to Urban Water supply—volume of water sourced from desalination, by state/territory	300
Table W 2.5	Inputs to Urban Water supply—volume of water sourced from recycling, by state/territory	300
Table W 2.6a	Urban Water treatment—volume of residential sewage, non-residential sewage and non-trade waste collected, by state/territory.....	301
Table W 2.6b	Urban Water treatment—volume of trade waste collected, by state/territory.....	301
Table W 2.6c	Urban Water treatment—volume of total sewage collected, by state/territory.....	301
Table W 2.7	Urban Water prices—consumer price index, water and sewerage services, index numbers by capital city.....	302
Table W 2.8	Inputs to rural water supply—power consumed to provide rural water distribution services, by state/territory.....	302

Table W 2.9a	Inputs to rural water supply—supply network intake volume for surface water source, by state/territory.....	302
Table W 2.9b	Inputs to rural water supply—supply network intake volume for groundwater source, by state/territory.....	303
Table W 2.9c	Inputs to rural water supply—supply network intake volume for treated waste water, by state/territory.....	303
Table W 2.9d	Inputs to rural water supply—supply network intake volume for other sources, by state/territory.....	303
Table W 2.9e	Inputs to rural water supply—total supply network intake volume, by state/territory.....	303
Table W 2.10a	Rural water markets—entitlements on issue, by state/territory.....	304
Table W 2.10b	Rural water markets—total entitlement trade, by state/territory	304
Table W 2.10c	Rural water markets—value of market turnover for water entitlements, by state/territory	304
Table W 2.10d	Rural water markets—value of market turnover for water allocations by state/territory.....	304
Table W 3.1	Urban Water supply—Australian population receiving water supply services, by state/territory.....	305
Table W 3.2a	Urban Water supply—number of residential properties connected to the urban water supply network, by state/territory	305
Table W 3.2b	Urban Water supply—number of non-residential properties connected to the urban water supply network, by state/territory	305
Table W 3.2c	Urban Water supply—Total number of properties connected to the urban water supply network, by state/territory	306
Table W 3.3a	Urban Water supply—volume of urban water supplied to residential properties, by state/territory.....	306
Table W 3.3b	Urban Water supply—volume of urban water supplied to commercial, municipal, and industrial properties, by state/territory	306
Table W 3.3c	Urban Water supply—volume of urban water supplied for other uses, by state/territory.....	307
Table W 3.3d	Urban Water supply—total volume of urban water supplied, by state/territory.....	307
Table W 3.4	Urban Water supply—Australian population receiving sewerage services, by state/territory.....	307
Table W 3.5a	Urban Water treatment— number of residential properties connected to sewerage services, by state/territory.....	308

Table W 3.5b	Urban Water treatment—number of non-residential properties connected to sewerage services, by state/territory.....	308
Table W 3.5c	Urban Water treatment—total number of properties connected to sewerage services, by state/territory.....	308
Table W 3.6a	Urban Water treatment—volume of recycled water supplied to residential properties, by state/territory.....	309
Table W 3.6b	Urban Water treatment—volume of recycled water supplied to commercial, municipal, and industrial properties, by state/territory	309
Table W 3.6c	Urban Water treatment—volume of recycled water supplied for agricultural uses, by state/territory	309
Table W 3.6d	Urban Water treatment—volume of recycled water supplied for on-site use, by state/territory	310
Table W 3.6e	Urban Water treatment—volume of recycled water supplied for other uses, by state/territory.....	310
Table W 3.6f	Urban Water treatment—total volume of recycled water supplied, by state/territory.....	310
Table W 3.7	Urban Water treatment—percentage of effluent recycled, by state/territory.....	311
Table W 3.8	Rural water use—volume of rural water used at customer service points, by state/territory.....	311
Table W 3.9a	Rural water use—water consumption by agricultural activity, by State or Territory—irrigation water	311
Table W 3.9b	Rural water use—water consumption by agricultural activity, by State or Territory—other water use.....	312
Table W 3.9c	Rural water use—water consumption by agricultural activity, by State or Territory—total	312
Table W 3.10a	Rural water use—area of irrigated crops and pastures, by agricultural activity—New South Wales	313
Table W 3.10b	Rural water use—area of irrigated crops and pastures, by agricultural activity—Victoria.....	313
Table W 3.10c	Rural water use—area of irrigated crops and pastures, by agricultural activity—Queensland	314
Table W 3.10d	Rural water use—area of irrigated crops and pastures, by agricultural activity—South Australia	314
Table W 3.10e	Rural water use—area of irrigated crops and pastures, by agricultural activity—Western Australia.....	315

Table W 3.10f	Rural water use—area of irrigated crops and pastures, by agricultural activity—Tasmania.....	315
Table W 3.10g	Rural water use—area of irrigated crops and pastures, by agricultural activity—Northern Territory	316
Table W 3.10h	Rural water use—area of irrigated crops and pastures, by agricultural activity—Australia	316
Table W 3.11a	Rural water use—volume of irrigation water applied, by agricultural activity—New South Wales	317
Table W 3.11b	Rural water use—volume of irrigation water applied, by agricultural activity—Victoria	317
Table W 3.11c	Rural water use—volume of irrigation water applied, by agricultural activity—Queensland.....	318
Table W 3.11d	Rural water use—volume of irrigation water applied, by agricultural activity—South Australia	318
Table W 3.11e	Rural water use—volume of irrigation water applied, by agricultural activity—Western Australia.....	319
Table W 3.11f	Rural water use—volume of irrigation water applied, by agricultural activity—Tasmania.....	319
Table W 3.11g	Rural water use—volume of irrigation water applied, by agricultural activity—Northern Territory	320
Table W 3.11h	Rural water use—volume of irrigation water applied, by agricultural activity—Australia	320
Table W 3.12a	Rural water use—application rate for irrigation water, by agricultural activity—New South Wales	321
Table W 3.12b	Rural water use—application rate for irrigation water, by agricultural activity—Victoria	321
Table W 3.12c	Rural water use—application rate for irrigation water, by agricultural activity—Queensland.....	322
Table W 3.12d	Rural water use—application rate for irrigation water, by agricultural activity—South Australia	322
Table W 3.12e	Rural water use—application rate for irrigation water, by agricultural activity—Western Australia.....	323
Table W 3.12f	Rural water use—application rate for irrigation water, by agricultural activity—Tasmania.....	323
Table W 3.12g	Rural water use—application rate for irrigation water, by agricultural activity—Northern Territory	324

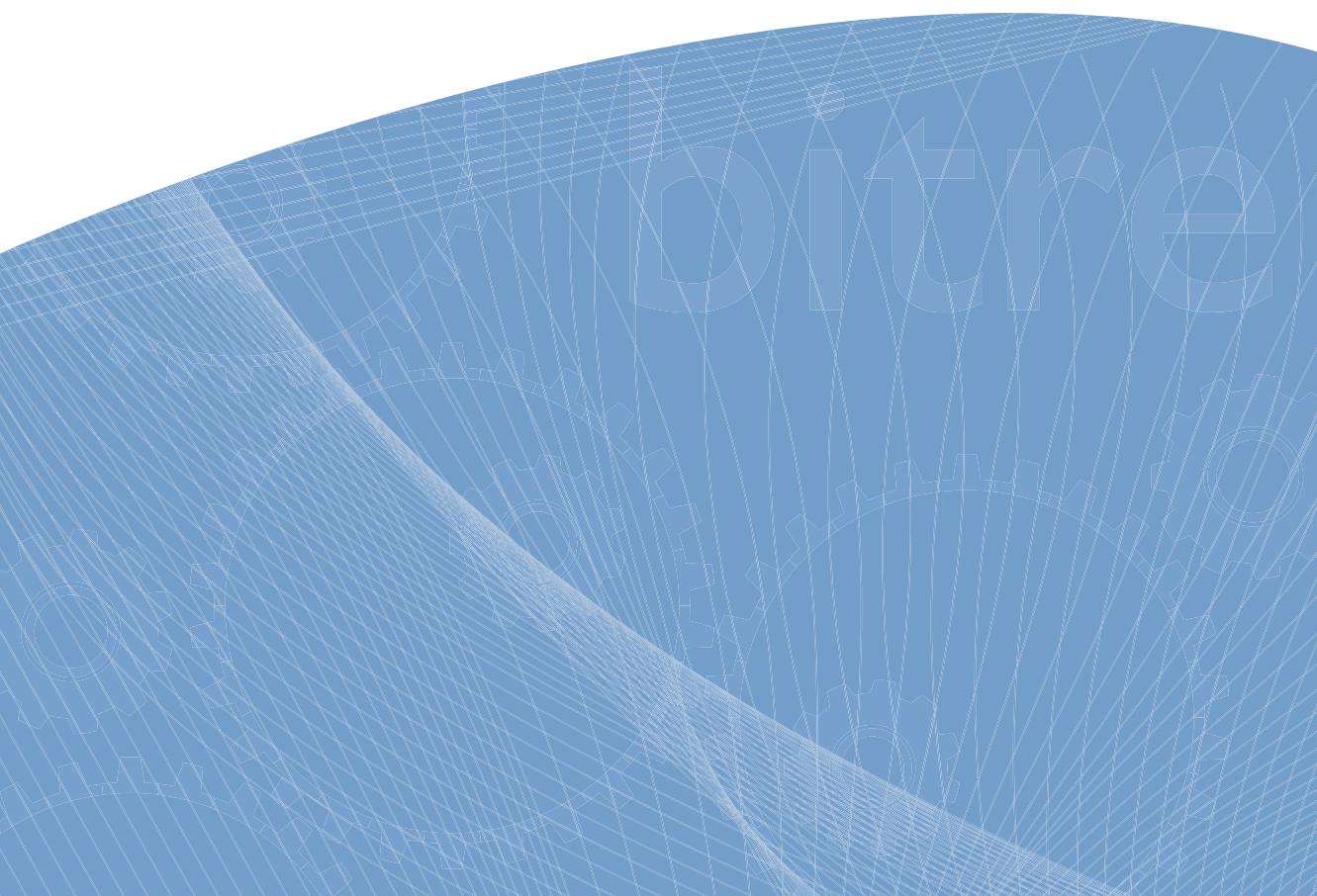
Table W 3.12h Rural water use—application rate for irrigation water, by agricultural activity—Australia	324
Table W 3.13a Rural water use—area irrigated, by irrigation method—New South Wales	325
Table W 3.13b Rural water use—area irrigated, by irrigation method—Victoria	325
Table W 3.13c Rural water use—area irrigated, by irrigation method—Queensland	326
Table W 3.13d Rural water use—area irrigated, by irrigation method—South Australia....	326
Table W 3.13e Rural water use—area irrigated, by irrigation method—Western Australia.....	327
Table W 3.13f Rural water use—area irrigated, by irrigation method—Tasmania	327
Table W 3.13g Rural water use—area irrigated, by irrigation method—Northern Territory	328
Table W 3.13h Rural water use—area irrigated, by irrigation method—Australia.....	328
Table W 3.14a Gross value of irrigated agricultural production, by agricultural activity, experimental estimates—New South Wales.....	329
Table W 3.14b Gross value of irrigated agricultural production, by agricultural activity, experimental estimates—Victoria.....	329
Table W 3.14c Gross value of irrigated agricultural production, by agricultural activity, experimental estimates—Queensland.....	330
Table W 3.14d Gross value of irrigated agricultural production, by agricultural activity, experimental estimates—Western Australia.....	330
Table W 3.14e Gross value of irrigated agricultural production, by agricultural activity, experimental estimates—South Australia	331
Table W 3.14f Gross value of irrigated agricultural production, by agricultural activity, experimental estimates—Tasmania.....	331
Table W 3.14g Gross value of irrigated agricultural production, by agricultural activity, experimental estimates—Northern Territory.....	332
Table W 3.14h Gross value of irrigated agricultural production, by agricultural activity, experimental estimates—Australia.....	332
Table W 4.1 Urban Water quality—percentage of population in zones where compliance with microbiological standards was achieved, by state/territory.....	333
Table W 4.2a Urban Water quality—number of urban zones where chemical compliance was achieved, by state/territory.....	333
Table W 4.2b Urban Water quality—number of urban zones where chemical compliance was measured, by state/territory	334

Table W 4.2c	Urban Water quality—percentage of urban zones where chemical compliance achieved, by state/territory.....	334
Table W 4.3a	Energy emissions—wastewater handling greenhouse gas (carbon dioxide equivalent) net emissions, by state or territory—from industrial wastewater.....	335
Table W 4.3b	Water emissions—wastewater treatment and discharge greenhouse gas (carbon dioxide equivalent) net emissions, by state or territory—from domestic wastewater; seweried population.....	336
Table W 4.3c	Water emissions—wastewater treatment and discharge greenhouse gas (carbon dioxide equivalent) net emissions, by state or territory—from domestic wastewater; unsewered population	337

List of Figures

Figure I 1	Australia's key economic infrastructure at 30 June 2014 and 30 June 2015	10
Figure I 2	Infrastructure construction activity, adjusted by chain volume index	11
Figure I 3	Infrastructure construction activity, by sector, adjusted by chain volume index.....	12
Figure T 1a	Australia's domestic transport, 2014–15.....	32
Figure T 1b	Australia's international transport, 2014–15	32
Figure T 2	Australian domestic freight task, by mode of transport	33
Figure T 3	Australian domestic passenger task, by mode of transport.....	34
Figure T 4	Map of national road network.....	81
Figure T 5	Australia's railways, by network manager.....	99
Figure T 6	Australia's top 40 airports in 2015–16, passengers.....	105
Figure T 7	Principal Australian ports, by commodity	113
Figure E 1	Australian energy flows in petajoules, 2013–14.....	168
Figure E 2	Australian electricity consumption, by broad industry.....	169
Figure E 3	Australian gas consumption, by broad industry.....	170
Figure C 1	Telecommunications networks: traditional and next generation	262
Figure C 2	Communications subscribers—number of subscribers, by communications medium	264
Figure W 1	Total volume of rainfall in Australia.....	283
Figure W 2	Water infrastructure engineering construction, adjusted by chain volume index.....	284
Figure A 1	Schematic representation of flow of road expenditure funds for 2014–15 (Tasmania).....	345
Figure A 2	Composition of BITRE estimate of net road-related petroleum products excise, 2014–15.....	346
Table A 3	Road classification types included in NTC definition of Arterial Roads.....	348

Introduction



Introduction

The Australian Infrastructure Statistics Yearbook provides comprehensive and coherent time series statistics on major Australian infrastructure and its use.

Part I of the Yearbook provides a summary of major economic infrastructure and several statistical measures of factors that relate to investment in and use of major economic infrastructure. The rest of the Yearbook is divided into four sections, focussing on each of the four themes of major economic infrastructure:

- Part T, for transport infrastructure;
- Part E, for energy infrastructure;
- Part C, for communications infrastructure; and
- Part W, for water infrastructure.

The yearbook covers four key areas.

- Physical infrastructure
 - Measures include the value and capacity of infrastructure at a given time ('stock' measures); additions to the amount of infrastructure (construction) and reductions (depreciation) that take place during the year ('flow' measures); and measures of the quality of the infrastructure.
- Inputs
 - Measures of non-capital inputs to activities that rely on infrastructure.
- Activity
 - Measures of activities associated with infrastructure. For transport, this includes freight and passenger movements, and road, rail, aviation and maritime activity.
- Impacts
 - Measures of the external impact of activities. These impacts include safety and security issues as well as greenhouse gas emissions and other pollution.

Each of the chapters in the yearbook cover these four key areas. A summary of each chapter is provided below.

Publication layout

Notes on each table, including end notes, are included in the are numbered consecutively within each Part. References provided at the bottom of tables relate to the most recent issue of the statistical publication. Where a complete time series is not available from the most recent issue, earlier issues were used.

Part I *Infrastructure and the economy*

Chapter 1: The Economy

This chapter provides several key macroeconomic indicators of factors that are likely to influence, or be influenced by, activity associated with infrastructure. Where available, the contribution of detailed infrastructure industries to the key macroeconomic indicator is provided. This chapter provides estimates of production, employment, wages and salaries, prices, international trade, interest rates, the Australian currency exchange rate and the Australian resident population.

Chapter 2: Infrastructure construction

Time series statistics on infrastructure construction activity across the four forms of major economic infrastructure covered in the Yearbook are provided in this chapter.

Part T *Transport*

Chapter 1: Transport infrastructure

This chapter provides a number of measures of the construction of transport infrastructure as well as measures of the length of roads available for public use and road construction price indexes.

Chapter 2: Freight

In its broadest sense, freight transport describes the movement of physical items between locations. A summary of freight statistics is provided, classified by mode of transport. Freight is further classified into bulk and non-bulk segments. Two measures of freight transport are currently provided in the framework: the weight of freight moved in Australia (measured in millions of tonnes) and freight by weight and distance moved (measured in tonne kilometres—the transport task performed in moving one tonne of freight one kilometre).

Chapter 3: Passengers

In a similar fashion, passenger transport describes the movement of people between locations. This definition of passengers does not include drivers of freight vehicles when they are employed for freight purposes but does include drivers of freight vehicles when they are being used to transport passengers (e.g. private use of light commercial vehicles). The chapter provides a

summary of passenger statistics, classified by mode of transport (some measures of walking and cycling to work are available in Table T 3.4, but estimates for recreational boating are not currently provided in this publication). Two measures of passenger transport are currently provided: the number of people transported and the number of passenger kilometres travelled (a measure of the transport task performed in moving one passenger one kilometre).

Chapters 4, 5, 6 and 7: Road, Rail, Aviation and Shipping

These chapters focus on the four main motorised modes of transport including road, rail, aviation and shipping. Where possible, data are classified by location in terms of state or territory (interstate, intrastate, intercapital) or level of urbanisation.

Price data are included in the framework to provide an indication of the costs of each mode of transport. Price estimates for shipping and rail are not readily available.

The Yearbook also includes estimates for the size and characteristics of the various modal vehicle fleets.

Chapters 8 and 9: Safety and Energy and the Environment

These chapters complete the section on transport infrastructure with a summary of some key impacts of transport activity.

Chapter 8 presents safety statistics for transport accidents and casualties with comparisons by mode of transport; state or territory of accident; and severity of injuries.

Chapter 9 provides direct energy consumption and emissions data by transport activity. This includes estimates for fuel sales, fuel prices and the production and international trade of transport fuels, classified by petroleum fuel type, as well as estimates of transport emissions, classified by transport mode and emission type.

Part E Energy

Chapter 1: Energy infrastructure.

A number of measures of energy infrastructure construction are provided in this chapter. As well as measures of the length of electricity networks, capacity of electricity generation plants and reliability of electricity supply.

Chapter 2: Energy inputs

In this chapter, data are provided on inputs to energy infrastructure; including:

- measures of mineral energy reserves, and
- energy used in the generation of electricity and natural gas distribution.

Chapter 3: Energy production and trade

The first few tables in Chapter 3 provide a summary of energy production in Australia of all main primary fuels and energy imports and exports. The remaining tables provide energy usage details for key specific energy types:

- For electricity, detailed usage statistics are provided by state/territory and industry, with further detail provided for the number of customers and electricity prices facing residential consumers in each capital city.
- For gas usage statistics are provided by state/territory and industry, as well as gas prices facing residential consumers in each capital city, detailed
- For black coal, detailed usage statistics are provided by state/territory and industry, as well as time series statistics for export prices for black coal.
- For brown coal, detailed usage statistics are provided, classified by industry for New South Wales and Victoria.
- For petroleum fuels, detailed usage statistics are provided by state/territory and industry, as well as time series statistics for a range of international measures of crude oil prices.

Chapter 4: Energy impacts

Measures of the external impacts of energy usage are provided for serious injuries and greenhouse gas emissions. The electricity generation industry plays a unique role in greenhouse gas statistics within the Kyoto framework: Greenhouse gas emissions from the electricity generation industry represent all 'scope 2' ('upstream' or indirect) emissions for other industries (see Table E 4.2).

Part C Communication

The Yearbook focuses on key infrastructure that enables economic activity. Telecommunications networks are a vital part of Australian infrastructure, however, the telecommunications industry is becoming increasingly integrated with the radio communications and broadcasting industries. At the same time, rapid advances in technology have enabled a dramatic expansion in the capacity of existing physical infrastructure in the communications industry.

Chapter 1, 2 and 3: Communication infrastructure, Investment in information technology and subscribers and providers

To provide a meaningful summary of Australian communications infrastructure, Part C includes measures of both physical infrastructure (see Chapter 1) and technology investments that enhance infrastructure capacity (see Chapter 2). Chapter 3 provides estimates for fixed and mobile telephone and internet subscribers and internet service providers.

Chapter 4: Communications usage

This chapter provides estimates of internet usage and internet commerce, as well as telecommunication prices facing residential customers in each capital city; indicative broadband subscription prices and domain name registration statistics.

Chapter 5: Communication security

Communication security provides statistics for the number of telephone numbers registered on the do not call register and the number of emergency calls to 000 and 112.

Part W Water

A significant number of tables presented were compiled by BITRE using data published by the Bureau of Meteorology (BoM) and the National Water Commission (NWC) in two annual National Performance Reports (NPR); one for urban utilities and the other for rural water service providers. The urban and rural NPRs provide comprehensive data on water supply and wastewater treatment activity for major water utilities (above 10,000 properties) in Australia using a common set of measures.

Following the closure of National Water Commission in 2014, the Bureau of Meteorology took up the task to produce the national performance reports on urban water utilities. The national performance report on rural water service providers is no longer updated, and the rural water data presented in the Yearbook are sourced from the final national performance report published by the NWC in 2014.

Chapter 1: Water infrastructure

This chapter provides measures of water infrastructure construction that are consistent with construction measures used in earlier parts of the Yearbook. In addition, there are several stock measures such as:

- the current value of water infrastructure assets
- the capacity of major water storage dams; and
- infrastructure quality measures for water supply, wastewater treatment and rural water supply networks.

Chapter 2: Inputs to water supply

Tables in Chapter 2 provide:

- estimates for total Australian rainfall each calendar year
- measures of sources of water used in urban and rural water distribution networks
- water supply prices facing residential customers in each capital city
- measures of power consumed to provide rural water distribution; and
- trading activity in rural water markets.

Chapter 3:Water usage

Chapter 3 provides a summary of annual water usage in Australia. Statistics are provided for the services provided by major water utilities (urban water; urban wastewater and rural water) in terms of the population that their networks serve, the number of customer connections to the network and the volume and nature of water supplied. In addition, Chapter 3 provides a summary of water consumed by agriculture, including water sourced from rural water supply networks as well as other sources.

Chapter 4:Water health and emissions

Chapter 4 provides measures of water quality for urban water supply, sewer overflows to the environment and greenhouse gas emissions from urban and rural water supply and wastewater treatment.

PART I: Infrastructure and the economy

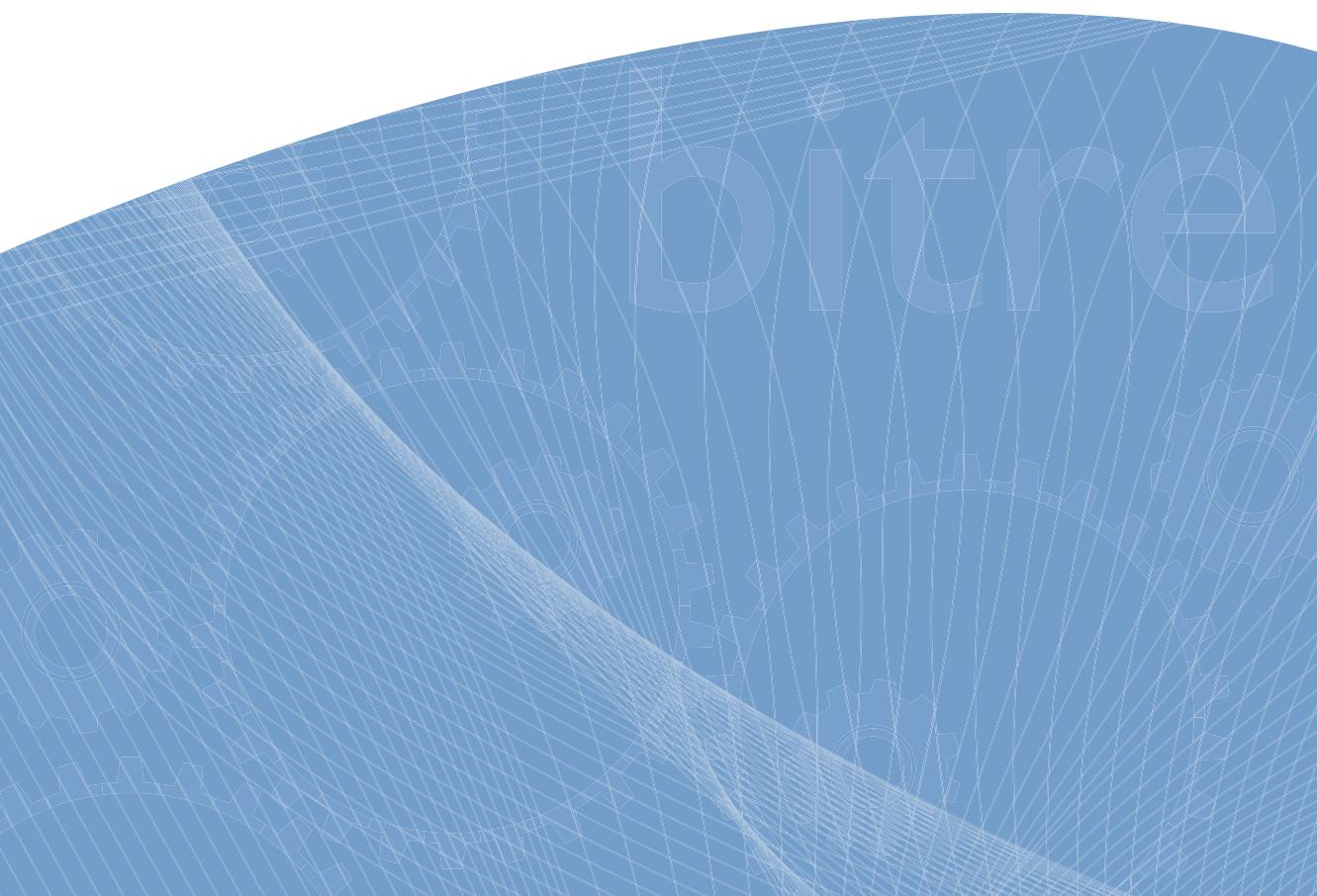
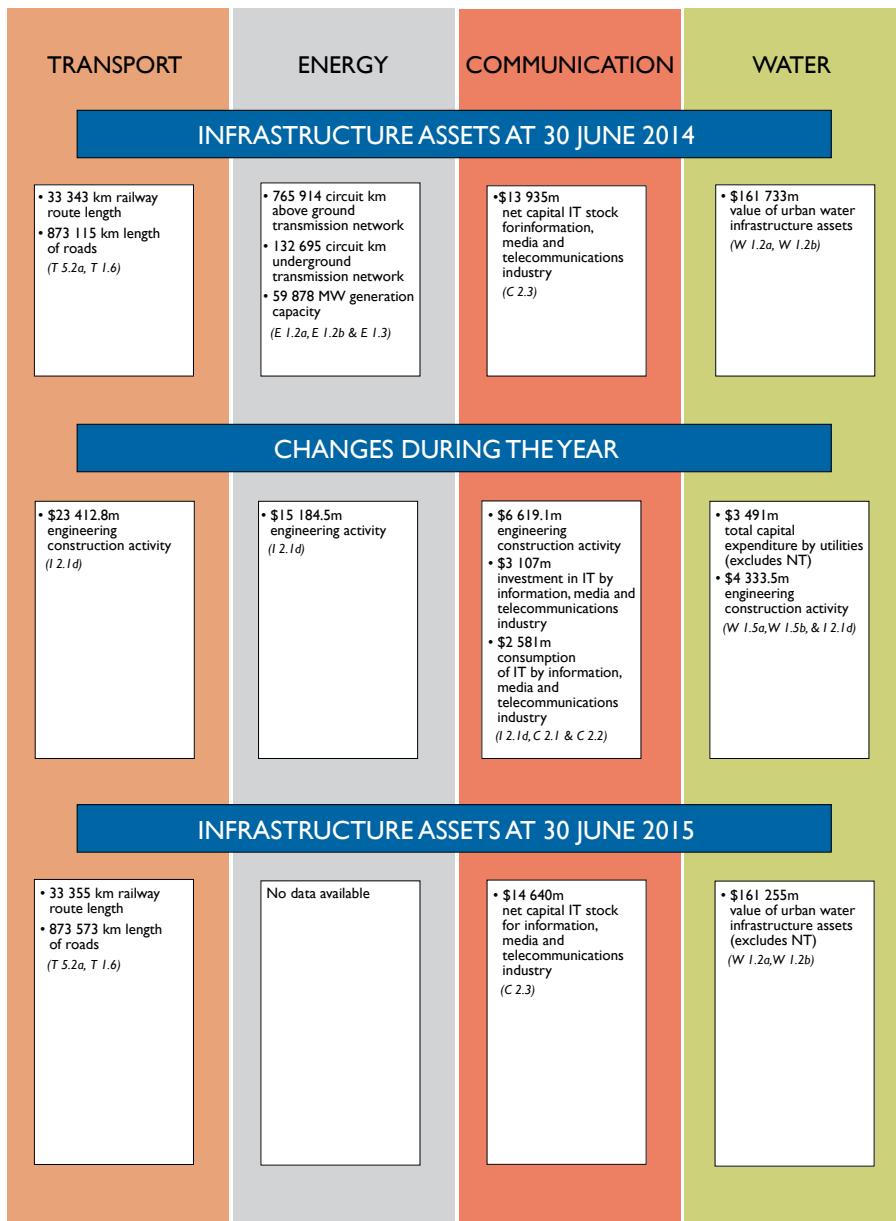


Figure 11 Australia's key economic infrastructure at 30 June 2014 and 30 June 2015



Notes:

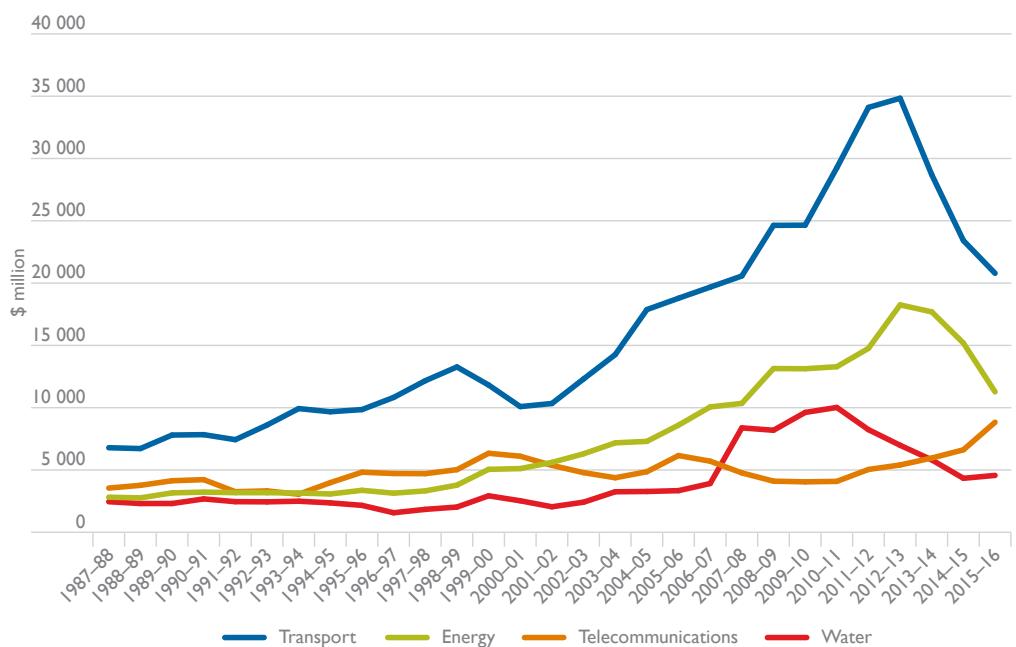
1. Railway route length refers to lines that are open for traffic.
2. The value of urban water infrastructure assets at 30 June 2015 excludes Northern Territory data.
3. Total capital expenditure by utilities also excludes Northern Territory data.

PART I:

Infrastructure and the economy

The main source of infrastructure statistics used by BITRE is the ABS publication Engineering Construction Activity, Australia (ABS cat. no. 8762.0). This publication provides measures of non-building construction, classified by major form of infrastructure: transport (roads, rail, ports, etc), energy (electricity and gas transmission networks, etc), telecommunications networks, and water supply and distribution networks.

Figure I 2 Infrastructure construction activity, adjusted by chain volume index

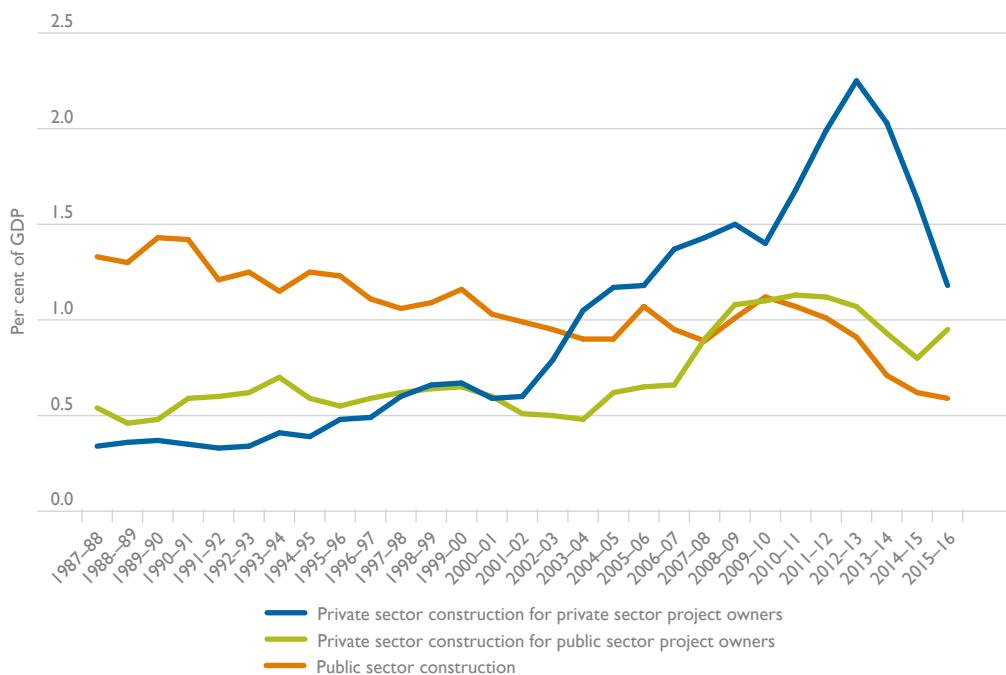


Source: ABS (2016a).

Since 2001, Australian real infrastructure construction activity has increased strongly, mainly due to sharp increases in the construction of transport, water and energy infrastructure. Growth in transport infrastructure construction increased in 2009–10 to 2011–12. However, the value of transport construction activity stabilised in 2012–13 and has decreased since 2013–14.

Water infrastructure construction expenditure increased sharply in 2007–08 and again in 2009–10, reflecting work conducted on the South East Queensland Water Grid and the Victorian desalination plant. With the completion of these projects, expenditure on water infrastructure decreased but has stabilised to slightly above pre desalination plant levels.

Figure I 3 Infrastructure construction activity, by sector, adjusted by chain volume index



Source: ABS (2016a).

Between 2000 and 2013, private sector involvement in the construction of infrastructure has increased sharply. Initially in the form of private sector-owned projects, then from 2005 in the form of private sector construction of public sector projects. Private sector involvement has declined since peaking in 2012–13. Public sector construction activity stayed at approximately 1 per cent of GDP between 2000 and 2012 before decreasing to 0.59 per cent in 2015–16.

CHAPTER I

The economy

Table 11.1a Gross value added, major Australian infrastructure industries

Financial year	Chain volume measures ¹						Major infrastructure industries as percentage of GDP %	
	Gross value added, at basic prices ²							
	Transport, postal and warehousing	Energy		Information media and telecommunications	Water Supply and waste services	Gross Domestic Product		
\$ million								
1975–76	17 970	8 524	187	4 653	9 170	486 156	8.3	
1976–77	19 459	9 223	269	4 864	9 480	503 693	8.6	
1977–78	21 916	9 738	331	5 166	8 782	508 211	9.0	
1978–79	22 268	10 318	387	5 586	9 029	528 808	9.0	
1979–80	22 931	10 876	468	6 003	9 780	544 944	9.2	
1980–81	24 335	11 589	490	6 645	9 824	563 244	9.4	
1981–82	24 705	12 084	748	7 172	9 916	581 951	9.4	
1982–83	23 805	12 279	744	7 489	10 503	568 970	9.6	
1983–84	25 006	12 978	818	7 935	10 488	595 297	9.6	
1984–85	27 038	13 774	916	8 550	11 026	626 547	9.8	
1985–86	28 676	14 480	900	9 278	11 208	652 245	9.9	
1986–87	29 208	15 095	883	9 982	11 144	669 037	9.9	
1987–88	30 495	15 996	947	10 860	11 426	707 634	9.9	
1988–89	31 882	16 860	1 012	11 753	11 706	735 081	10.0	
1989–90	32 684	17 716	1 085	13 137	12 266	761 023	10.1	
1990–91	32 907	18 046	1 028	13 860	12 830	758 132	10.4	
1991–92	33 631	18 463	1 009	14 861	12 687	761 157	10.6	
1992–93	33 858	19 025	1 021	16 598	12 584	792 061	10.5	
1993–94	35 703	19 696	1 079	18 130	12 964	824 044	10.6	
1994–95	37 860	20 138	1 152	20 274	13 374	856 009	10.8	
1995–96	40 897	20 457	1 163	21 434	13 336	889 814	10.9	
1996–97	42 602	20 384	1 169	23 021	13 250	924 938	10.9	
1997–98	43 572	21 154	1 215	24 905	13 683	965 989	10.8	
1998–99	44 846	21 516	1 294	26 751	14 014	1 014 357	10.7	
1999–00	46 548	22 149	1 348	27 600	13 977	1 053 599	10.6	
2000–01	48 377	22 477	1 390	28 628	14 362	1 073 927	10.7	
2001–02	49 928	22 189	1 406	29 463	14 953	1 115 345	10.6	
2002–03	53 000	22 390	1 443	31 351	15 079	1 149 595	10.7	
2003–04	54 878	22 821	1 470	32 867	14 654	1 197 296	10.6	
2004–05	58 248	23 162	1 461	33 755	14 649	1 235 689	10.6	
2005–06	60 027	23 958	1 468	35 110	14 416	1 272 548	10.6	
2006–07	63 676	24 115	1 555	37 398	14 588	1 320 366	10.7	
2007–08	67 173	24 717	1 600	39 621	13 934	1 369 308	10.7	
2008–09	66 734	25 978	1 611	40 149	14 412	1 394 225	10.7	
2009–10	67 965	26 024	1 617	40 757	14 834	1 422 363	10.6	
2010–11	70 083	26 084	1 766	42 074	15 820	1 456 209	10.7	
2011–12	73 044	25 771	1 681	42 321	16 454	1 509 109	10.6	
2012–13	75 538	25 576	1 831	41 983	16 912	1 545 932	10.5	
2013–14	75 105	24 973	1 805	42 905	16 460	1 584 578	10.2	
2014–15	74 323	25 141	2 019	46 968	16 674	1 621 350	10.2	
2015–16	74 811	25 463	2 227	50 214	17 068	1 668 711	10.2	

^{1,2} See end notes.

Source: ABS (2016b).

Table I.I.1b Gross value added, Australia's transport industry

Financial year	Chain volume measures ¹						
	Gross value added, at basic prices ²				Total transport, postal and warehousing	Gross Domestic Product	Transport industry as percentage of GDP
	Road	Air and space	Rail, pipeline and other transport ³	Transport, postal and storage services			
\$ million							
1975–76	4 965	991	3 727	9 988	17 970	486 156	3.7
1976–77	5 597	1 003	3 871	10 458	19 459	503 693	3.9
1977–78	6 607	1 099	3 966	10 920	21 916	508 211	4.3
1978–79	6 551	1 217	3 920	11 257	22 268	528 808	4.2
1979–80	6 441	1 340	4 317	12 140	22 931	544 944	4.2
1980–81	7 222	1 316	4 383	11 998	24 335	563 244	4.3
1981–82	7 382	1 350	4 440	11 757	24 705	581 951	4.2
1982–83	7 225	1 281	4 162	10 979	23 805	568 970	4.2
1983–84	7 413	1 349	4 513	12 299	25 006	595 297	4.2
1984–85	7 965	1 455	5 084	13 414	27 038	626 547	4.3
1985–86	8 410	1 581	5 433	13 744	28 676	652 245	4.4
1986–87	8 348	1 748	5 418	14 085	29 208	669 037	4.4
1987–88	8 847	1 955	5 520	14 489	30 495	707 634	4.3
1988–89	9 511	2 075	5 608	14 916	31 882	735 081	4.3
1989–90	9 956	1 798	5 958	15 298	32 684	761 023	4.3
1990–91	9 684	2 089	5 954	15 438	32 907	758 132	4.3
1991–92	9 996	2 435	5 969	15 356	33 631	761 157	4.4
1992–93	9 775	2 688	6 152	15 361	33 858	792 061	4.3
1993–94	10 252	2 942	6 406	16 198	35 703	824 044	4.3
1994–95	11 250	3 198	6 380	17 119	37 860	856 009	4.4
1995–96	12 471	3 419	6 819	18 318	40 897	889 814	4.6
1996–97	13 043	3 637	7 016	19 004	42 602	924 938	4.6
1997–98	13 574	3 630	6 998	19 522	43 572	965 989	4.5
1998–99	14 069	3 702	7 110	20 134	44 846	1 014 357	4.4
1999–00	14 749	3 907	7 352	20 692	46 548	1 053 599	4.4
2000–01	15 211	4 222	7 431	21 536	48 377	1 073 927	4.5
2001–02	16 100	3 962	7 743	22 343	49 928	1 115 345	4.5
2002–03	17 269	4 484	8 161	23 205	53 000	1 149 595	4.6
2003–04	18 525	4 765	8 329	23 436	54 878	1 197 296	4.6
2004–05	19 688	5 279	8 546	24 813	58 248	1 235 689	4.7
2005–06	20 651	5 574	8 631	25 260	60 027	1 272 548	4.7
2006–07	22 849	6 073	8 634	26 333	63 676	1 320 366	4.8
2007–08	24 295	6 276	9 261	27 646	67 173	1 369 308	4.9
2008–09	22 716	6 054	9 562	28 569	66 734	1 394 225	4.8
2009–10	23 230	6 043	9 602	29 271	67 965	1 422 363	4.8
2010–11	22 766	6 492	9 988	30 905	70 083	1 456 209	4.8
2011–12	22 661	6 818	10 507	33 085	73 044	1 509 109	4.8
2012–13	22 578	6 854	10 994	35 151	75 538	1 545 932	4.9
2013–14	23 040	6 758	10 940	34 367	75 105	1 584 578	4.7
2014–15	22 790	6 746	11 398	33 389	74 323	1 621 350	4.6
2015–16	22 693	7 230	11 127	33 760	74 811	1 668 711	4.5

^{1,2,3} See end notes.

Source: ABS (2016b).

**Table I I.2a Australian employment, major infrastructure industries—
transport and storage**

August reference month	Transport and Storage Total Employment								Total Aust employ- ment	Transport and storage as % of total employ- ment		
	Transport				Postal and courier services	Transport support services	Ware- housing and storage services	Total				
	Road	Rail	Water	Air and space								
thousands												
1985	159.1	74.1	5.6	33.1	14.0	73.4	49.4	8.6	417.2	6 675.5		
1986 ⁴	171.8	73.3	6.1	35.1	14.9	74.4	49.5	11.2	436.2	6 918.5		
1987	170.0	65.7	5.7	32.5	12.7	69.5	44.6	7.8	408.6	7 092.3		
1988	171.8	60.5	5.2	34.4	13.6	68.5	46.1	9.1	409.1	7 353.3		
1989	185.5	59.2	6.3	43.9	12.6	71.2	48.3	11.5	438.6	7 715.3		
1990	193.4	48.7	6.6	40.0	10.9	73.9	42.6	17.0	433.2	7 808.0		
1991	185.4	54.4	7.7	39.0	10.7	68.4	41.5	14.5	421.6	7 620.7		
1992	184.7	42.4	5.5	36.1	10.0	61.1	37.2	13.9	390.8	7 613.4		
1993	171.3	47.8	3.7	35.8	9.1	60.1	39.8	16.6	384.2	7 589.4		
1994	175.7	43.8	7.1	36.8	14.4	56.7	40.8	19.3	394.6	7 861.7		
1995	183.6	39.7	7.3	40.7	13.5	63.5	40.8	15.2	404.3	8 165.9		
1996	184.7	40.5	10.1	48.2	17.0	69.1	36.8	21.0	427.5	8 265.9		
1997	194.2	38.2	7.4	46.7	14.4	74.1	38.7	15.9	429.5	8 250.3		
1998	190.6	30.0	7.9	46.4	12.2	78.0	36.5	19.6	421.1	8 455.2		
1999	204.3	27.8	8.2	44.9	11.2	73.2	45.6	24.8	440.1	8 603.6		
2000	205.1	30.8	9.2	56.6	8.1	81.8	35.4	30.3	459.8	8 911.6		
2001	213.8	28.7	10.7	52.5	8.0	81.2	37.4	26.6	460.6	8 971.9		
2002	204.2	28.4	7.9	45.2	6.9	78.9	36.3	27.7	438.1	9 150.3		
2003	217.8	32.3	8.5	47.7	8.1	77.9	39.4	27.2	460.0	9 327.0		
2004	218.9	29.9	13.4	40.3	9.2	81.7	39.6	36.2	487.3	9 462.1		
2005	214.1	30.3	8.7	50.3	7.4	86.3	41.9	41.4	495.2	9 870.3		
2006	228.8	33.1	12.4	46.0	7.6	74.8	45.0	43.2	501.0	10 105.8		
2007	234.5	30.5	12.6	46.4	13.8	88.6	44.6	48.1	536.3	10 406.4		
2008	228.3	48.5	9.4	48.7	8.9	96.6	57.3	57.0	566.4	10 710.4		
2009	231.0	52.0	8.5	51.0	11.5	97.9	71.2	25.1	571.6	10 707.3		
2010	215.0	46.9	7.2	52.1	9.3	93.1	79.8	43.3	562.7	10 973.8		
2011	233.7	46.0	9.2	56.9	10.9	89.4	67.8	48.0	576.5	11 130.6		
2012	222.3	46.5	8.1	49.1	9.2	76.7	64.7	53.6	548.8	11 260.8		
2013	220.3	44.9	11.8	54.4	5.5	97.4	82.8	51.4	582.6	11 355.6		
2014	252.0	41.2	8.7	57.2	6.8	81.5	81.6	49.4	648.6	11 565.4		
2015	252.9	40.7	6.3	58.8	7.7	89.2	83.4	53.2	618.6	11 686.6		
2016	268.5	36.7	6.5	54.1	7.0	99.6	74.5	54.4	608.7	11 869.1		

⁴ See end notes.

Source: ABS (2016c).

Table I 1.2b Australian employment, major infrastructure industries—energy

August reference month	Energy Total Employment					Total	Total Aust employ-ment	Energy as % of total employ-ment			
	Mining		Petroleum and coal product manufacturing	Electricity supply	Gas supply						
	Coal mining	Oil and gas extraction									
thousands											
1985	37.2	2.3	6.7	81.4	10.5	138.0	6 675.5	2.1			
1986 ⁴	32.2	1.5	6.0	84.2	9.6	133.5	6 918.5	1.9			
1987	39.2	1.7	6.2	72.8	11.2	131.0	7 092.3	1.8			
1988	33.2	3.8	5.1	73.8	8.4	124.3	7 353.3	1.7			
1989	28.8	3.4	7.5	66.9	10.4	117.2	7 715.3	1.5			
1990	28.2	4.5	9.5	62.3	5.2	109.6	7 808.0	1.4			
1991	32.6	5.2	6.8	62.6	7.2	114.4	7 620.7	1.5			
1992	25.6	6.6	9.2	62.5	8.5	112.4	7 613.4	1.5			
1993	29.4	3.2	6.4	54.5	7.9	101.4	7 589.4	1.3			
1994	22.3	2.6	7.7	55.7	8.2	96.5	7 861.7	1.2			
1995	24.0	4.0	5.2	49.3	7.6	90.1	8 165.9	1.1			
1996	20.5	2.6	7.4	38.5	7.7	76.7	8 265.9	0.9			
1997	23.1	3.5	9.0	37.7	6.4	79.7	8 250.3	1.0			
1998	19.5	5.9	6.6	37.7	5.9	75.5	8 455.2	0.9			
1999	18.4	4.0	6.2	38.1	5.7	72.5	8 603.6	0.8			
2000	15.5	6.0	10.0	36.5	⁴ 3.0	71.0	8 911.6	0.8			
2001	21.7	3.9	13.6	44.6	4.9	88.7	8 971.9	1.0			
2002	17.2	4.7	13.1	37.3	5.9	78.2	9 150.3	0.9			
2003	20.8	5.4	6.0	57.1	5.0	94.3	9 327.0	1.0			
2004	18.0	5.5	8.1	40.2	⁴ 4.0	75.8	9 462.1	0.8			
2005	27.3	7.3	7.7	45.1	7.3	94.7	9 870.3	1.0			
2006	28.6	8.7	9.8	36.0	6.6	89.8	10 105.8	0.9			
2007	24.6	10.6	6.7	39.8	10.0	91.6	10 406.4	0.9			
2008	33.3	14.0	5.6	44.7	10.8	108.4	10 710.4	1.0			
2009	39.6	11.6	6.2	61.1	9.3	127.8	10 707.3	1.2			
2010	42.0	15.3	6.6	67.7	7.6	139.3	10 973.8	1.3			
2011	51.0	14.1	11.0	60.4	9.7	146.3	11 130.6	1.3			
2012	46.7	16.9	11.8	70.8	11.0	157.2	11 260.8	1.4			
2013	51.7	19.9	6.9	58.6	22.6	159.7	11 355.6	1.4			
2014	38.9	24.8	6.5	63.9	15.6	149.6	11 565.4	1.3			
2015	46.0	36.1	9.3	63.1	14.3	168.8	11 686.6	1.4			
2016	53.6	22.3	3.6	59.7	14.0	153.0	11 869.1	1.3			

⁴ See end notes.

Source: ABS (2016c).

Table I 1.2c Australian employment, major infrastructure industries—communication

August reference month	Communication Total Employment			Total Aust employment	Communication services as % of total employment
	Telecommunication services	Internet service providers, web search portals and data processing services	Total		
thousands					
1985	79.0	7.6	86.6	6 675.5	1.3
1986 ⁴	79.0	7.7	86.7	6 918.5	1.3
1987	73.8	7.5	81.4	7 092.3	1.1
1988	71.4	7.5	78.9	7 353.3	1.1
1989	73.8	7.9	81.7	7 715.3	1.1
1990	76.7	8.3	85.0	7 808.0	1.1
1991	70.4	7.9	78.3	7 620.7	1.0
1992	61.7	7.4	69.1	7 613.4	0.9
1993	60.7	7.4	68.0	7 589.4	0.9
1994	74.9	9.6	84.4	7 861.7	1.1
1995	80.0	11.1	91.1	8 165.9	1.1
1996	92.1	12.8	104.8	8 265.9	1.3
1997	75.5	13.0	88.5	8 250.3	1.1
1998	70.3	14.4	84.7	8 455.2	1.0
1999	73.0	14.0	87.0	8 603.6	1.0
2000	88.7	20.3	109.0	8 911.6	1.2
2001	85.4	19.3	104.7	8 971.9	1.2
2002	85.6	20.7	106.3	9 150.3	1.2
2003	92.5	20.5	113.0	9 327.0	1.2
2004	88.2	18.6	106.8	9 462.1	1.1
2005	96.4	19.9	116.3	9 870.3	1.2
2006	97.9	21.6	119.5	10 105.8	1.2
2007	96.7	22.8	119.5	10 406.4	1.1
2008	96.5	15.9	112.4	10 710.4	1.0
2009	85.2	7.1	92.4	10 707.3	0.9
2010	89.7	8.0	97.7	10 973.8	0.9
2011	90.0	8.5	98.5	11 130.6	0.9
2012	102.2	7.6	109.8	11 260.8	1.0
2013	86.8	6.0	92.8	11 355.6	0.8
2014	102.7	7.7	110.4	11 565.4	1.0
2015	90.5	10.6	101.1	11 686.6	0.9
2016	100.9	11.2	112.1	11 869.1	0.9

⁴ See end notes.

Source: ABS (2016c).

Table I 1.2d Australian employment, major infrastructure industries—water

August reference month	Water supply, sewerage and drainage services	Total Aust employment <i>thousands</i>	Water supply, sewerage and drainage services as % of total employment	
			%	
1985	46.8	6 675.5	0.7	
1986 ⁴	43.7	6 918.5	0.6	
1987	35.7	7 092.3	0.5	
1988	31.8	7 353.3	0.4	
1989	35.5	7 715.3	0.5	
1990	36.5	7 808.0	0.5	
1991	32.7	7 620.7	0.4	
1992	33.7	7 613.4	0.4	
1993	32.1	7 589.4	0.4	
1994	28.5	7 861.7	0.4	
1995	27.7	8 165.9	0.3	
1996	21.7	8 265.9	0.3	
1997	22.0	8 250.3	0.3	
1998	25.6	8 455.2	0.3	
1999	23.0	8 603.6	0.3	
2000	25.2	8 911.6	0.3	
2001	20.5	8 971.9	0.2	
2002	23.2	9 150.3	0.3	
2003	18.7	9 327.0	0.2	
2004	23.9	9 462.1	0.3	
2005	26.0	9 870.3	0.3	
2006	29.8	10 105.8	0.3	
2007	25.2	10 406.4	0.2	
2008	35.3	10 710.4	0.3	
2009	28.2	10 707.3	0.3	
2010	37.5	10 973.8	0.3	
2011	32.5	11 130.6	0.3	
2012	37.3	11 260.8	0.3	
2013	29.2	11 355.6	0.3	
2014	28.9	11 565.4	0.2	
2015	33.3	11 686.6	0.3	
2016	21.8	11 869.1	0.2	

⁴ See end notes.

Source: ABS (2016c).

Table I I.3a Australian average weekly earnings⁵, transport industry
(2014–15 prices, adjusted by CPI)

May reference month	Road	Rail	Water	Air and space	Other transport	All industries
\$						
1996	980.16	1 277.74	1 072.25	1 339.40	779.17	918.82
1998	1 018.48	1 334.84	1 682.10	1 615.85	^b 748.25	967.13
2000	978.92	1 431.79	1 665.07	1 657.00		993.38
2002	1 052.77	1 432.51	1 213.01	1 395.42		972.86
2004	1 036.44	1 521.13	^b 1 171.10	1 408.08		1 002.64
2006 ⁶	1 129.81	1 782.57	1 355.15	1 462.97		1 022.86
2008	1 132.51	1 603.19	1 637.36	1 530.19	1 287.61	1 067.43
2010	1 066.02	1 759.60	2 027.22	1 859.96	681.43	1 082.41
2012	1 096.13	1 923.81	1 634.51	1 719.84	^b 1 263.49	1 149.11
2014	1 203.22	1 899.85	1 801.30	1 494.14	1 044.65	1 154.60

^b Use estimate with caution as it is subject to a relative standard error between 25 per cent and 50 per cent.

^{5,6} See end notes.

Source: ABS (2015a), ABS (2016d) and unpublished data..

Table I I.3b Australian average weekly earnings⁵, energy industry
(2014–15 prices, adjusted by CPI)

May reference month	Electricity supply	Gas supply	All industries
\$			
1996	980.16	1 222.80	918.82
1998	1 516.31	1 321.37	967.13
2000	1 626.57	1 389.18	993.38
2002	1 585.36	1 525.53	972.86
2004	1 622.92	1 490.65	1 002.64
2006 ⁶	1 693.28	1 422.68	1 022.86
2008	1 772.53	2 104.31	1 067.43
2010	1 920.95	1 440.13	1 082.41
2012	2 032.76	2 180.55	1 149.11
2014	2 083.84	1 822.38	1 154.60

^{5,6} See end notes.

Source: ABS (2015a), ABS (2016d) and unpublished data..

Table I I.3c Australian average weekly earnings⁵, communication industry
(2014–15 prices, adjusted by CPI)

May reference month	Telecommunication services	Radio and television services	Broadcasting (except internet)	Internet service providers, web search portals and data processing services	All industries
\$					
1996	1 291.99	1 112.29			918.82
1998	1 544.68	1 376.36			967.13
2000	1 617.74	1 513.81			993.38
2002	1 537.67	1 268.79			972.86
2004	1 466.13	1 276.73			1 002.64
2006 ⁶	1 518.81	1 479.51			1 022.86
2008	1 551.06		1 424.64		1 067.43
2010	1 596.35		1 503.13		1 082.41
2012	1 567.16		1 534.70	1 405.96	1 149.11
2014	1 807.65		1 647.36	1 355.74	1 154.60

^{5,6} See end notes.

Source: ABS (2015a), ABS (2016d) and unpublished data..

Table I 1.3d Australian average weekly earnings⁵, water industry
(2014–15 prices, adjusted by CPI)

May reference month	Water supply, sewerage and drainage services	All industries
		\$
1996	1 172.99	918.82
1998	1 280.16	967.13
2000	1 227.12	993.38
2002	1 425.82	972.86
2004	1 352.81	1 002.64
2006 ⁶	1 336.74	1 022.86
2008	1 318.64	1 067.43
2010	1 573.38	1 082.41
2012	1 686.00	1 149.11
2014	1 533.88	1 154.60

^{5,6} See end notes.

Source: ABS (2015a), ABS (2016d) and unpublished data.

Table I 1.4a Australian producer price indexes, transport industry

Financial year	Transport					Water transport support services			Airport operations and other air transport support services	Customs agency services
	Road freight	Rail freight	Water freight	Pipeline transport	Postal and courier services	Stevedoring services	Port and water transport terminal operations	Other water transport support services		
base of each index: 2011–12 = 100										
1996–97		79.4				108.4				
1997–98	64.8	76.1				102.0				
1998–99	65.6	72.4	90.7			100.3		74.4	94.3	82.3
1999–00	66.2	68.3	94.2			100.3		69.6	91.7	82.3
2000–01	67.6	69.0	99.7	72.2		98.1		69.7	87.1	83.7
2001–02	68.8	68.6	99.3	73.0	77.6	95.9	62.8	69.7	86.3	84.1
2002–03	70.4	68.6	96.5	73.3	79.1	93.7	63.2	72.8	91.2	85.6
2003–04	72.3	69.2	95.5	72.1	80.5	92.1	63.1	73.8	90.7	86.6
2004–05	75.9	70.0	103.8	76.5	82.2	95.4	66.1	75.1	91.5	88.2
2005–06	80.6	70.9	101.0	76.2	84.1	94.6	67.5	75.0	95.1	90.1
2006–07	83.2	72.4	100.3	76.4	85.7	98.9	72.9	80.5	94.2	90.9
2007–08	86.4	73.8	98.5	79.4	86.6	97.2	75.9	80.1	96.9	91.7
2008–09	92.5	80.3	108.9	89.5	90.2	98.9	80.0	81.2	97.3	94.1
2009–10	92.0	86.8	99.3	92.5	91.5	100.4	89.9	88.3	98.6	95.0
2010–11	95.9	91.8	97.3	96.6	96.4	99.6	96.2	96.9	99.2	96.4
2011–12	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2012–13	104.2	101.9	107.8	103.1	101.6	102.4	108.6	103.8	102.7	100.3
2013–14	106.3	102.6	104.2	102.6	107.7	103.0	110.7	109.1	106.4	102.8
2014–15	107.2	100.5	101.3	102.7	112.7	102.2	113.0	112.4	109.2	102.7
2015–16	105.5	101.1	103.9	103.3	119.9	101.9	113.8	114.8	111.7	100.8

Note: Data are not readily available for missing years.

Source: ABS (2016e).

Table I 1.4b Australian producer price indexes, communications industry

Financial year	Data processing and web hosting services	Electronic information storage services
<i>base of each index 2011–12 = 100</i>		
1998–99		110.6
1999–00		109.6
2000–01		104.1
2001–02	83.7	103.8
2002–03	85.1	102.8
2003–04	86.1	105.3
2004–05	86.4	105.5
2005–06	91.8	107.4
2006–07	93.4	103.5
2007–08	94.2	102.1
2008–09	95.2	101.9
2009–10	95.7	99.9
2010–11	98.7	98.6
2011–12	100.0	100.0
2012–13	103.0	98.1
2013–14	105.4	99.2
2014–15	106.6	99.5
2015–16	106.8	98.5

Note: Data are not readily available for missing years.

Source: ABS (2016e).

Table I 1.5a Australian population, by state/territory—capital city

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT ^{7,8}
1970–71	2 977 300	2 515 400	891 100	850 700	711 800	153 100	37 100	160 800
1971–72	3 017 700	2 559 000	915 900	864 100	734 700	153 800	39 900	174 150
1972–73	3 040 800	2 597 200	941 800	877 800	751 700	155 500	42 800	185 100
1973–74	3 063 300	2 632 100	967 400	892 700	775 000	157 800	46 700	197 400
1974–75	3 082 500	2 658 800	979 000	905 100	799 600	160 600	25 700	209 900
1975–76	3 143 800	2 723 700	1 000 900	924 000	832 800	164 400	44 200	226 500
1976–77	3 168 100	2 740 800	1 012 200	934 200	851 800	165 800		232 600
1977–78	3 197 700	2 757 200	1 028 300	942 900	869 000	167 300		236 900
1978–79	3 226 800	2 771 000	1 046 400	944 800	882 900	168 400		239 700
1979–80	3 257 500	2 787 400	1 063 300	948 000	899 400	169 400		243 200
1980–81	3 279 500	2 806 300	1 096 200	953 700	922 000	171 100	56 400	246 500
1981–82	3 318 700	2 833 800	1 128 700	962 500	952 400	172 200	61 800	252 100
1982–83	3 350 700	2 861 700	1 148 300	973 400	976 800	173 400	65 100	258 400
1983–84	3 382 900	2 884 600	1 161 200	984 300	995 600	175 500	68 900	265 200
1984–85	3 425 200	2 909 100	1 176 500	994 000	1 018 200	177 500	72 200	272 300
1985–86	3 471 567	2 966 901	1 217 348	1 003 548	1 050 120	182 071	75 360	257 852
1986–87	3 528 486	3 003 582	1 238 378	1 011 904	1 079 603	183 321	77 047	264 405
1987–88	3 590 980	3 042 608	1 264 491	1 021 117	1 110 469	184 186	75 888	271 044
1988–89	3 622 859	3 085 580	1 300 218	1 033 471	1 147 375	185 938	76 025	275 334
1989–90	3 643 660	3 125 919	1 330 879	1 044 602	1 175 362	189 039	76 542	281 099
1990–91 ⁹	3 672 855	3 155 576	1 357 993	1 056 561	1 188 762	190 739	86 415	288 195
1991–92	3 710 168	3 182 441	1 388 383	1 065 647	1 207 350	192 439	87 836	293 554
1992–93	3 734 809	3 197 927	1 422 783	1 068 616	1 225 552	193 627	89 908	298 222
1993–94	3 769 641	3 213 021	1 455 195	1 071 672	1 246 266	194 519	91 133	301 131
1994–95	3 821 233	3 243 707	1 486 730	1 074 679	1 271 738	195 026	93 238	304 463
1995–96 ¹⁰	3 881 136	3 283 278	1 500 803	1 078 437	1 295 092	195 718	95 829	307 917
1996–97	3 928 658	3 309 601	1 524 315	1 083 906	1 316 274	195 976	98 891	308 700
1997–98	3 969 649	3 342 230	1 548 584	1 090 526	1 334 992	195 913	101 165	309 539
1998–99	4 019 954	3 379 714	1 572 204	1 096 934	1 355 373	196 011	103 064	311 967
1999–00	4 069 093	3 422 722	1 598 585	1 102 445	1 372 947	196 468	105 113	314 848
2000–01	4 128 272	3 471 625	1 663 120	1 107 986	1 393 002	197 282	106 842	318 939
2001–02	4 162 999	3 523 946	1 701 606	1 114 990	1 413 867	197 931	107 443	322 316
2002–03	4 162 593	3 594 031	1 780 650	1 162 250	1 496 016	199 788	108 433	327 357
2003–04	4 184 763	3 641 951	1 823 496	1 168 541	1 520 232	201 771	109 211	328 940
2004–05	4 217 563	3 697 372	1 866 210	1 177 345	1 544 977	203 288	111 388	331 399
2005–06	4 256 161	3 760 760	1 908 265	1 189 243	1 576 912	204 753	113 461	335 170
2006–07	4 325 525	3 841 760	1 958 907	1 204 210	1 628 467	206 649	116 935	342 644
2007–08	4 409 562	3 931 438	2 012 204	1 219 523	1 682 860	209 166	121 210	348 368
2008–09	4 492 380	4 031 787	2 068 479	1 237 354	1 739 342	212 085	125 315	354 785
2009–10	4 555 516	4 105 857	2 108 348	1 253 097	1 781 132	214 669	127 829	361 766
2010–11	4 608 949	4 169 366	2 147 436	1 264 091	1 833 567	216 273	129 106	367 985
2011–12 ¹¹	4 676 118	4 252 458	2 193 316	1 278 600	1 904 858	216 921	132 321	375 183
2012–13	4 755 029	4 343 568	2 235 774	1 291 206	1 970 005	217 977	137 370	380 914
2013–14	4 837 661	4 437 903	2 273 474	1 304 637	2 008 061	219 240	139 621	385 346
2014–15	4 920 970	4 529 496	2 308 720	1 316 779	2 039 193	220 953	142 258	390 706

^{7,8,9,10,11} See end notes.

Note: Data are not readily available for missing years.

Source: ABS (2016f).

Table I I.5b Australian population, by state/territory—rest of state^{11,12}

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT ^{7,8}
1970–71	1 748 203	1 085 952	960 385	349 414	342 034	244 973	48 635	
1971–72	1 777 406	1 102 254	982 578	350 528	347 317	246 508	52 181	
1972–73	1 801 098	1 110 453	1 010 151	350 675	349 341	247 587	54 327	
1973–74	1 830 753	1 123 626	1 040 940	348 838	352 598	248 351	56 224	
1974–75	1 849 516	1 128 641	1 072 362	360 164	355 348	249 488	67 169	
1975–76	1 815 788	1 086 726	1 091 475	350 070	345 542	247 914	54 028	
1976–77	1 833 788	1 096 564	1 117 639	351 919	352 566	249 232		
1977–78	1 856 090	1 106 559	1 143 747	353 305	358 851	250 342		
1978–79	1 884 330	1 115 406	1 168 371	356 309	363 711	252 356		
1979–80	1 914 027	1 126 903	1 202 635	360 397	369 668	254 190		
1980–81	1 955 389	1 140 617	1 249 008	365 069	378 056	256 124	66 216	
1981–82	1 984 880	1 159 070	1 295 886	368 608	386 499	257 645	68 514	
1982–83	2 002 259	1 174 002	1 333 982	372 375	392 250	259 405	70 816	
1983–84	2 019 829	1 191 892	1 362 659	375 748	395 637	262 260	73 254	
1984–85	2 039 312	1 210 968	1 394 718	377 197	400 364	265 328	76 336	
1985–86	2 059 959	1 193 955	1 407 247	379 002	408 899	264 402	79 061	
1986–87	2 088 250	1 206 529	1 436 729	380 860	416 645	265 905	81 158	
1987–88	2 116 329	1 219 961	1 475 416	383 792	424 698	266 962	83 138	
1988–89	2 153 424	1 234 584	1 527 419	385 558	431 059	269 320	85 154	
1989–90	2 190 361	1 252 673	1 568 404	387 454	437 687	273 149	87 186	
1990–91 ⁹	2 225 876	1 264 797	1 602 958	389 738	447 305	276 063	79 078	1 125
1991–92	2 252 401	1 272 561	1 641 567	390 865	450 695	277 387	80 250	1 120
1992–93	2 270 071	1 274 460	1 687 005	392 058	452 117	278 032	80 826	1 080
1993–94	2 290 549	1 274 549	1 731 918	394 466	456 743	278 420	82 242	355
1994–95	2 305 748	1 273 680	1 778 379	394 750	462 049	278 647	84 314	342
1995–96 ¹⁰	2 323 592	1 276 877	1 837 887	395 816	470 164	278 725	86 014	334
1996–97	2 348 303	1 287 600	1 870 356	397 451	478 718	277 629	88 021	342
1997–98	2 369 422	1 295 590	1 899 141	399 026	487 676	276 054	88 715	349
1998–99	2 391 416	1 306 688	1 929 217	400 885	494 360	275 419	89 671	359
1999–00	2 417 120	1 318 617	1 962 952	402 593	501 512	274 941	90 448	367
2000–01	2 446 945	1 333 101	1 965 826	403 742	508 157	274 513	90 926	378
2001–02	2 465 952	1 339 138	2 013 192	406 137	512 244	274 835	91 968	359
2002–03	2 458 122	1 279 778	1 962 471	358 149	456 725	278 746	93 292	
2003–04	2 465 972	1 285 198	2 006 474	359 648	459 310	281 407	93 452	
2004–05	2 475 643	1 291 874	2 052 284	361 459	466 230	282 914	94 517	
2005–06	2 486 529	1 300 506	2 099 727	363 286	473 669	284 549	95 596	
2006–07	2 508 631	1 311 762	2 152 111	366 409	477 672	286 613	96 813	
2007–08	2 533 899	1 324 937	2 207 301	369 142	488 840	289 402	98 664	
2008–09	2 561 375	1 340 147	2 260 292	371 548	500 908	292 268	100 712	
2009–10	2 588 776	1 355 244	2 296 396	374 225	509 713	294 178	101 949	
2010–11	2 609 580	1 368 451	2 329 342	375 523	519 842	295 210	102 186	
2011–12 ¹¹	2 631 065	1 380 063	2 374 889	377 435	533 136	295 185	103 560	
2012–13	2 652 034	1 389 977	2 415 585	379 068	545 382	295 090	105 199	
2013–14	2 675 757	1 400 207	2 446 451	380 913	548 985	295 486	103 747	
2014–15	2 696 714	1 407 985	2 470 134	381 881	551 066	295 633	102 049	

^{7,8,9,10,11,12}

See end notes.

Note:

Data are not readily available for missing years.

Source:

ABS (2016f).

Table I 1.5c Australian population, by state/territory—total

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT ^{7.8}
1970–71	4 725 503	3 601 352	1 851 485	1 200 114	1 053 834	398 073	85 735	151 169
1971–72	4 795 106	3 661 254	1 898 478	1 214 628	1 082 017	400 308	92 081	159 792
1972–73	4 841 898	3 707 653	1 951 951	1 228 475	1 101 041	403 087	97 127	173 306
1973–74	4 894 053	3 755 726	2 008 340	1 241 538	1 127 598	406 151	102 924	186 241
1974–75	4 932 016	3 787 441	2 051 362	1 265 264	1 154 948	410 088	92 869	199 007
1975–76	4 959 588	3 810 426	2 092 375	1 274 070	1 178 342	412 314	98 228	207 740
1976–77	5 001 888	3 837 364	2 129 839	1 286 119	1 204 366	415 032	103 938	213 688
1977–78	5 053 790	3 863 759	2 172 047	1 296 205	1 227 851	417 642	109 980	217 981
1978–79	5 111 130	3 886 406	2 214 771	1 301 109	1 246 611	420 756	114 149	220 797
1979–80	5 171 527	3 914 303	2 265 935	1 308 397	1 269 068	423 590	118 245	224 291
1980–81	5 234 889	3 946 917	2 345 208	1 318 769	1 300 056	427 224	122 616	227 581
1981–82	5 303 580	3 992 870	2 424 586	1 331 108	1 338 899	429 845	130 314	233 045
1982–83	5 352 959	4 035 702	2 482 282	1 345 775	1 369 050	432 805	135 916	238 983
1983–84	5 402 729	4 076 492	2 523 859	1 360 048	1 391 237	437 760	142 154	245 112
1984–85	5 464 512	4 120 068	2 571 218	1 371 197	1 418 564	442 828	148 536	251 389
1985–86	5 531 526	4 160 856	2 624 595	1 382 550	1 459 019	446 473	154 421	258 910
1986–87	5 616 736	4 210 111	2 675 107	1 392 764	1 496 248	449 226	158 205	265 477
1987–88	5 707 309	4 262 569	2 739 907	1 404 909	1 535 167	451 148	159 026	272 129
1988–89	5 776 283	4 320 164	2 827 637	1 419 029	1 578 434	455 258	161 179	276 432
1989–90	5 834 021	4 378 592	2 899 283	1 432 056	1 613 049	462 188	163 728	282 211
1990–91	5 898 731	4 420 373	2 960 951	1 446 299	1 636 067	466 802	165 493	289 320
1991–92	5 962 569	4 455 002	3 029 950	1 456 512	1 658 045	469 826	168 086	294 674
1992–93	6 004 880	4 472 387	3 109 788	1 460 674	1 677 669	471 659	170 734	299 302
1993–94	6 060 190	4 487 570	3 187 113	1 466 138	1 703 009	472 939	173 375	301 486
1994–95	6 126 981	4 517 387	3 265 109	1 469 429	1 733 787	473 673	177 552	304 805
1995–96	6 204 728	4 560 155	3 338 690	1 474 253	1 765 256	474 443	181 843	308 251
1996–97	6 276 961	4 597 201	3 394 671	1 481 357	1 794 992	473 605	186 912	309 042
1997–98	6 339 071	4 637 820	3 447 725	1 489 552	1 822 668	471 967	189 880	309 888
1998–99	6 411 370	4 686 402	3 501 421	1 497 819	1 849 733	471 430	192 735	312 326
1999–00	6 486 213	4 741 339	3 561 537	1 505 038	1 874 459	471 409	195 561	315 215
2000–01	6 575 217	4 804 726	3 628 946	1 511 728	1 901 159	471 795	197 768	319 317
2001–02	6 628 951	4 863 084	3 714 798	1 521 127	1 926 111	472 766	199 411	322 675
2002–03	6 620 715	4 873 809	3 743 121	1 520 399	1 952 741	478 534	201 725	327 357
2003–04	6 650 735	4 927 149	3 829 970	1 528 189	1 979 542	483 178	202 663	328 940
2004–05	6 693 206	4 989 246	3 918 494	1 538 804	2 011 207	486 202	205 905	331 399
2005–06	6 742 690	5 061 266	4 007 992	1 552 529	2 050 581	489 302	209 057	335 170
2006–07	6 834 156	5 153 522	4 111 018	1 570 619	2 106 139	493 262	213 748	342 644
2007–08	6 943 461	5 256 375	4 219 505	1 588 665	2 171 700	498 568	219 874	348 368
2008–09	7 053 755	5 371 934	4 328 771	1 608 902	2 240 250	504 353	226 027	354 785
2009–10	7 144 292	5 461 101	4 404 744	1 627 322	2 290 845	508 847	229 778	361 766
2010–11	7 218 529	5 537 817	4 476 778	1 639 614	2 353 409	511 483	231 292	367 985
2011–12 ¹¹	7 307 183	5 632 521	4 568 205	1 656 035	2 437 994	512 106	235 881	375 183
2012–13	7 407 063	5 733 545	4 651 359	1 670 274	2 515 387	513 067	242 569	380 914
2013–14	7 513 418	5 838 110	4 719 925	1 685 550	2 557 046	514 726	243 368	385 346
2014–15	7 617 684	5 937 481	4 778 854	1 698 660	2 590 259	516 586	244 307	390 706

^{7.8.11} See end notes.

Source: ABS (2015o).

Table I 1.6 Key indicators influencing Australian infrastructure

Financial year	Goods exports	Goods imports	Rate at close of financial year	
			Exchange rate ¹³	Interest rate ¹⁴
1972–73	40 391	17 594	1.4	6.4
1973–74	37 626	23 457	1.5	18.8
1974–75	40 540	23 920	1.3	8.8
1975–76	42 836	22 199	1.2	10.3
1976–77	46 281	24 962	1.1	11.0
1977–78	47 194	23 518	1.1	10.6
1978–79	49 752	25 671	1.1	10.3
1979–80	53 635	26 075	1.2	13.8
1980–81	49 525	28 505	1.1	15.6
1981–82	50 691	31 919	1.0	18.6
1982–83	50 999	28 338	0.9	14.2
1983–84	55 173	29 980	0.9	12.8
1984–85	64 431	35 067	0.7	15.8
1985–86	66 737	36 053	0.7	14.7
1986–87	73 126	34 235	0.7	13.7
1987–88	77 624	37 684	0.8	13.1
1988–89	76 188	47 479	0.8	18.4
1989–90	80 420	49 692	0.8	15.0
1990–91	90 025	47 220	0.8	10.4
1991–92	99 241	49 279	0.7	6.4
1992–93	104 966	53 371	0.7	5.2
1993–94	114 031	57 087	0.7	5.1
1994–95	116 752	67 891	0.7	7.6
1995–96	129 109	71 091	0.8	7.6
1996–97	144 919	78 752	0.7	5.4
1997–98	151 964	88 393	0.6	5.3
1998–99	153 685	93 476	0.7	4.9
1999–00	169 874	106 877	0.6	6.2
2000–01	180 123	105 858	0.5	5.0
2001–02	181 329	109 287	0.6	5.1
2002–03	182 017	126 887	0.7	4.7
2003–04	183 377	141 782	0.7	5.5
2004–05	190 275	160 312	0.8	5.7
2005–06	194 150	175 175	0.7	6.0
2006–07	198 956	192 713	0.8	6.4
2007–08	205 734	217 556	1.0	7.8
2008–09	209 888	209 768	0.8	3.3
2009–10	225 337	222 659	0.9	4.9
2010–11	228 315	242 673	1.1	5.0
2011–12	242 780	273 445	1.0	3.5
2012–13	258 197	270 782	0.9	2.8
2013–14	273 872	267 430	0.9	2.7
2014–15	290 703	271 136	0.8	2.2
2015–16	309 883	270 806	0.7	2.0

^{13,14} See end notes.

Source: ABS (2016g), ABS (2016d) and RBA (2016).

CHAPTER 2

Infrastructure construction

Table I 2.1a Value of major infrastructure engineering construction work done, by the private sector for the private sector, adjusted by chain volume index

Financial year	Transport	Energy	Telecommunications	Water	Total major infrastructure engineering construction work done
\$ million					
1986–87	1 534.3	427.3	28.8	186.8	2 177.2
1987–88	1 731.2	415.2	14.5	245.2	2 406.0
1988–89	1 965.5	386.6	15.3	257.0	2 624.5
1989–90	2 293.8	298.0	12.2	249.7	2 853.7
1990–91	2 017.9	298.3	16.1	355.3	2 687.7
1991–92	1 972.6	352.7	12.1	206.3	2 543.8
1992–93	1 815.4	471.7	122.5	276.5	2 686.0
1993–94	2 229.1	515.0	146.0	448.2	3 338.4
1994–95	2 029.3	578.9	125.8	587.9	3 322.0
1995–96	2 083.0	1 214.0	330.0	681.2	4 308.2
1996–97	2 805.1	1 095.6	280.6	331.3	4 512.6
1997–98	3 744.5	1 497.7	111.8	401.6	5 755.6
1998–99	4 223.2	1 880.7	181.2	361.8	6 646.9
1999–00	3 216.1	2 774.8	549.5	504.5	7 044.9
2000–01	2 235.7	2 577.0	955.0	571.6	6 339.4
2001–02	2 927.6	2 776.3	544.0	445.5	6 693.4
2002–03	4 653.2	3 242.8	516.2	645.8	9 058.0
2003–04	6 409.3	4 035.6	1 085.8	1 090.9	12 621.7
2004–05	8 574.6	3 763.5	1 237.6	867.0	14 442.7
2005–06	8 811.6	3 658.4	1 538.0	974.3	14 982.3
2006–07	8 643.1	4 549.7	3 971.4	976.6	18 140.7
2007–08	8 386.1	4 670.6	4 730.3	1 768.3	19 555.3
2008–09	8 927.1	6 254.2	4 042.7	1 664.6	20 888.6
2009–10	8 100.1	5 542.4	3 847.2	2 372.4	19 862.1
2010–11	10 753.7	6 224.9	3 790.2	3 758.4	24 527.2
2011–12	15 423.4	7 328.7	4 489.9	2 784.9	30 027.0
2012–13	16 995.2	11 170.1	4 570.5	2 087.7	34 823.5
2013–14	13 745.7	11 749.4	4 856.4	1 792.6	32 144.0
2014–15	10 389.6	10 001.5	4 685.2	1 343.0	26 419.3
2015–16	6 328.4	7 190.3	4 963.2	1 287.4	19 769.3

Source: ABS (2016a), adjusted by chain volume index.

Table I 2.1b Value of major infrastructure engineering construction work done, by the private sector for the public sector, adjusted by chain volume index

Financial year	Transport	Energy	Telecommunications	Water	Total major infrastructure engineering construction work done
\$ million					
1986–87	2 790.3	1 451.9	78.5	817.8	5 138.4
1987–88	2 008.7	942.0	59.5	779.9	3 790.2
1988–89	1 832.0	927.3	13.6	632.3	3 405.0
1989–90	2 118.8	863.5	20.9	649.2	3 652.5
1990–91	2 359.1	1 257.7	39.6	821.2	4 477.6
1991–92	2 329.8	1 327.2	57.2	844.9	4 559.2
1992–93	2 922.1	1 137.9	42.0	832.9	4 934.9
1993–94	3 611.1	1 039.8	56.6	1 070.6	5 778.1
1994–95	3 366.5	850.6	21.6	812.3	5 051.1
1995–96	3 216.4	926.0	45.8	740.4	4 928.5
1996–97	3 749.7	1 034.7	12.4	665.9	5 462.7
1997–98	4 534.7	736.2	55.0	710.7	6 036.6
1998–99	5 144.4	447.7	37.1	820.6	6 449.7
1999–00	4 773.3	491.3	217.8	1 413.6	6 896.0
2000–01	4 361.1	442.8	417.4	1 178.5	6 399.8
2001–02	3 683.2	581.0	504.5	868.0	5 636.7
2002–03	3 760.2	671.6	426.7	919.9	5 778.3
2003–04	3 905.6	416.2	65.5	1 339.4	5 726.8
2004–05	5 239.2	705.8	225.6	1 515.5	7 686.1
2005–06	5 893.8	954.2	77.3	1 330.7	8 256.0
2006–07	6 494.4	615.9	47.2	1 513.6	8 671.1
2007–08	7 118.0	503.9	28.2	4 701.2	12 351.4
2008–09	9 680.0	726.0	54.3	4 659.9	15 120.1
2009–10	9 836.3	1 023.1	191.8	4 640.5	15 691.7
2010–11	11 742.5	1 072.0	290.3	3 394.6	16 499.4
2011–12	12 461.1	1 204.2	547.4	2 703.5	16 916.2
2012–13	12 193.9	1 474.5	822.5	2 075.7	16 566.5
2013–14	10 765.5	1 252.6	1 095.6	1 699.4	14 813.1
2014–15	9 173.7	705.8	1 932.1	1 198.9	13 010.5
2015–16	10 255.2	516.6	3 859.3	1 153.2	15 784.3

Source: ABS (2016a), adjusted by chain volume index.

Table I 2.1c Value of major infrastructure engineering construction work done, by the public sector, adjusted by chain volume index

Financial year	Transport	Energy	Telecommunications	Water	Total major engineering construction work done
\$ million					
1986–87	3 239.8	1 468.7	3 756.2	1 742.0	10 206.7
1987–88	3 048.1	1 459.4	3 475.0	1 429.0	9 411.6
1988–89	2 921.3	1 448.2	3 740.4	1 422.0	9 531.8
1989–90	3 392.0	2 000.5	4 104.0	1 411.5	10 908.0
1990–91	3 459.4	1 668.9	4 170.4	1 501.6	10 800.3
1991–92	3 132.3	1 501.4	3 188.3	1 406.9	9 228.8
1992–93	3 869.5	1 567.7	3 158.8	1 334.2	9 930.1
1993–94	4 088.2	1 598.6	2 852.2	976.8	9 515.8
1994–95	4 278.2	1 645.6	3 838.0	960.5	10 722.3
1995–96	4 548.5	1 229.8	4 446.8	740.4	10 965.5
1996–97	4 269.1	1 008.9	4 424.3	570.9	10 273.2
1997–98	3 885.5	1 090.3	4 538.5	727.9	10 242.2
1998–99	3 903.3	1 456.1	4 807.7	843.8	11 010.9
1999–00	3 830.9	1 784.9	5 573.9	1 009.2	12 198.8
2000–01	3 491.1	2 093.1	4 732.1	779.4	11 095.7
2001–02	3 726.1	2 251.7	4 322.2	734.8	11 034.9
2002–03	3 892.9	2 385.3	3 844.8	851.1	10 974.1
2003–04	3 944.5	2 726.0	3 226.2	821.7	10 718.4
2004–05	4 059.3	2 828.7	3 397.9	893.4	11 179.2
2005–06	4 078.6	3 986.5	4 544.6	1 037.7	13 647.4
2006–07	4 538.0	4 896.0	1 687.4	1 424.6	12 545.9
2007–08	5 065.9	5 171.8	7.8	1 911.9	12 157.4
2008–09	6 025.9	6 160.0	7.8	1 864.6	14 058.3
2009–10	6 711.7	6 561.0	10.9	2 605.8	15 889.5
2010–11	6 753.7	5 990.3	6.5	2 866.1	15 616.6
2011–12	6 213.8	6 227.5	5.0	2 748.6	15 194.8
2012–13	5 645.3	5 605.9	9.8	2 821.7	14 082.7
2013–14	4 180.6	4 689.4	7.9	2 321.2	11 199.1
2014–15	3 849.5	4 477.2	1.9	1 791.6	10 120.2
2015–16	4 203.6	3 562.9	11.8	2 125.5	9 903.7

Source: ABS (2016a), adjusted by chain volume index.

Table I 2.1d Total value of major infrastructure engineering construction work done, adjusted by chain volume index

Financial year	Transport	Energy	Telecommunications	Water	Total major engineering construction work done
\$ million					
1986–87	7 564.4	3 347.8	3 863.5	2 746.5	17 522.2
1987–88	6 788.1	2 816.6	3 549.0	2 454.1	15 607.8
1988–89	6 718.7	2 762.1	3 769.3	2 311.2	15 561.3
1989–90	7 804.6	3 162.0	4 137.2	2 310.4	17 414.1
1990–91	7 836.4	3 224.9	4 226.1	2 678.1	17 965.6
1991–92	7 434.7	3 181.4	3 257.7	2 458.1	16 331.8
1992–93	8 607.0	3 177.2	3 323.3	2 443.5	17 551.0
1993–94	9 928.5	3 153.4	3 054.9	2 495.6	18 632.4
1994–95	9 674.0	3 075.1	3 985.4	2 360.8	19 095.4
1995–96	9 847.9	3 369.8	4 822.6	2 162.0	20 202.2
1996–97	10 823.9	3 139.2	4 717.3	1 568.0	20 248.4
1997–98	12 164.7	3 324.2	4 705.3	1 840.2	22 034.4
1998–99	13 270.8	3 784.5	5 025.9	2 026.2	24 107.5
1999–00	11 820.3	5 051.0	6 341.2	2 927.3	26 139.8
2000–01	10 088.0	5 113.0	6 104.5	2 529.5	23 834.9
2001–02	10 336.9	5 609.0	5 370.7	2 048.3	23 364.9
2002–03	12 306.3	6 299.7	4 787.7	2 416.8	25 810.5
2003–04	14 259.4	7 177.9	4 377.6	3 252.0	29 066.9
2004–05	17 873.1	7 298.0	4 861.1	3 275.9	33 308.1
2005–06	18 784.0	8 599.1	6 159.9	3 342.7	36 885.7
2006–07	19 675.4	10 061.5	5 706.0	3 914.9	39 357.8
2007–08	20 570.0	10 346.3	4 766.3	8 381.5	44 064.1
2008–09	24 633.0	13 140.2	4 104.7	8 189.1	50 067.0
2009–10	24 648.1	13 126.5	4 049.9	9 618.7	51 443.3
2010–11	29 250.0	13 287.2	4 087.0	10 019.1	56 643.2
2011–12	34 098.3	14 760.4	5 042.4	8 236.9	62 138.0
2012–13	34 834.4	18 250.5	5 402.7	6 985.0	65 472.7
2013–14	28 691.8	17 691.4	5 959.9	5 813.1	58 156.2
2014–15	23 412.8	15 184.5	6 619.1	4 333.5	49 550.0
2015–16	20 787.2	11 269.8	8 834.3	4 566.1	45 457.4

Source: ABS (2016a), adjusted by chain volume index.

PART T: Transport

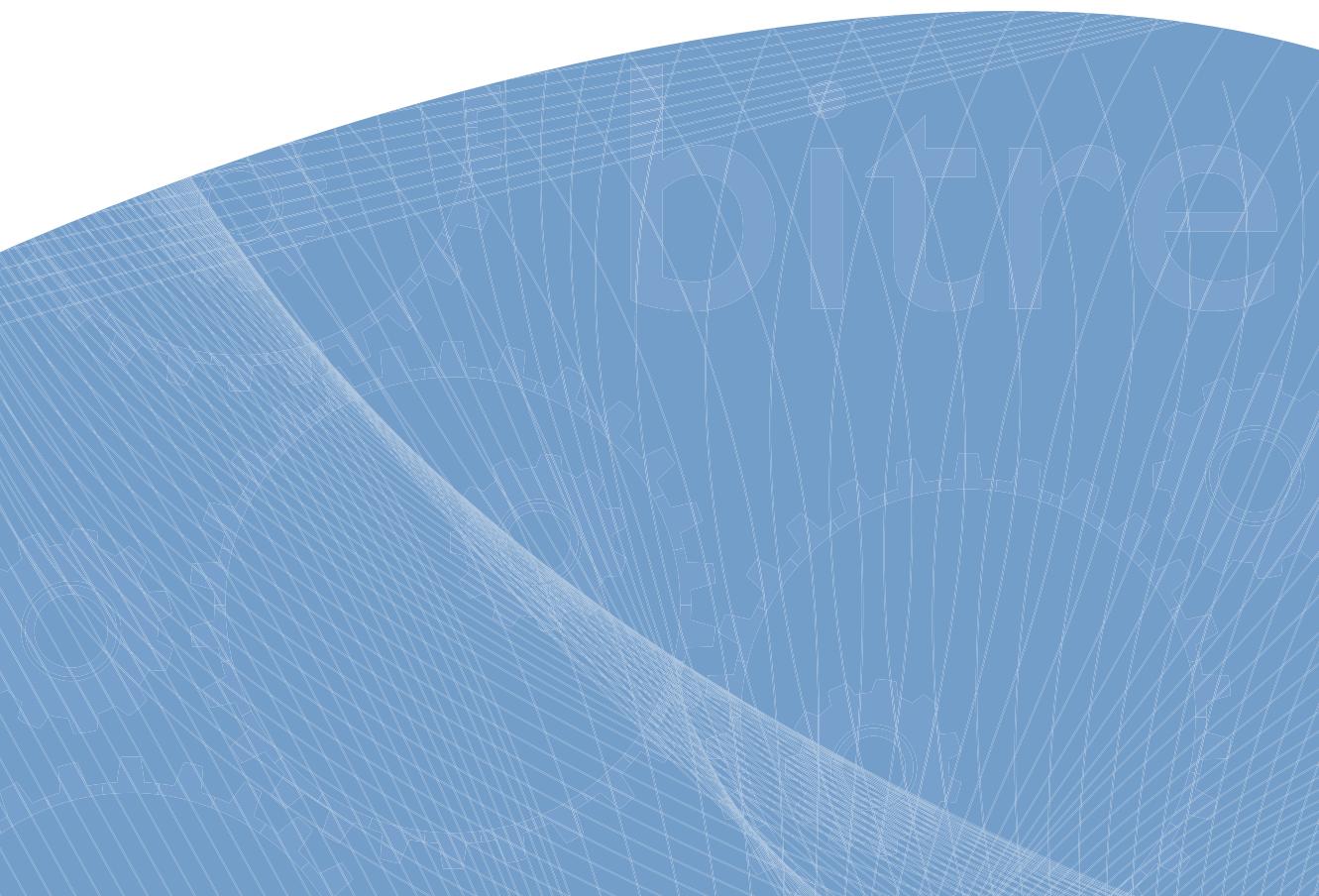
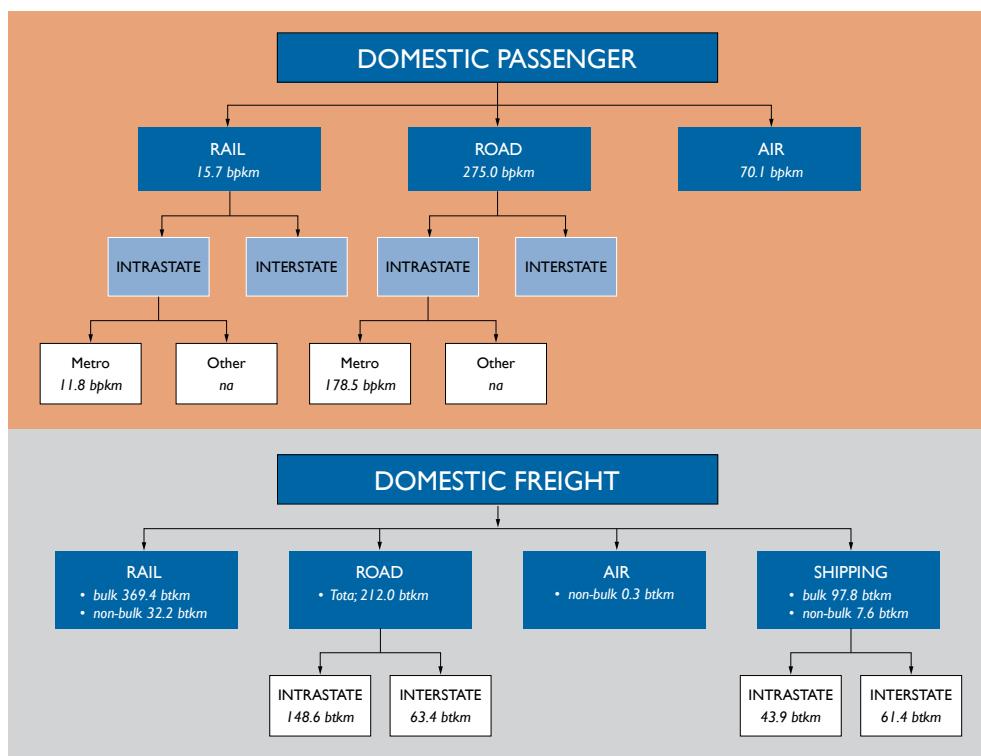


Figure T 1a Australia's domestic transport, 2014–15

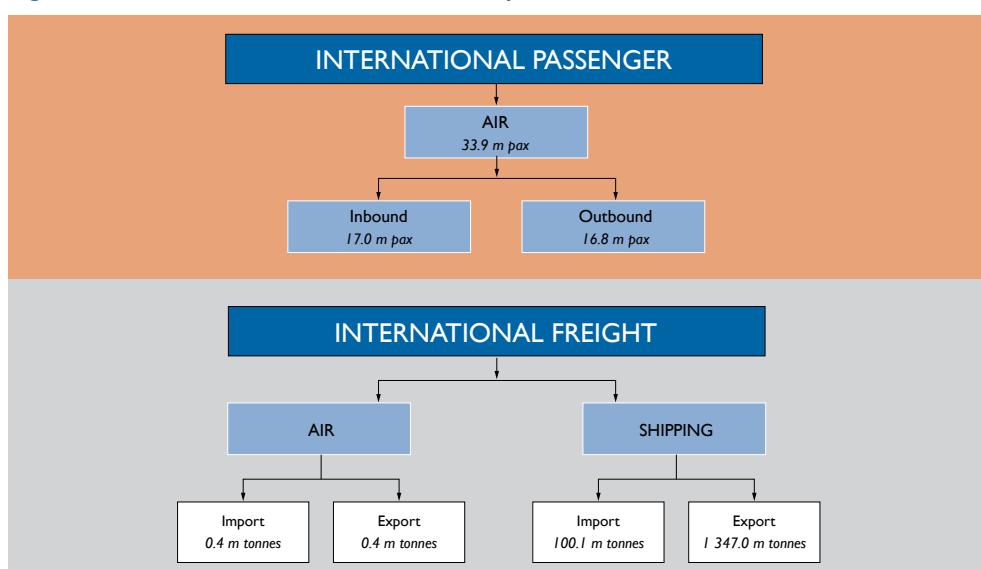


Note: Metropolitan refers to the eight capital cities: Sydney, Melbourne, Brisbane, Adelaide, Perth, Hobart, Darwin and Canberra.

Numbers are for 2014–15 except sea freight (2013–14).

Source: BITRE (2016d), BITRE (2016f), BITRE (2015f) and BITRE estimates.

Figure T 1b Australia's international transport, 2014–15



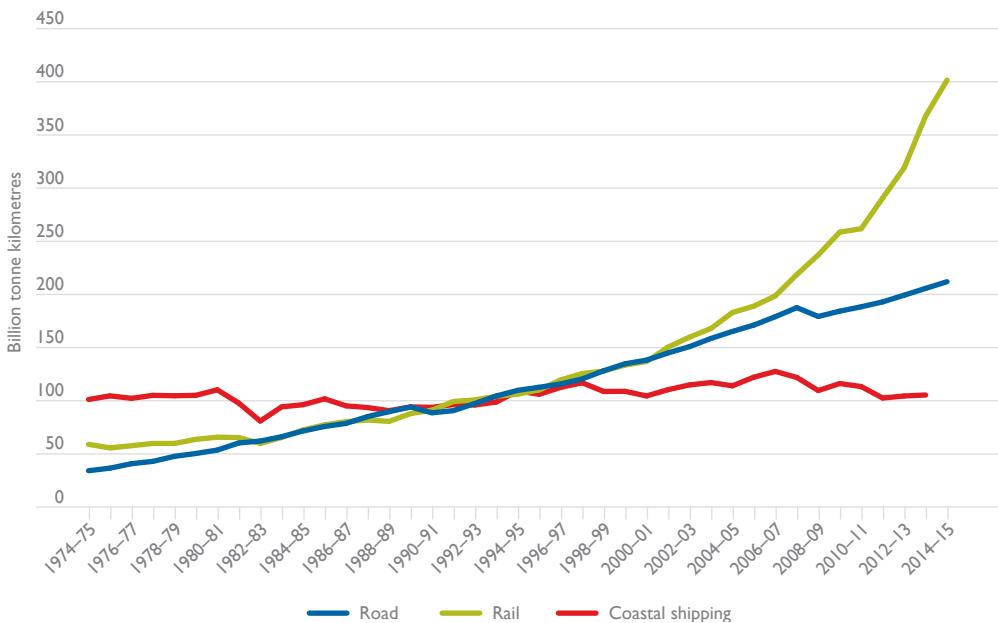
Source: BITRE (2016e) and ABS (2015d).

PART T

Transport

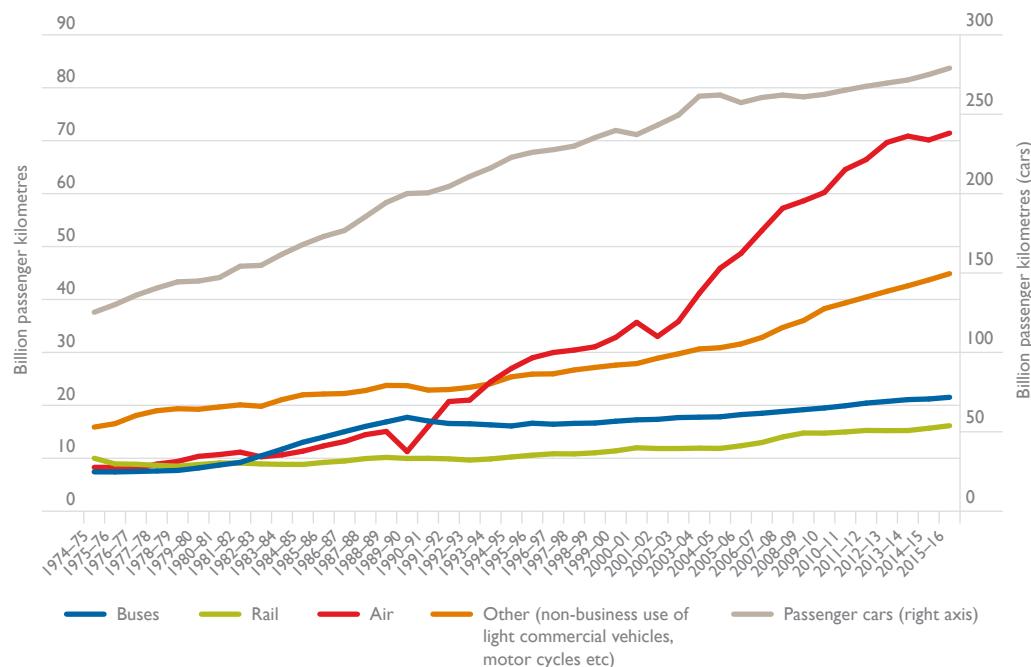
Statistics for Australian transport activity are provided from two perspectives: transportation activity measured in terms of what is being transported (freight or passengers), or transportation activity by mode (road, rail, aviation or shipping).

Figure T 2 Australian domestic freight task, by mode of transport



Source: BITRE (2012a), BITRE (2016d) and BITRE estimates.

Freight transport activity is measured in terms of tonne kilometres (the movement of one tonne of freight, one kilometre). The Australian domestic freight task has been increasing strongly for the last 40 years, with road and rail freight now dominating domestic freight activity. The rapid growth in rail freight task has been driven by rail's movement of iron ore in the Pilbara region. Coastal freight has decreased since 2006–07.

Figure T 3 Australian domestic passenger task, by mode of transport

Source: BITRE (2015e) and BITRE estimates.

Passenger transport activity is measured in terms of passenger kilometres (the movement of one passenger, one kilometre). The Australian domestic passenger task is dominated by road transport, mainly passenger cars (right axis). Passenger travel on other modes has increased in recent years, with travel by air increasing rapidly since 2001.

CHAPTER I

Transport infrastructure

Table T 1.1a Value of transport infrastructure engineering construction work done by the private sector for the private sector, adjusted by chain volume index

Financial year	Roads and bridges	Railways	Ports and harbours	Total major infrastructure engineering construction work done	Transport percentage of total major infrastructure engineering construction work done
\$ million					
1986–87	976.9	193.4	363.9	1 534.3	70.47
1987–88	1 372.2	87.6	271.3	1 731.2	71.95
1988–89	1 869.8	42.7	53.0	1 965.5	74.89
1989–90	2 149.2	29.3	115.3	2 293.8	80.38
1990–91	1 895.9	32.2	89.8	2 017.9	75.08
1991–92	1 860.3	59.2	53.2	1 972.6	77.55
1992–93	1 735.2	22.3	57.9	1 815.4	67.59
1993–94	2 039.4	68.1	121.6	2 229.1	66.77
1994–95	1 935.9	49.3	44.1	2 029.3	61.09
1995–96	1 937.7	103.7	41.5	2 083.0	48.35
1996–97	2 536.1	134.4	134.5	2 805.1	62.16
1997–98	3 120.1	283.7	340.8	3 744.5	65.06
1998–99	3 650.1	257.9	315.2	4 223.2	63.54
1999–00	2 849.2	241.8	125.1	3 216.1	45.65
2000–01	1 962.0	138.4	135.4	2 235.7	35.27
2001–02	2 368.7	404.3	154.6	2 927.6	43.74
2002–03	3 687.7	764.5	201.0	4 653.2	51.37
2003–04	5 626.1	382.6	400.6	6 409.3	50.78
2004–05	6 909.3	649.2	1 016.1	8 574.6	59.37
2005–06	7 092.7	612.8	1 106.1	8 811.6	58.81
2006–07	6 317.6	1 152.8	1 172.7	8 643.1	47.64
2007–08	5 582.3	1 694.9	1 108.9	8 386.1	42.88
2008–09	6 404.7	1 249.0	1 273.4	8 927.1	42.74
2009–10	5 167.4	1 405.7	1 526.9	8 100.1	40.78
2010–11	5 535.8	2 213.9	3 004.1	10 753.7	43.84
2011–12	5 711.4	4 191.9	5 520.2	15 423.4	51.37
2012–13	5 340.9	4 412.0	7 242.3	16 995.2	48.80
2013–14	4 438.9	3 976.3	5 330.5	13 745.7	42.76
2014–15	4 766.4	3 256.8	2 366.4	10 389.6	39.33
2015–16	4 599.6	1 070.0	658.8	6 328.4	32.01

Source: ABS (2016a), adjusted by chain volume index.

Table T 1.1b Value of transport infrastructure engineering construction work done by the private sector for the public sector, adjusted by chain volume index

Financial year	Roads and bridges	Railways	Ports and harbours	Transport infrastructure engineering construction work done	Transport percentage of total major infrastructure engineering construction work done	
		\$ million				
1986–87	2 224.6	304.3	261.4	2 790.3	54.30	
1987–88	1 632.1	276.6	100.0	2 008.7	53.00	
1988–89	1 603.0	84.6	144.4	1 832.0	53.80	
1989–90	1 943.6	99.3	76.0	2 118.8	58.01	
1990–91	2 080.2	163.1	115.8	2 359.1	52.69	
1991–92	2 079.8	176.7	73.4	2 329.8	51.10	
1992–93	2 549.3	197.0	175.8	2 922.1	59.21	
1993–94	3 021.5	399.1	190.5	3 611.1	62.50	
1994–95	2 711.0	549.1	106.4	3 366.5	66.65	
1995–96	2 767.3	337.5	111.6	3 216.4	65.26	
1996–97	2 809.2	679.2	261.3	3 749.7	68.64	
1997–98	3 655.9	734.4	144.5	4 534.7	75.12	
1998–99	4 390.9	593.3	160.2	5 144.4	79.76	
1999–00	4 382.8	271.6	118.9	4 773.3	69.22	
2000–01	4 080.0	170.0	111.1	4 361.1	68.14	
2001–02	3 343.3	99.9	240.0	3 683.2	65.34	
2002–03	3 229.3	350.5	180.4	3 760.2	65.07	
2003–04	2 764.4	960.7	180.6	3 905.6	68.20	
2004–05	3 682.8	1 350.2	206.2	5 239.2	68.17	
2005–06	4 357.0	1 365.9	170.9	5 893.8	71.39	
2006–07	5 386.1	949.6	158.6	6 494.4	74.90	
2007–08	6 188.4	694.5	235.2	7 118.0	57.63	
2008–09	7 961.3	1 390.3	328.4	9 680.0	64.02	
2009–10	7 680.9	1 575.2	580.2	9 836.3	62.68	
2010–11	8 844.3	2 169.6	728.6	11 742.5	71.17	
2011–12	9 584.0	2 550.1	327.0	12 461.1	73.66	
2012–13	9 376.9	2 590.4	226.5	12 193.9	73.61	
2013–14	8 063.7	2 270.5	431.3	10 765.5	72.68	
2014–15	6 850.0	1 712.5	611.1	9 173.7	70.51	
2015–16	7 482.7	2 316.3	456.2	10 255.2	64.97	

Source: ABS (2016a), adjusted by chain volume index.

Table T 1.1c Value of transport infrastructure engineering construction work done by the public sector, adjusted by chain volume index

Financial year	Roads and bridges	Railways	Ports and harbours	Transport infrastructure engineering construction work done	Transport percentage of total major infrastructure engineering construction work done
\$ million					
1986–87	2 879.8	287.9	72.1	3 239.8	31.74
1987–88	2 689.6	313.9	44.6	3 048.1	32.39
1988–89	2 676.9	197.3	47.0	2 921.3	30.65
1989–90	2 799.8	533.3	58.8	3 392.0	31.10
1990–91	2 797.5	591.0	70.9	3 459.4	32.03
1991–92	2 475.8	625.9	30.6	3 132.3	33.94
1992–93	3 104.5	730.8	34.3	3 869.5	38.97
1993–94	3 188.9	849.5	49.7	4 088.2	42.96
1994–95	3 106.5	1 132.7	38.9	4 278.2	39.90
1995–96	3 146.0	1 370.9	31.7	4 548.5	41.48
1996–97	2 791.4	1 438.6	39.2	4 269.1	41.56
1997–98	2 931.3	906.8	47.4	3 885.5	37.94
1998–99	2 957.2	866.6	79.5	3 903.3	35.45
1999–00	3 063.3	741.3	26.3	3 830.9	31.40
2000–01	2 777.5	650.3	63.4	3 491.1	31.46
2001–02	2 797.2	828.6	100.3	3 726.1	33.77
2002–03	3 017.4	809.8	65.7	3 892.9	35.47
2003–04	3 008.9	866.3	69.2	3 944.5	36.80
2004–05	2 916.0	1 114.2	29.1	4 059.3	36.31
2005–06	3 089.5	971.9	17.2	4 078.6	29.89
2006–07	3 440.3	1 062.5	35.2	4 538.0	36.17
2007–08	3 748.9	990.1	326.8	5 065.9	41.67
2008–09	4 556.6	1 024.0	445.2	6 025.9	42.86
2009–10	4 336.3	2 153.7	221.7	6 711.7	42.24
2010–11	4 471.4	2 226.2	56.1	6 753.7	43.25
2011–12	4 976.9	1 194.2	42.7	6 213.8	40.89
2012–13	4 871.0	727.7	46.6	5 645.3	40.09
2013–14	3 667.8	454.2	58.6	4 180.6	37.33
2014–15	3 557.8	259.0	32.6	3 849.5	38.04
2015–16	3 926.3	244.8	32.5	4 203.6	42.44

Source: ABS (2016a), adjusted by chain volume index.

Table T 1.1d Total value of transport infrastructure engineering construction work done, adjusted by chain volume index

Financial year	Roads and bridges	Railways	Ports and harbours	Transport infrastructure engineering construction work done	Transport percentage of total major infrastructure engineering construction work done
		\$ million			per cent
1986–87	6 081.3	785.6	697.5	7 564.4	43.2
1987–88	5 693.9	678.2	416.0	6 788.1	43.5
1988–89	6 149.8	324.6	244.4	6 718.7	43.2
1989–90	6 892.5	661.9	250.1	7 804.6	44.8
1990–91	6 773.6	786.4	276.5	7 836.4	43.6
1991–92	6 415.8	861.7	157.2	7 434.7	45.5
1992–93	7 389.0	950.0	268.0	8 607.0	49.0
1993–94	8 249.8	1 316.8	361.9	9 928.5	53.3
1994–95	7 753.4	1 731.2	189.4	9 674.0	50.7
1995–96	7 851.0	1 812.2	184.7	9 847.9	48.7
1996–97	8 136.7	2 252.3	435.0	10 823.9	53.5
1997–98	9 707.2	1 924.8	532.7	12 164.7	55.2
1998–99	10 998.2	1 717.7	554.9	13 270.8	55.0
1999–2000	10 295.3	1 254.8	270.2	11 820.3	45.2
2000–01	8 819.4	958.7	309.9	10 088.0	42.3
2001–02	8 509.1	1 332.8	494.9	10 336.9	44.2
2002–03	9 934.4	1 924.8	447.1	12 306.3	47.7
2003–04	11 399.4	2 209.6	650.4	14 259.4	49.1
2004–05	13 508.1	3 113.7	1 251.4	17 873.1	53.7
2005–06	14 539.1	2 950.6	1 294.2	18 784.0	50.9
2006–07	15 144.0	3 164.9	1 366.5	19 675.4	50.0
2007–08	15 519.6	3 379.5	1 670.9	20 570.0	46.7
2008–09	18 922.6	3 663.4	2 047.0	24 633.0	49.2
2009–10	17 184.6	5 134.6	2 328.9	24 648.1	47.9
2010–11	18 851.5	6 609.7	3 788.8	29 250.0	51.6
2011–12	20 272.4	7 936.1	5 889.8	34 098.3	54.9
2012–13	19 588.9	7 730.2	7 515.4	34 834.4	53.2
2013–14	16 170.4	6 701.0	5 820.4	28 691.8	49.3
2014–15	15 174.2	5 228.3	3 010.2	23 412.8	47.3
2015–16	16 008.5	3 631.1	1 147.6	20 787.2	45.7

Source: ABS (2016a), adjusted by chain volume index.

Table T 1.2a Road-related expenditure, by Commonwealth, 1998–99 to 2014–15
(constant 2014–15 prices, adjusted by ABS Consumer Price Index)

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other	Total Government
\$ million										
1998–99	886.8	450.7	550.8	259.6	295.9	107.1	85.3	49.5	4.4	2 690.1
1999–00	854.2	410.4	568.8	201.2	264.2	114.3	88.7	70.6	5.1	2 577.6
2000–01	708.4	328.1	554.8	119.7	228.0	84.1	64.1	25.9	3.8	2 116.9
2001–02	792.4	586.4	550.4	160.2	291.0	75.9	61.8	47.9	4.6	2 570.5
2002–03	792.6	487.6	518.9	137.0	254.5	76.0	58.7	27.9	3.5	2 356.5
2003–04	923.9	384.4	550.8	159.5	259.6	67.2	56.0	28.1	2.9	2 432.5
2004–05	1 021.4	534.8	533.8	181.3	289.7	84.6	65.9	30.0	3.4	2 744.9
2005–06	2 251.1	672.1	1 043.3	328.6	755.3	171.5	110.8	39.6	4.5	5 376.9
2006–07	1 150.8	657.1	827.0	220.6	369.0	83.9	54.6	36.0	7.6	3 406.7
2007–08	852.9	643.9	877.7	233.5	415.2	82.5	76.6	22.2	7.3	3 211.9
2008–09	1 737.8	730.2	2 093.8	392.2	514.2	107.5	91.8	30.4	4.8	5 702.7
2009–10	1 794.6	883.0	1 806.9	524.4	427.9	169.6	163.6	45.1	7.0	5 822.1
2010–11	1 626.1	576.5	861.0	206.5	364.3	147.6	84.3	52.0	6.7	3 925.0
2011–12	2 843.7	1 175.8	2 242.5	506.5	665.2	108.5	154.7	54.0	7.9	7 758.9
2012–13	1 308.3	451.0	729.5	194.1	518.7	68.0	98.3	50.7	7.3	3 425.9
2013–14	1 965.8	1 915.3	1 119.0	125.4	382.9	63.0	101.8	77.4	7.3	5 758.0
2014–15	1 801.0	536.3	1 142.7	196.8	752.9	104.8	132.7	85.9	7.9	4 760.9

Source: ABS (2016d), BITRE estimates.

Table T 1.2b Road-related expenditure, by State/Territory, 1998–99 to 2014–15
(constant 2014–15 prices, adjusted by ABS Consumer Price Index)

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total Government	Total Public Sector
\$ million										
1998–99	2 440.8	964.2	2 633.5	217.8	655.7	124.5	64.4	101.8	7 202.8	7 784.5
1999–00	2 670.9	1 514.5	1 720.8	362.0	1 048.3	119.6	15.9	32.5	7 484.5	8 233.4
2000–01	3 535.3	1 485.3	2 421.6	449.4	915.5	121.9	55.0	137.0	9 121.0	9 754.3
2001–02	2 980.1	968.1	2 048.6	398.3	1 244.6	155.4	50.2	144.4	7 989.7	8 120.5
2002–03	2 922.7	1 822.6	1 144.3	418.0	778.6	178.3	45.0	156.1	7 465.7	7 647.2
2003–04	2 817.8	1 394.2	1 392.4	244.7	871.9	153.8	49.7	164.6	7 089.0	7 665.4
2004–05	3 047.6	1 455.4	1 446.5	299.3	949.0	216.5	43.8	129.6	7 587.5	7 947.3
2005–06	2 056.8	1 293.5	1 172.3	310.2	550.6	116.2	183.2	143.9	5 826.7	5 981.6
2006–07	3 266.8	1 448.2	2 370.0	302.8	1 205.8	150.3	221.0	157.0	9 121.8	9 522.3
2007–08	3 826.1	1 815.8	3 266.4	359.1	1 448.7	179.4	213.6	188.3	11 297.4	12 293.8
2008–09	3 578.4	2 208.4	2 927.7	363.9	1 264.3	133.2	282.6	202.6	10 961.1	12 032.3
2009–10	3 714.2	2 040.3	2 955.5	213.3	1 189.5	196.4	159.9	229.3	10 698.3	11 544.6
2010–11	3 659.3	2 205.8	4 277.9	464.6	1 044.9	220.3	233.9	266.7	12 373.2	12 976.5
2011–12	2 851.7	1 188.2	4 090.7	247.2	956.9	156.7	276.0	229.1	9 996.5	11 096.6
2012–13	4 223.1	1 250.8	6 346.7	708.1	1 602.8	185.9	154.0	233.4	14 704.8	15 214.6
2013–14	3 212.7	909.6	5 330.9	538.9	1 940.5	197.7	211.1	273.6	12 615.0	13 167.1
2014–15	3 920.1	2 483.9	3 810.7	316.0	1 421.4	157.0	187.1	177.8	12 474.0	13 201.1

Note: Total public sector includes general government and public non-financial corporations.

Source: ABS (2016d), ABS (2016h), BITRE estimates.

Table T 1.2c Road-related expenditure, by Local, 1998–99 to 2014–15 (constant 2014–15 prices, adjusted by ABS Consumer Price Index)

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total Government
\$ million									
1998–99	2 183.0	1 079.6	1 335.0	247.8	514.1	99.3	nes	na	5 452.7
1999–00	2 250.0	1 116.9	1 442.0	258.0	644.1	94.5	nes	na	5 820.6
2000–01	2 013.5	924.3	1 358.8	244.7	614.0	93.7	nes	na	5 247.7
2001–02	1 967.8	972.1	1 330.2	253.9	565.7	99.6	nes	na	5 178.7
2002–03	1 836.0	927.0	1 362.4	238.5	593.1	96.5	nes	na	5 062.3
2003–04	1 659.0	922.5	1 409.1	249.1	528.5	97.9	nes	na	4 874.3
2004–05	1 615.7	966.5	1 193.2	254.5	641.9	94.7	nes	na	4 772.9
2005–06	1 372.7	853.2	1 297.3	220.1	425.2	83.8	nes	na	4 229.5
2006–07	1 475.1	937.4	1 371.0	253.0	552.8	104.6	nes	na	4 709.3
2007–08	1 693.6	1 090.4	1 676.5	277.5	747.7	105.8	nes	na	5 598.9
2008–09	1 712.8	1 064.2	1 950.7	326.5	698.3	123.0	nes	na	5 880.6
2009–10	1 157.9	1 059.1	1 978.4	287.1	686.6	133.5	nes	na	5 270.6
2010–11	1 453.8	1 141.5	2 322.4	291.8	749.6	148.7	nes	na	6 079.6
2011–12	1 509.2	1 251.3	2 446.0	332.4	700.1	135.9	nes	na	6 285.2
2012–13	1 746.8	1 294.8	2 628.2	348.1	747.0	139.8	nes	na	6 901.6
2013–14	1 887.7	1 334.6	2 460.1	394.5	809.3	135.5	nes	na	7 000.5
2014–15	1 762.7	1 198.5	2 065.1	366.9	757.8	142.1	nes	na	6 229.9

na*: not applicable.

nes: not estimated separately.

Source: ABS (2016d), ABS (2016h), BITRE estimates.

Table T 1.2d Road-related expenditure, by All Government, 1998–99 to 2014–15 (constant 2014–15 prices, adjusted by ABS Consumer Price Index)

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other	Total Government	Total Public Sector
\$ million											
1998–99	5 510.7	2 494.5	4 519.3	725.2	1 465.8	330.9	143.6	151.3	4.4	15 345.5	15 927.2
1999–00	5 775.1	3 041.8	3 731.7	821.1	1 956.6	328.4	119.9	103.1	5.1	15 882.7	16 631.6
2000–01	6 257.2	2 737.7	4 335.2	813.8	1 757.5	299.7	119.7	161.1	3.8	16 485.6	17 118.9
2001–02	5 740.3	2 526.6	3 929.3	812.3	2 101.3	330.9	107.3	186.3	4.6	15 738.8	15 869.7
2002–03	5 551.3	3 237.2	3 025.5	793.5	1 626.2	350.8	117.0	179.5	3.5	14 884.4	15 065.9
2003–04	5 400.7	2 701.1	3 352.3	653.4	1 660.0	318.8	120.5	186.0	2.9	14 395.8	14 972.2
2004–05	5 684.7	2 956.8	3 173.5	735.1	1 880.6	395.7	124.0	151.5	3.4	15 105.3	15 465.0
2005–06	5 680.7	2 818.8	3 512.9	858.9	1 731.1	371.5	289.0	165.8	4.5	15 433.1	15 588.1
2006–07	5 892.8	3 042.7	4 567.9	776.3	2 127.6	338.7	304.7	179.5	7.6	17 237.8	17 638.3
2007–08	6 372.7	3 550.1	5 820.6	870.0	2 611.6	367.8	297.7	210.5	7.3	20 108.2	21 104.6
2008–09	7 028.9	4 002.9	6 972.3	1 082.6	2 476.8	363.7	379.4	233.0	4.8	22 544.3	23 615.6
2009–10	6 666.7	3 982.4	6 740.8	1 024.8	2 304.0	499.5	311.0	254.7	7.0	21 790.9	22 637.2
2010–11	6 739.1	3 923.7	7 461.2	962.9	2 158.9	516.7	316.8	291.9	6.7	22 377.8	22 981.1
2011–12	7 204.7	3 615.2	8 779.2	1 086.1	2 322.1	401.1	354.0	270.3	7.9	24 040.6	25 140.7
2012–13	7 278.3	2 996.6	9 704.4	1 250.2	2 868.4	393.7	251.2	282.1	7.3	25 032.3	25 542.1
2013–14	7 066.2	4 159.4	8 910.0	1 058.9	3 132.6	396.3	291.8	350.9	7.3	25 373.4	25 925.5
2014–15	7 483.7	4 218.7	7 018.6	879.8	2 932.1	403.9	265.2	255.0	7.9	23 464.8	24 191.9

Note: Total public sector includes general government and public non-financial corporations.

Source: ABS (2016d), ABS (2016h), BITRE estimates.

Table T 1.2e Road-related expenditure, by All Government and Private Sector, 1998–99 to 2014–15 (constant 2014–15 prices, adjusted by ABS Consumer Price Index)

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other	Total Government and Private Sector	Total Public and Private Sector
\$ million											
1998–99	5 657.2	2 511.8	4 676.8	750.4	1 465.8	337.2	143.6	151.3	4.4	15 698.5	16 280.2
1999–00	5 873.6	3 055.7	3 933.2	842.7	1 956.6	331.4	126.0	103.1	5.1	16 227.4	16 976.3
2000–01	6 334.1	2 744.9	4 442.6	834.1	1 757.5	302.6	134.2	161.1	3.8	16 714.9	17 348.3
2001–02	5 796.7	2 526.6	4 054.8	822.2	2 153.5	333.7	110.1	186.3	4.6	15 988.6	16 119.5
2002–03	5 802.0	3 244.1	3 166.6	857.9	1 723.4	356.3	117.0	179.5	3.5	15 450.2	15 631.7
2003–04	5 567.9	2 695.8	3 540.9	677.5	1 757.7	324.2	120.5	186.0	2.9	14 873.4	15 449.8
2004–05	5 867.6	2 963.3	3 411.2	769.1	2 072.6	407.5	124.0	151.5	3.4	15 770.2	16 130.0
2005–06	5 852.8	2 818.8	3 863.5	880.4	1 950.0	390.5	289.0	165.8	4.5	16 215.3	16 370.3
2006–07	6 121.4	3 062.4	4 934.2	800.9	2 228.4	354.7	304.7	179.5	7.6	17 993.8	18 394.4
2007–08	6 577.2	3 630.9	6 159.5	914.0	2 674.7	385.6	297.7	210.5	7.3	20 857.5	21 853.9
2008–09	7 318.4	4 002.9	7 264.1	1 124.1	2 532.2	378.7	379.4	233.0	4.8	23 237.5	24 308.7
2009–10	6 953.0	3 991.4	7 012.5	1 056.3	2 360.4	518.7	311.0	254.7	7.0	22 465.0	23 311.2
2010–11	7 146.9	3 923.7	7 830.7	981.4	2 262.7	528.7	316.8	293.0	6.7	23 290.6	23 893.9
2011–12	7 682.3	3 615.2	9 084.8	1 103.2	2 372.4	417.1	354.0	324.8	7.9	24 961.7	26 061.8
2012–13	7 715.0	3 000.8	10 109.7	1 285.8	3 007.4	414.6	251.2	315.5	7.3	26 107.3	26 617.2
2013–14	7 456.8	4 178.7	9 253.8	1 103.7	3 272.0	415.6	291.8	383.5	7.3	26 363.1	26 915.2
2014–15	7 948.7	4 233.7	7 391.6	909.8	3 052.1	426.9	265.2	282.0	7.9	24 517.8	25 244.9

Note: Total public sector includes general government and public non-financial corporations.

Source: ABS (2016d), ABS (2016h), BITRE estimates.

Table T 1.3 Road-related expenditure by jurisdictions, 1998–99 to 2014–15 (constant 2014–15 prices), adjusted by BITRE Road Construction and Maintenance Price Index 2016

Financial year	Commonwealth Government	State - General Government	State - Public Sector	Local Government	Total Government	Total Public Sector	Total Government and Private Sector	Total Public and Private Sector
\$ million								
1998–99	2 678.9	7 173.0	7 752.2	5 430.1	15 282.0	15 861.3	15 633.5	16 212.8
1999–00	2 614.3	7 591.0	8 350.6	5 903.5	16 108.9	16 868.4	16 458.4	17 218.0
2000–01	2 263.9	9 754.4	10 431.7	5 612.1	17 630.4	18 307.7	17 875.6	18 552.9
2001–02	2 812.2	8 740.9	8 884.1	5 665.7	17 218.8	17 361.9	17 492.0	17 635.2
2002–03	2 544.2	8 060.2	8 256.1	5 465.4	16 069.7	16 265.7	16 680.6	16 876.5
2003–04	2 554.4	7 444.4	8 049.7	5 118.6	15 117.4	15 722.7	15 619.0	16 224.2
2004–05	2 795.1	7 726.4	8 092.8	4 860.2	15 381.8	15 748.1	16 058.9	16 425.2
2005–06	5 394.0	5 845.2	6 000.7	4 243.0	15 482.1	15 637.6	16 266.8	16 422.3
2006–07	3 410.6	9 132.4	9 533.4	4 714.8	17 257.8	17 658.7	18 014.6	18 415.6
2007–08	3 139.4	11 042.3	12 016.3	5 472.5	19 654.2	20 628.1	20 386.5	21 360.4
2008–09	5 333.0	10 250.6	11 252.4	5 499.4	21 083.0	22 084.8	21 731.2	22 733.0
2009–10	5 622.8	10 332.2	11 149.5	5 090.2	21 045.3	21 862.6	21 696.2	22 513.6
2010–11	3 796.4	11 967.7	12 551.2	5 880.3	21 644.4	22 227.9	22 527.2	23 110.7
2011–12	7 311.5	9 420.0	10 456.7	5 922.8	22 654.4	23 691.1	23 522.3	24 559.0
2012–13	3 255.7	13 974.2	14 458.8	6 558.7	23 788.7	24 273.2	24 810.3	25 294.8
2013–14	5 574.8	12 213.6	12 748.1	6 777.7	24 566.1	25 100.6	25 524.3	26 058.8
2014–15	4 760.9	12 474.0	13 201.1	6 229.9	23 464.8	24 191.9	24 517.8	25 244.9

Source: ABS (2016h), BITRE (2015a), BITRE estimates.

Table T 1.4a Selected road-related taxes and charges (Constant 2014–15 prices, adjusted by ABS Consumer Price Index)

Financial Year	Net road-related petroleum products excise	Australian Government					State and Territory governments				Sub-total	Tolls	Total road-related revenue
		Road-related Goods and Service Tax (GST)	Road-related Fringe Benefits Tax (FBT)	Federal Registration Scheme (FIRS)	Luxury car tax	Passenger motor vehicles customs duty	Vehicle registration fees	Driver's licence fees	Stamp duty				
1997–98	13 511.5	na*	2 604.6	28.3	na*	3 645.9	353.6	2 010.4	6 010.0	220.0			
1998–99	13 574.3	na*	2 642.5	29.7	na*	4 071.3	303.8	2 076.6	6 451.7	429.2			
1999–00	13 672.7	na*	2 656.8	33.6	na*	3 889.9	342.9	2 100.3	6 333.1	554.8			
2000–01	12 859.0	2 519.7	2 636.0	38.6	247.9	3 840.5	367.8	2 013.1	6 221.4	682.0			
2001–02	12 841.1	2 479.4	2 488.9	44.2	311.9	3 932.9	337.5	2 122.4	6 392.8	884.4			
2002–03	12 984.7	2 459.1	2 386.2	49.3	369.9	4 100.4	322.8	2 323.5	6 746.7	905.8			
2003–04	12 498.1	2 607.4	2 341.9	55.0	445.5	2 069.6	20 017.6	4 338.6	351.4	2 524.5	7 214.5	980.3	28 212.3
2004–05	12 273.0	2 624.4	2 345.7	56.4	389.3	1 824.9	19 513.7	4 568.2	409.8	2 505.5	7 483.6	1 012.0	28 009.3
2005–06	12 002.7	2 684.5	2 310.5	63.3	406.3	1 429.0	18 894.4	4 616.0	394.8	2 432.7	7 443.4	1 261.0	27 600.8
2006–07	12 063.0	3 009.3	2 180.8	63.1	454.8	1 540.3	19 311.4	4 807.7	310.2	2 464.7	7 582.6	1 401.8	28 295.8
2007–08	11 847.9	2 916.1	1 978.3	64.5	531.6	1 665.0	19 003.3	4 057.1	286.5	2 625.9	6 969.4	1 375.9	27 348.6
2008–09	11 461.5	3 308.8	1 859.5	63.0	433.6	1 309.0	18 435.5	4 227.1	340.8	2 336.6	6 904.5	1 383.6	26 723.5
2009–10	11 381.3	3 397.2	1 731.1	69.7	543.3	1 381.9	18 504.6	4 756.2	364.9	2 386.2	7 507.3	1 612.0	27 623.9
2010–11	11 234.5	3 761.4	1 643.5	81.6	523.6	846.1	18 090.6	4 835.1	387.6	2 368.8	7 591.5	1 766.8	27 448.9
2011–12	11 213.5	3 912.9	1 577.5	88.2	471.2	964.9	18 228.1	5 060.3	416.3	2 436.2	7 912.8	1 907.8	28 048.8
2012–13	11 241.0	3 997.2	1 504.2	80.2	445.1	931.9	18 199.6	5 204.0	446.9	2 583.7	8 234.5	1 963.8	28 397.9
2013–14	11 025.8	4 063.0	1 411.6	76.4	470.9	935.8	17 876.2	5 361.1	502.0	2 494.8	8 357.9	2 072.8	28 306.9
2014–15	11 031.8	3 933.4	1 426.3	72.6	525.0	732.0	17 721.0	5 647.8	523.6	2 525.1	8 696.6	2 265.3	28 682.8

Note: This table excludes items that raise relatively small amounts of revenue.

na*: not applicable.

Source: ABS (2016d), ATO (2016a), Treasury (2016), State/Territory road agencies, Private toll road operators.

Table T 1.4b Gross excise on petroleum products and fuel tax credits
(Constant 2014–15 prices, adjusted by CPI)

Financial year	Excise on petroleum products				Fuel tax credits
	Petrol	Diesel	Other petroleum products	Total (excluding crude and condensate)	
\$ million					
2008–09	7 474.6	7 730.6	1 585.8	16 791.0	5 841.9
2009–10	7 084.1	7 734.5	2 060.4	16 879.0	5 628.6
2010–11	6 492.0	8 160.1	2 298.8	16 951.0	5 585.3
2011–12	6 568.2	8 961.7	2 024.8	17 554.7	5 905.8
2012–13	6 314.4	8 945.1	2 399.8	17 659.3	5 649.9
2013–14	6 066.2	8 803.3	2 455.4	17 324.9	5 804.0
2014–15	6 090.0	8 843.0	2 309.0	17 242.0	6 010.0

Source: ATO (2016a).

Table T 1.4c Road-related revenue (Constant 2014–15 prices, adjusted by CPI), by jurisdiction

Financial year	Australian Government revenue	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
\$ million										
2007–08	19 003.3	2 573.8	2 051.2	1 885.2	476.3	990.4	154.6	91.6	122.2	27 348.6
2008–09	18 435.5	2 538.5	1 983.0	1 987.2	486.0	935.2	147.6	88.6	122.0	26 723.5
2009–10	18 504.6	2 721.1	2 282.3	2 165.3	489.6	1 086.7	147.7	93.3	133.3	27 623.9
2010–11	18 090.6	2 851.5	2 380.5	2 277.8	500.6	979.2	147.6	93.0	128.1	27 448.9
2011–12	18 228.1	2 868.9	2 522.4	2 447.2	528.5	1 029.5	197.7	96.6	129.8	28 048.8
2012–13	18 199.6	2 762.1	2 743.2	2 590.9	544.0	1 103.8	210.0	114.3	130.1	28 397.9
2013–14	17 876.2	2 860.5	2 860.5	2 587.0	543.4	1 141.3	215.6	75.3	147.2	28 306.9
2014–15	17 721.0	3 068.8	3 104.5	2 608.0	540.2	1 214.1	202.5	74.1	149.6	28 682.8

na: not applicable.

Note: State and Territory revenue includes tolls, Vehicle registration fees, Drivers licence fees and Stamp duty. Commonwealth revenue includes Petroleum products excise, Road-related GST, Road-related Fringe Benefits Tax (FBT), Federal Interstate Registration Scheme, Luxury car tax and Passenger motor vehicles customs duty.

Source: ABS (2016d), State and Territory Road agencies and Private toll road operators.

Table T 1.4d Road-related taxes and charges (Constant 2014–15 prices, adjusted by CPI), New South Wales

Financial year	Vehicle registration fees	Driver's licence fees	Stamp duty	Sub-total	Tolls	Total
\$ million						
2007–08	999.0	108.6	713.6	1 821.1	752.7	2 573.8
2008–09	1 039.9	133.6	619.3	1 792.8	745.7	2 538.5
2009–10	1 149.0	164.1	661.6	1 974.8	746.3	2 721.1
2010–11	1 235.8	175.2	643.8	2 054.8	796.7	2 851.5
2011–12	1 279.5	133.0	635.8	2 048.3	820.6	2 868.9
2012–13	1 165.3	120.6	665.5	1 951.4	810.7	2 762.1
2013–14	1 178.4	133.9	676.1	1 988.3	872.2	2 860.5
2014–15	1 223.2	141.6	707.3	2 072.1	996.7	3 068.8

na: not applicable.

Source: NSW Roads and Maritime Services data (2016), Private toll road operators.

Table T 1.4e Road-related taxes and charges (Constant 2014–15 prices, adjusted by CPI), Victoria

Financial year	Vehicle registration fees	Driver's licence fees	Stamp duty	Sub-total	Tolls	Total
\$ million						
2007–08	903.4	35.0	681.4	1 619.8	431.5	2 051.2
2008–09	924.8	39.3	594.0	1 558.1	424.9	1 983.0
2009–10	962.1	39.3	645.9	1 647.3	635.0	2 282.3
2010–11	997.9	57.4	632.9	1 688.2	692.3	2 380.5
2011–12	1 063.0	72.6	624.0	1 759.5	762.9	2 522.4
2012–13	1 212.8	81.6	664.5	1 958.9	784.3	2 743.2
2013–14	1 236.0	128.6	672.0	2 036.6	823.9	2 860.5
2014–15	1 380.9	132.2	717.8	2 230.9	873.6	3 104.5

na: not applicable.

Source: VicRoads data (2016), Private toll road operators.

Table T 1.4f Road-related taxes and charges (Constant 2014–15 prices, adjusted by CPI), Queensland

Financial year	Vehicle registration fees	Driver's licence fees	Stamp duty	Sub-total	Tolls	Total
\$ million						
2007–08	1 154.8	59.5	479.3	1 693.5	191.7	1 885.2
2008–09	1 207.3	67.5	499.4	1 774.1	213.0	1 987.2
2009–10	1 416.9	69.0	448.6	1 934.5	230.8	2 165.3
2010–11	1 460.6	67.1	472.2	2 000.0	277.9	2 277.9
2011–12	1 534.9	95.3	492.6	2 122.8	324.6	2 447.4
2012–13	1 559.9	130.4	531.8	2 222.1	369.1	2 591.1
2013–14	1 577.4	138.5	494.3	2 210.2	321.6	2 531.9
2014–15	1 579.2	145.8	488.0	2 213.0	395.1	2 608.1

na: not applicable.

Source: Department of Transport and Main Roads Queensland data (2016), Private toll road operators.

Table T 1.4g Road-related taxes and charges (Constant 2014–15 prices, adjusted by CPI), South Australia

Financial year	Vehicle registration fees	Driver's licence fees	Stamp duty	Sub-total	Tolls	Total
\$ million						
2007–08	272.3	27.9	176.0	476.3	na	476.3
2008–09	283.4	42.3	160.3	486.0	na	486.0
2009–10	295.8	30.4	163.4	489.6	na	489.6
2010–11	310.3	29.6	160.7	500.6	na	500.6
2011–12	318.8	55.8	153.9	528.5	na	528.5
2012–13	333.5	54.8	155.7	544.0	na	544.0
2013–14	348.1	35.6	159.7	543.4	na	543.4
2014–15	349.1	35.1	156.0	540.2	na	540.2

na: not applicable.

Source: Department of Planning, Transport and Infrastructure (SA) data (2016).

Table T 1.4h Road-related taxes and charges (Constant 2014–15 prices, adjusted by CPI), Western Australia

Financial year	Vehicle registration fees	Driver's licence fees	Stamp duty	Sub-total	Tolls	Total
\$ million						
2007–08	485.7	37.2	467.4	990.4	na	990.4
2008–09	527.8	40.6	366.8	935.2	na	935.2
2009–10	672.8	39.7	374.2	1 086.7	na	1 086.7
2010–11	571.2	38.5	369.5	979.2	na	979.2
2011–12	599.8	37.6	392.1	1 029.5	na	1 029.5
2012–13	644.0	37.7	422.1	1 103.8	na	1 103.8
2013–14	698.8	43.5	399.0	1 141.3	na	1 141.3
2014–15	804.3	48.0	361.9	1 214.1	na	1 214.1

na: not applicable.

Source: Department of Transport (WA) data (2016).

Table T 1.4i Road-related taxes and charges (Constant 2014–15 prices, adjusted by CPI), Tasmania

Financial year	Vehicle registration fees	Driver's licence fees	Stamp duty	Sub-total	Tolls	Total
\$ million						
2007–08	97.5	8.3	48.8	154.6	na	154.6
2008–09	95.7	8.1	43.8	147.6	na	147.6
2009–10	101.4	10.1	36.1	147.7	na	147.7
2010–11	103.8	7.7	36.1	147.6	na	147.6
2011–12	103.6	9.6	84.4	197.7	na	197.7
2012–13	110.7	9.4	89.8	210.0	na	210.0
2013–14	166.8	9.2	39.7	215.6	na	215.6
2014–15	153.9	8.3	40.3	202.5	na	202.5

na: not applicable.

Source: Department of Treasury and Finance (TAS) data (2016).

Table T 1.4j Road-related taxes and charges (Constant 2014–15 prices, adjusted by CPI), Northern Territory

Financial year	Vehicle registration fees	Driver's licence fees	Stamp duty	Sub-total	Tolls	Total
\$ million						
2007–08	63.0	2.5	26.2	91.6	na	91.6
2008–09	63.3	2.3	23.1	88.6	na	88.6
2009–10	67.0	2.6	23.7	93.3	na	93.3
2010–11	68.4	2.7	21.9	93.0	na	93.0
2011–12	70.4	2.7	23.5	96.6	na	96.6
2012–13	84.3	2.8	27.2	114.3	na	114.3
2013–14	47.2	3.2	24.9	75.3	na	75.3
2014–15	46.4	3.5	24.2	74.1	na	74.1

na: not applicable.

Source: Department of Treasury and Finance (NT) data (2016).

Table T 1.4k Road-related taxes and charges (Constant 2014–15 prices, adjusted by CPI), Australian Capital Territory

Financial year	Vehicle registration fees	Driver's licence fees	Stamp duty	Sub-total	Tolls	Total
\$ million						
2007–08	81.4	7.5	33.3	122.2	na	122.2
2008–09	84.9	7.2	30.0	122.0	na	122.0
2009–10	91.1	9.6	32.7	133.3	na	133.3
2010–11	87.0	9.4	31.7	128.1	na	128.1
2011–12	90.2	9.7	29.9	129.8	na	129.8
2012–13	93.3	9.6	27.2	130.1	na	130.1
2013–14	108.5	9.6	29.1	147.2	na	147.2
2014–15	110.9	9.1	29.6	149.6	na	149.6

na: not applicable.

Source: ACT Government data (2016).

Table T 1.5 Arterial road and bridge maintenance expenditure, constant 2014–15 prices, adjusted by BITRE Road Construction and Maintenance Price Index—Road maintenance sub-index

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
<i>\$ million</i>								
2000–01	631.1	271.4	385.1	77.7	225.4	41.5	42.1	20.2
2001–02	578.3	315.6	385.3	74.0	193.5	43.3	37.4	15.5
2002–03	582.2	309.8	339.9	73.1	225.6	32.4	23.7	21.8
2003–04	585.5	296.1	413.6	78.7	224.8	37.5	28.0	12.8
2004–05	602.6	259.0	408.0	93.5	209.5	35.2	26.7	11.5
2005–06	558.1	245.2	423.1	94.3	225.5	49.3	28.3	10.1
2006–07	562.8	264.3	491.5	81.4	269.1	47.2	35.7	11.5
2007–08	610.7	292.5	502.3	92.1	260.9	37.8	27.8	13.0
2008–09	727.2	286.0	531.7	116.0	304.4	36.2	47.5	9.4
2009–10	704.4	282.3	614.2	109.2	294.6	46.9	31.3	18.6
2010–11	749.3	376.5	638.2	79.8	250.3	57.2	56.9	13.3
2011–12	799.4	318.6	784.1	90.5	175.5	47.9	46.9	12.4
2012–13	702.1	272.5	1 090.2	83.3	253.9	62.3	57.2	13.2
2013–14	911.5	263.2	1 109.0	80.8	314.8	48.9	56.1	10.4
2014–15	964.5	338.0	624.4	73.2	304.9	56.1	68.2	12.7
2015–16	920.6	328.0	499.4	108.4	302.5	50.7	65.3	13.7

Note: For this table, arterial roads are defined as by the NTC, which differs from that used in Table T 1.6 and between each state. The list of road classifications used by the NTC is included in the endnotes. Road and bridge maintenance figures exclude Commonwealth-funded Natural Disaster Relief and Recovery Arrangements (NDRRA) and Insurance-related expenditure since 2010–11.

Source: NTC (2016a), BITRE (2015a), BITRE estimates.

Table T 1.6a Total road length by state/territory, by road type^{1,2,3,4,5,6,7,8}

	Urban				Non-urban				Total		
	Highway	Arterial	Local	Busway	Total	Highway kilometres	Arterial	Local	Busway		
<i>New South Wales</i>											
2010	1 463.7	3 823.9	33 191.1	na	38 478.7	10 172.1	70 354.0	87 393.8	na	167 919.9	206 398.6
2011	1 470.1	3 947.2	33 405.0	na	38 822.3	10 272.2	70 010.1	87 906.0	na	168 188.3	207 010.6
2012	1 491.2	3 968.3	33 047.6	49.5	38 556.6	10 329.1	69 972.5	87 416.6	0.0	167 718.2	206 274.8
2013	1 491.7	4 013.4	33 339.1	51.8	38 896.0	10 353.1	69 847.0	87 112.5	0.0	167 312.6	206 208.6
2014	1 498.0	4 069.4	33 585.5	51.8	39 204.7	10 355.9	69 836.9	87 414.3	0.0	167 607.1	206 811.8
2015	1 501.3	4 064.5	33 832.4	52.6	39 450.8	10 348.7	69 867.0	87 572.9	0.0	167 788.6	207 239.4
<i>Victoria</i>											
2010	1 631.2	4 984.1	27 956.8	na	34 572.1	6 614.5	30 578.7	71 861.2	na	109 054.4	143 626.5
2011	1 634.1	4 982.6	28 626.3	na	35 243.0	6 591.5	30 605.3	71 764.7	na	108 961.5	144 204.5
2012	1 652.9	5 012.7	29 182.0	0.0	35 847.6	6 626.2	30 620.1	71 332.8	0.0	108 579.1	144 426.7
2013	1 669.1	5 060.8	29 293.4	0.0	36 023.3	6 623.6	30 625.2	71 731.0	0.0	108 979.8	145 003.1
2014	1 671.0	5 057.4	29 432.7	0.0	36 161.1	6 643.9	30 633.9	71 874.3	0.0	109 152.1	145 313.2
2015	1 672.6	5 060.8	29 683.1	0.0	36 416.5	6 644.3	30 636.2	72 039.3	0.0	109 319.8	145 736.3
<i>Queensland</i>											
2010	912.4	2 188.9	25 792.9	na	28 894.2	10 879.2	19 055.2	170 713.0	na	200 647.4	229 541.6
2011	950.6	2 214.4	26 095.5	na	29 260.5	10 880.4	19 029.7	169 582.1	na	199 492.2	228 752.7
2012	983.7	2 281.1	26 238.0	28.7	29 531.5	10 887.2	19 051.2	167 603.2	0.0	197 541.6	227 073.1
2013	975.7	2 286.4	26 398.7	29.4	29 690.2	10 888.5	19 060.7	164 128.9	0.0	194 078.1	223 768.3
2014	954.8	2 270.8	26 618.6	34.7	29 878.9	10 885.4	19 053.6	163 793.7	0.0	193 732.7	223 611.6
2015	993.2	2 320.5	26 744.1	33.5	30 091.3	10 892.6	19 063.8	163 340.8	0.0	193 297.2	223 388.5
<i>South Australia</i>											
2010	273.6	1 636.7	10 595.6	na	12 505.9	4 347.5	12 801.8	67 051.2	na	84 200.5	96 706.4
2011	252.1	1 692.8	10 606.3	na	12 551.2	3 229.0	13 902.7	66 625.9	na	83 757.6	96 308.8
2012	252.5	1 694.3	10 607.2	12.4	12 566.4	3 231.2	13 978.1	67 262.8	0.0	84 472.1	97 038.5
2013	252.8	1 693.3	10 703.8	12.4	12 662.3	3 231.2	13 974.4	67 313.2	0.0	84 518.8	97 181.1
2014	254.9	1 690.2	10 739.1	12.4	12 696.6	3 231.0	13 957.1	66 959.8	0.0	84 147.9	96 844.5
2015	273.7	1 702.3	10 729.6	12.1	12 717.7	3 231.0	13 961.5	67 019.5	0.0	84 212.0	96 929.7
<i>Western Australia</i>											
2010	1 266.3	1 286.7	15 652.6	na	18 205.6	10 238.3	15 785.5	111 400.2	na	137 424.0	155 629.6
2011	1 441.2	1 555.5	15 302.2	na	18 298.9	9 917.7	15 120.2	114 429.1	na	139 467.0	157 765.9
2012	1 392.6	1 626.0	15 325.9	13.6	18 358.1	9 869.3	15 175.7	113 990.6	5.8	139 041.4	157 399.5
2013	1 413.7	1 618.1	15 467.4	12.8	18 512.0	9 904.1	15 175.2	114 105.6	5.8	139 190.7	157 702.7
2014	1 428.9	1 606.1	15 661.5	12.8	18 709.3	9 946.1	15 133.5	113 761.8	5.8	138 847.2	157 556.5
2015	1 432.5	1 638.7	15 869.9	13.4	18 954.5	9 930.8	15 192.5	113 319.7	5.8	138 448.8	157 403.3
<i>Tasmania</i>											
2010	349.1	538.1	3 023.9	na	3 911.1	1 518.6	3 064.3	10 817.9	na	15 400.8	19 311.9
2011	350.9	537.9	3 030.9	na	3 919.7	1 516.3	3 090.9	11 270.8	na	15 878.0	19 797.7
2012	349.4	568.2	3 017.5	0.0	3 935.1	1 530.4	3 083.2	11 554.8	0.0	16 168.4	20 103.5
2013	349.3	569.0	3 033.1	0.0	3 951.4	1 530.3	3 084.7	11 535.2	0.0	16 150.2	20 101.6
2014	349.0	567.8	3 037.4	0.0	3 954.2	1 530.4	3 235.8	11 377.6	0.0	16 143.8	20 098.0
2015	348.6	563.4	3 036.0	0.0	3 948.0	1 529.4	3 289.8	11 184.8	0.0	16 004.0	19 952.0
<i>Northern Territory</i>											
2010	43.2	237.2	867.1	na	1 147.5	6 553.3	9 737.1	1 594.0	na	17 884.4	19 031.9
2011	23.9	302.9	839.9	na	1 166.7	6 556.5	10 144.0	1 477.3	na	18 177.8	19 344.5
2012	23.5	309.6	910.5	0.0	1 243.6	2 648.2	13 560.5	1 772.7	0.0	17 981.4	19 225.0
2013	23.5	309.5	925.6	0.0	1 258.6	2 647.9	13 594.4	1 802.6	0.0	18 044.9	19 303.5
2014	23.5	309.6	939.0	0.0	1 272.1	2 648.2	13 610.5	1 727.8	0.0	17 986.5	19 258.6
2015	23.5	310.7	946.5	0.0	1 280.7	2 649.8	13 607.3	1 744.3	0.0	18 001.4	19 282.1

(continued)

	Urban				Non-urban					Total	Total
	Highway	Arterial	Local	Busway	Total	Highway	Arterial	Local	Busway		
<i>Australian Capital Territory</i>											
2010	33.4	300.7	2 589.6	na	2 923.7	38.0	53.7	440.2	na	531.9	3 455.6
2011	32.0	310.0	2 629.6	na	2 971.6	36.6	55.6	448.1	na	540.3	3 511.9
2012	28.9	308.7	2 650.5	0.0	2 988.1	36.3	57.8	277.9	0.0	372.0	3 360.1
2013	28.5	314.2	2 669.1	0.0	3 011.8	36.9	55.5	287.6	0.0	380.0	3 391.8
2014	29.3	328.4	2 692.9	0.0	3 050.6	37.2	61.2	277.5	0.0	375.9	3 426.5
2015	30.6	327.7	2 698.6	0.0	3 056.9	37.4	62.1	291.3	0.0	390.8	3 447.7
<i>Other Territories</i>											
2010	0.0	0.0	0.0	na	0.0	0.0	12.2	141.9	na	154.1	154.1
2011	0.0	0.0	0.0	na	0.0	0.0	12.2	175.3	na	187.5	187.5
2012	0.0	0.0	0.0	0.0	0.0	0.0	18.7	162.0	0.0	180.7	180.7
2013	0.0	0.0	0.0	0.0	0.0	0.0	18.7	163.2	0.0	181.9	181.9
2014	0.0	0.0	0.0	0.0	0.0	0.0	18.7	163.1	0.0	181.8	181.8
2015	0.0	0.0	0.0	0.0	0.0	0.0	18.7	163.2	0.0	181.9	181.9
<i>Australia</i>											
2010	5 972.8	14 996.1	119 669.7	na	140 638.6	50 361.6	161 442.6	521 413.5	na	733 217.7	873 856.3
2011	6 154.9	15 543.2	120 535.9	na	142 234.0	49 000.0	161 970.7	523 679.4	na	734 650.1	876 884.1
2012	6 174.8	15 768.9	120 979.2	104.2	143 027.1	45 157.9	165 517.8	521 373.3	5.8	732 054.8	875 081.9
2013	6 204.2	15 864.8	121 830.2	106.4	144 005.6	45 215.7	165 435.7	518 179.8	5.8	728 837.0	872 842.6
2014	6 209.4	15 899.8	122 706.7	111.7	144 927.6	45 278.0	165 541.2	517 349.8	5.8	728 174.8	873 102.4
2015	6 275.9	15 988.6	123 540.2	111.6	145 916.3	45 264.0	165 698.9	516 675.9	5.8	727 644.6	873 560.9

1,2,3,4,5,6,7,8 See end notes.

na: not available.

Source: PSMA (2010, 2011, 2012, 2013, 2014, 2015), OpenStreetMap (2012, 2014), ABS (2010), ABS (2012a), BITRE estimates.

Table T 1.6b Toll road length

Type	Name	State	Length (km)
Harbour/river crossing	Sydney Harbour Bridge	NSW	1.1
	Sydney Harbour Tunnel	NSW	2.7
	Go Between Bridge	QLD	0.3
Tunnels or roads with tunnels	Cross City Tunnel	NSW	2.1
	Lane Cove Tunnel	NSW	3.8
	Clem7	QLD	6.8
	Airport Link	QLD	6.7
	Legacy Way	QLD	5.7
Intra-city links	M1 (Eastern Distributor)	NSW	6.0
	M2 (Hills)	NSW	21.0
	M7 (Westlink)	NSW	40.0
	M5 (South-West)	NSW	22.0
	CityLink	VIC	22.0
	EastLink	VIC	39.0
	Gateway Motorway	QLD	23.1
	Logan Motorway	QLD	38.7
	Total		241.0

Source: BITRE (2016a).

Table T 1.7 Selected road construction and maintenance price and cost indexes, for Australia and for states and territories

Financial year	NSW	VIC	QLD	SA	WA	Australia (BITRE)	Australia (ABS)
	index (2011–12 = 100)						
1998–99	60.2	56.9	56.5	56.3	59.2		58.1
1999–00	62.0	59.3	58.7	58.3	62.0		60.2
2000–01	63.8	62.4	60.8	61.8	64.8	64.9	62.6
2001–02	64.8	64.5	60.9	62.9	66.0	65.2	63.7
2002–03	69.1	68.3	64.6	65.7	68.4	68.1	67.4
2003–04	72.0	71.1	68.1	67.3	69.9	71.7	70.1
2004–05	75.2	72.2	72.1	70.2	73.2	75.7	73.0
2005–06	78.8	75.4	77.5	74.5	79.3	79.3	77.4
2006–07	82.4	78.7	82.4	77.7	83.8	81.8	81.3
2007–08	86.1	82.4	88.4	81.7	89.5	86.6	85.7
2008–09	89.6	87.9	96.6	89.4	94.4	93.4	91.2
2009–10	91.9	89.5	96.1	92.7	93.8	92.5	92.4
2010–11	94.3	93.9	98.2	95.7	95.3	95.2	95.2
2011–12	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2012–13	103.6	103.8	103.9	103.4	103.1	101.4	103.6
2013–14	106.7	106.6	106.3	107.2	103.9	102.2	106.1
2014–15	108.7	107.3	106.0	109.6	104.3	100.7	106.8
2015–16	109.6	107.5	106.4	110.6	103.4	96.0	107.2

Note: Data are not available for missing years.

2015–16 BITRE index is preliminary.

Source: For state and national indexes – ABS (2016e); for national (BITRE) index – BITRE 2015a and BITRE estimates.

Table T 1.8a Rail-related expenditure, by Commonwealth Government (constant 2014–15 prices, adjusted by ABS Consumer Price Index)

Financial year	NSW ^b	VIC	QLD	SA ^b	WA	TAS	NT	ACT	Non-State	Total Government	Total Public Sector ^a
	\$ million										
1998–99	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	15.2	15.9	806.3
1999–00	0.0	0.0	0.0	0.0	0.0	14.2	0.0	0.0	77.4	90.1	927.2
2000–01	0.0	0.0	0.0	0.0	0.0	17.1	79.2	0.0	67.8	162.6	797.7
2001–02	0.0	0.0	4.2	0.0	0.0	1.1	154.3	0.0	0.0	159.5	433.4
2002–03	0.0	0.0	3.1	0.0	0.0	0.1	18.9	0.0	0.0	22.1	149.4
2003–04	189.7	0.0	0.3	0.0	0.0	0.0	0.0	0.0	785.2	785.5	120.4
2004–05	0.2	0.0	0.2	26.0	12.3	0.0	16.2	0.0	129.4	222.7	551.0
2005–06	1.5	0.0	0.0	21.5	0.0	0.0	0.0	0.0	337.3	377.9	765.7
2006–07	- 1.1	30.7	0.0	25.8	0.0	1.9	0.0	0.0	0.1	63.2	1 047.2
2007–08	23.3	110.7	29.3	3.7	32.9	17.9	0.0	0.0	0.0	244.5	1 446.5
2008–09	155.9	306.1	38.8	32.9	23.2	36.1	1.0	0.0	478.0	1 105.0	1 644.4
2009–10	- 29.3	49.5	436.4	61.1	16.9	52.7	1.9	0.0	850.5	1 463.2	2 257.9
2010–11	5.8	330.5	0.0	158.8	65.0	15.6	0.0	0.0	602.6	1 180.7	2 011.0
2011–12	71.2	506.4	31.6	328.0	130.5	29.0	0.0	0.0	431.2	1 528.7	2 750.7
2012–13	144.2	644.7	35.8	- 17.4	172.4	45.4	0.0	0.0	218.8	1 244.6	2 814.5
2013–14	396.3	1 141.6	69.2	0.6	23.3	34.1	0.0	0.0	0.0	1 685.0	2 325.9
2014–15	275.7	143.9	248.0	0.0	0.0	4.6	0.0	0.0	0.0	741.4	1 350.0

^a Total public sector includes general government and public non-financial corporations.

^b Negative expenditure represents money recovered from state.

Source: ABS (2016d), BITRE estimates.

Table T 1.8b Rail-related expenditure, by State/Territory Government
(constant 2014–15 prices, adjusted by ABS Consumer Price Index)

Financial year	NSW	VIC	QLD	SA ^c	WA ^c	TAS ^c	NT ^c	ACT	Total Government	Total Public Sector ^a
\$ million										
1998–99	1 443.9	103.1	862.6	46.9	200.0	- 0.1	20.3	0.0	2 676.8	6 960.0
1999–00	1 110.5	1 474.1	1 052.5	36.7	160.4	- 12.7	16.8	1.5	3 839.8	8 598.7
2000–01	1 464.3	1 444.2	944.5	77.8	243.3	- 15.6	109.4	0.0	4 267.9	5 472.9
2001–02	1 434.7	1 321.1	868.2	46.3	60.3	0.3	272.1	0.0	4 003.0	7 734.9
2002–03	1 645.3	1 203.7	908.5	76.1	153.5	- 0.1	12.4	0.0	3 999.4	8 390.3
2003–04	1 546.3	3 132.0	896.8	39.7	173.3	0.0	6.6	0.0	5 794.7	7 233.0
2004–05	1 852.1	1 662.2	998.4	- 18.2	120.9	5.2	- 11.0	0.0	4 609.6	8 282.2
2005–06	2 163.1	2 028.4	959.3	- 1.5	124.9	3.7	0.0	0.0	5 277.9	8 125.6
2006–07	3 278.5	2 299.0	1 066.6	28.8	101.9	0.5	0.0	0.0	6 775.4	10 054.3
2007–08	2 352.0	2 168.6	1 044.8	15.0	97.1	6.7	0.0	0.0	5 684.2	10 216.0
2008–09	3 035.6	1 831.0	576.2	144.9	65.1	36.4	- 1.0	0.0	5 688.2	11 617.8
2009–10	3 649.0	2 892.6	47.1	345.9	74.0	5.0	- 1.9	0.0	7 011.7	12 365.7
2010–11	2 842.8	2 482.5	185.7	160.7	6.3	24.3	20.5	0.0	5 722.8	11 426.9
2011–12	3 246.3	2 606.7	376.1	115.5	- 87.3	- 2.7	0.0	0.0	6 254.7	9 746.0
2012–13	3 449.7	2 654.5	905.8	508.4	- 124.9	- 24.7	0.0	0.0	7 368.9	8 800.1
2013–14	3 552.7	1 983.3	1 111.0	234.0	20.2	- 8.8	0.0	8.1	6 900.6	6 709.7
2014–15	3 666.3	3 263.1	1 500.0	113.0	38.0	17.4	0.0	23.0	8 620.8	7 156.6

^a Total public sector includes general government and public non-financial corporations.

^c Negative values are due to some mismatch between Commonwealth expenditure, and reported state expenditure from the ABS Government Financial Statistics.

Source: ABS (2016d), ABS (2016h), BITRE estimates.

Table T 1.8c Rail-related expenditure, by All Government
(constant 2014–15 prices, adjusted by ABS Consumer Price Index)

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total Government	Total Public Sector ^{a,d}	Public Corporations
\$ million											
1998–99	1 443.9	103.1	862.6	46.9	200.0	3.1	20.3	0.0	2 692.6	7 766.3	7 847.8
1999–00	1 110.5	1 474.1	1 052.5	36.7	160.4	1.5	16.8	1.5	3 929.9	9 525.9	9 257.0
2000–01	1 464.3	1 444.2	944.5	77.8	243.3	1.4	188.6	0.0	4 430.6	6 270.6	5 298.6
2001–02	1 434.7	1 321.1	872.3	46.3	60.3	1.4	426.3	0.0	4 162.5	8 168.3	6 748.7
2002–03	1 645.3	1 203.7	911.6	76.1	153.5	0.0	31.2	0.0	4 021.4	8 539.8	8 201.8
2003–04	1 736.0	3 132.0	897.1	39.7	173.3	0.0	6.6	0.0	6 580.2	7 353.4	7 890.1
2004–05	1 852.3	1 662.2	998.6	7.8	133.2	5.2	5.2	0.0	4 832.3	8 833.2	9 099.9
2005–06	2 164.6	2 028.4	959.3	20.0	124.9	3.7	0.0	0.0	5 655.7	8 891.2	9 497.7
2006–07	3 277.5	2 329.8	1 066.6	54.6	101.9	2.4	0.0	0.0	6 838.7	11 101.5	11 532.4
2007–08	2 375.3	2 279.3	1 074.0	18.7	130.0	24.6	0.0	0.0	5 928.6	11 662.5	11 868.3
2008–09	3 191.5	2 137.1	615.0	177.8	88.3	72.5	0.0	0.0	6 793.2	13 262.2	14 571.1
2009–10	3 619.7	2 942.1	483.5	407.0	90.9	57.7	0.0	0.0	8 474.9	14 623.6	14 011.9
2010–11	2 848.6	2 813.0	185.7	319.5	71.2	39.9	20.5	0.0	6 903.5	13 437.9	14 056.3
2011–12	3 317.5	3 113.1	407.7	443.5	43.2	26.3	0.0	0.0	7 783.4	12 496.7	12 241.8
2012–13	3 593.9	3 299.3	941.6	491.0	47.5	20.7	0.0	0.0	8 613.5	11 614.6	10 703.0
2013–14	3 949.1	3 124.9	1 180.2	234.6	43.5	25.3	0.0	8.1	8 585.5	9 035.6	8 622.2
2014–15	3 942.0	3 407.0	1 748.0	113.0	38.0	22.0	0.0	23.0	9 362.2	8 506.6	8 527.0

^a Total public sector includes general government and public non-financial corporations.

^d State totals will not add to total government as they do not include transfer payments to public non-financial corporations.

^e The sum of public corporations and total government will not add to total public sector due to the existence of payments from general government to public non-financial corporations.

Source: ABS (2016d), ABS (2016h), BITRE estimates.

CHAPTER 2

Freight

Table T 2.1a Domestic freight, by transport mode—bulk

Financial year	Goods moved (billion tkm)				Goods moved (million tonnes)	
	Road	Rail	Coastal shipping	Total freight task	Rail	Coastal shipping
1974–75	10.4	48.9	95.2	154.6		
1975–76	11.2	45.2	99.0	155.4		
1976–77	12.5	47.5	97.3	157.3		
1977–78	13.2	49.2	100.3	162.7		
1978–79	14.6	48.4	100.5	163.5		
1979–80	15.5	52.4	101.2	169.0		
1980–81	16.4	55.0	106.6	178.0		
1981–82	18.5	55.3	94.1	168.0		
1982–83	19.1	51.4	78.4	148.8		
1983–84	20.4	55.8	91.3	167.5		
1984–85	22.1	62.8	93.3	178.2		
1985–86	23.4	66.5	99.0	189.0		
1986–87	24.3	69.1	92.5	185.8		
1987–88	26.3	69.7	90.9	186.9		
1988–89	27.7	66.8	87.8	182.3		
1989–90	29.2	74.3	91.3	194.8		
1990–91	27.5	77.7	90.8	196.0		
1991–92	28.3	85.5	93.3	207.1		
1992–93	30.6	85.5	92.8	208.9		
1993–94	33.1	88.4	95.4	216.8		
1994–95	35.0	91.0	105.6	231.6		
1995–96	36.2	95.6	102.4	234.2		43.5
1996–97	37.4	104.0	109.0	250.5		44.7
1997–98	39.2	107.7	112.1	259.1		47.6
1998–99	42.0	109.5	104.4	255.9		43.3
1999–00	44.5	114.4	102.6	261.4		45.1
2000–01	45.9	117.9	97.1	260.9		45.3
2001–02	48.4	129.6	102.8	280.9		46.1
2002–03	50.6	138.8	106.3	295.8		45.7
2003–04	53.6	142.8	109.3	305.7		45.5
2004–05	56.2	155.0	106.7	317.9		45.9
2005–06	58.6	157.0	115.4	331.0		48.6
2006–07	61.8	172.7	119.5	354.0		51.8
2007–08	65.1	⁹ 187.4	112.3	364.8	⁹ 642.8	49.3
2008–09	62.7	207.6	100.3	370.6	705.0	44.9
2009–10	65.0	230.5	106.5	402.0	798.8	44.7
2010–11	67.1	233.8	102.9	403.8	¹⁰ 840.3	43.3
2011–12	69.3	260.0	94.8	424.1	¹⁰ 908.0	43.0
2012–13	72.4	288.1	96.6	457.1	1 013.0	43.5
2013–14	75.5	337.6	97.8	510.9	1 089.6	45.3
2014–15	78.2	369.4			1 210.9	

^{9,10} See end notes.

Note: Data are not readily available for missing years.

Source: BITRE (2015b), BITRE (2015c), BITRE(2016b) and BITRE estimates.

Table T 2.1b Domestic freight by transport mode—non-bulk

Financial year	Goods moved (billion tkm)					Goods moved (million tonnes)		
	Road	Rail	Coastal shipping	Air freight	Total freight task	Rail	Coastal shipping	Air freight
1974–75	23.8	10.1	6.0	0.1	40.0			
1975–76	25.4	10.4	5.6	0.1	41.6			
1976–77	28.3	10.2	5.0	0.1	43.6			
1977–78	29.8	10.6	4.8	0.1	45.3			
1978–79	33.1	11.5	4.2	0.2	48.9			
1979–80	35.0	11.3	3.9	0.2	50.4			
1980–81	37.1	10.8	3.7	0.2	51.8			
1981–82	41.8	10.0	3.7	0.2	55.6			
1982–83	43.0	8.5	2.5	0.2	54.2			
1983–84	45.8	9.6	3.0	0.2	58.7			
1984–85	49.6	9.8	3.0	0.2	62.6			
1985–86	52.4	10.8	2.8	0.2	66.2			
1986–87	54.4	11.3	2.7	0.2	68.7			
1987–88	58.8	12.2	2.7	0.2	73.9			
1988–89	61.9	13.8	2.9	0.2	78.9			
1989–90	65.0	13.6	2.9	0.1	81.6			
1990–91	61.2	13.4	3.0	0.2	77.8			
1991–92	62.4	13.8	3.1	0.2	79.5			
1992–93	66.8	15.2	3.2	0.2	85.5			
1993–94	71.4	15.9	3.4	0.3	91.0			
1994–95	74.8	15.2	3.6	0.3	93.9			
1995–96	76.5	14.6	3.7	0.3	95.1			4.3
1996–97	78.4	15.6	3.6	0.3	97.9			4.4
1997–98	81.3	17.9	4.8	0.3	104.3			4.9
1998–99	86.2	18.4	4.4	0.4	109.4			5.1
1999–00	90.3	19.2	6.3	0.4	116.1			6.2
2000–01	92.3	19.6	7.4	0.4	119.7			6.7
2001–02	96.6	20.9	7.6	0.3	125.5			6.3
2002–03	100.2	21.8	8.5	0.3	130.8			7.1
2003–04	105.0	25.9	8.7	0.3	139.9			7.7
2004–05	109.0	29.0	7.4	0.4	145.8			7.8
2005–06	112.5	32.4	6.8	0.4	152.2			6.7
2006–07	117.4	26.3	8.0	0.4	152.1			7.1
2007–08	122.5	⁹ 31.3	9.6	0.4	163.8	⁹ 19.5		8.3
2008–09	116.6	29.6	9.3	0.3	155.8	17.5		7.8
2009–10	119.3	28.1	9.8	0.3	157.5	16.5		7.7
2010–11	121.4	28.0	10.5	0.3	160.2	¹⁰ 18.8		8.5
2011–12	123.7	30.7	7.8	0.3	162.5	¹⁰ 21.6		7.5
2012–13	127.0	30.8	7.8	0.3	166.0	27.6		7.4
2013–14	130.3	30.1	7.6	0.3	168.2	21.9		6.7
2014–15	133.8	32.2		0.3		24.3		0.2

^{9,10} See end notes.

Note: Data are not readily available for missing years.

Source: BITRE (2015b), BITRE (2015c), BITRE(2016b), BITRE (2016c) and BITRE estimates.

Table T 2.1c Domestic freight by transport mode—total bulk and non-bulk

Financial year	Goods moved (billion tkm)					Goods moved (million tonnes)				
	Road	Rail	Coastal shipping	Air freight	Total freight task	Road	Rail	Coastal shipping	Air freight	Total freight weight
1974–75	34.2	59.0	101.2		194.4					46.4
1975–76	36.6	55.6	104.6		196.8					47.5
1976–77	40.8	57.7	102.3		200.8					47.2
1977–78	43.0	59.8	105.1		207.9					48.0
1978–79	47.7	59.8	104.7		212.3					47.4
1979–80	50.4	63.7	105.1		219.2					48.1
1980–81	53.6	65.7	110.3		229.6					47.3
1981–82	60.3	65.4	97.8		223.4					43.1
1982–83	62.1	59.8	80.9		202.9					38.3
1983–84	66.2	65.4	94.3		226.0					42.7
1984–85	71.6	72.6	96.3		240.5	1 030.6				42.7
1985–86	75.8	77.3	101.8		254.9	1 017.5				44.7
1986–87	78.7	80.4	95.2		254.3	1 004.4				44.4
1987–88	85.1	81.9	93.6		260.6	991.3				43.2
1988–89	89.7	80.6	90.7		261.0	1 005.4				43.0
1989–90	94.1	87.9	94.2		276.3	1 019.5				44.5
1990–91	88.7	91.1	93.8		273.6	1 033.6				44.2
1991–92	90.7	99.3	96.4		286.4	1 081.3				43.6
1992–93	97.4	100.8	96.0		294.2	1 129.1				44.2
1993–94	104.5	104.2	98.8		307.5	1 176.8				45.3
1994–95	109.8	106.2	109.2		325.1	1 224.5				49.2
1995–96	112.7	110.3	106.1		329.1	1 265.1				47.8
1996–97	115.8	119.6	112.6							
1997–98	120.5	125.6	116.9							
1998–99	128.2	128.0	108.8							
1999–00	134.8	133.6	108.9							
2000–01	138.2	137.5	104.5							
2001–02	145.0	150.5	110.4							
2002–03	150.9	160.6	114.9		426.4	1 553.0	575.7	52.8		2 181.5
2003–04	158.6	168.7	117.1		444.4	1 696.0	590.9	53.2		2 340.1
2004–05	165.2	183.9	114.1		463.2	1 756.0	634.3	53.7		2 444.0
2005–06	171.2	189.4	122.2	0.4	483.2	1 844.0	641.2	55.2	0.3	2 540.8
2006–07	179.1	199.0	127.6	0.4	506.0	2 146.0	665.6	58.9	0.3	2 870.9
2007–08	187.6	218.7	121.9	0.4	528.6		662.3	57.6	0.3	
2008–09	179.3	237.2	109.6	0.3	526.4		722.5	52.7	0.2	
2009–10	184.3	258.6	116.2	0.3	559.5	2 092.0	815.3	52.4	0.2	2 959.9
2010–11	188.4	261.8	113.4	0.3	564.0		10 859.1	51.9	0.3	
2011–12	193.0	290.7	102.6	0.3	586.6	2 280.0	10 929.6	50.5	0.2	3 260.4
2012–13	199.3	319.0	104.5	0.3	623.1		1 040.6	50.9	0.2	
2013–14	205.7	367.7	105.4	0.3	679.1	2,276.5	1 111.5	52.0	0.2	3 440.1
2014–15	212.0	401.6		0.3			1 235.2		0.2	

^{9,10} See end notes.

Note: Data are not readily available for missing years.

Source: BITRE (2015b), BITRE (2015c), BITRE (2016d), BITRE (2016b), BITRE (2016c), BITRE estimates, ABS (2015b).

Table T 2.2a Total domestic freight by state/territory, by transport mode—road

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total ^{II}
	billion tonne-kilometres								
1972–73	11.7	7.3	4.2	1.6	4.4	0.7	0.5	0.1	30.4
1973–74	12.8	8.0	4.7	1.8	4.9	0.7	0.6	0.1	33.5
1974–75	13.0	8.2	4.8	1.8	5.1	0.8	0.6	0.1	34.2
1975–76	13.8	8.7	5.1	2.0	5.5	0.8	0.6	0.1	36.6
1976–77	15.2	9.7	5.8	2.2	6.2	0.9	0.7	0.2	40.8
1977–78	15.9	10.2	6.2	2.3	6.7	1.0	0.8	0.2	43.0
1978–79	17.4	11.3	6.9	2.6	7.5	1.1	0.8	0.2	47.7
1979–80	18.3	11.9	7.3	2.8	8.0	1.1	0.9	0.2	50.4
1980–81	19.3	12.6	7.9	3.0	8.6	1.2	0.9	0.2	53.6
1981–82	21.6	14.1	8.9	3.3	9.8	1.4	1.1	0.2	60.3
1982–83	22.1	14.5	9.3	3.4	10.2	1.4	1.1	0.2	62.1
1983–84	23.6	15.4	10.0	3.6	10.9	1.5	1.2	0.2	66.2
1984–85	25.5	16.6	10.8	3.9	11.8	1.6	1.3	0.2	71.6
1985–86	27.1	17.5	11.5	4.2	12.4	1.7	1.4	0.2	75.8
1986–87	28.2	18.1	11.9	4.4	12.9	1.7	1.4	0.3	78.7
1987–88	30.5	19.5	12.9	4.8	13.9	1.8	1.5	0.3	85.1
1988–89	32.3	20.5	13.6	5.1	14.6	1.9	1.6	0.3	89.7
1989–90	34.0	21.4	14.3	5.5	15.2	1.9	1.7	0.3	94.1
1990–91	32.3	20.2	13.3	5.3	14.1	1.7	1.6	0.3	88.7
1991–92	33.0	20.6	13.6	5.5	14.4	1.8	1.7	0.3	90.7
1992–93	35.4	22.1	14.6	6.0	15.4	1.9	1.8	0.3	97.4
1993–94	38.1	23.6	15.7	6.4	16.5	2.0	2.0	0.3	104.5
1994–95	40.2	24.8	16.5	6.9	17.2	2.0	2.1	0.3	109.8
1995–96	41.4	25.4	16.9	7.2	17.5	2.1	2.1	0.3	112.7
1996–97	42.7	26.1	17.2	7.5	17.8	2.1	2.2	0.3	115.8
1997–98	44.6	27.2	17.9	8.0	18.3	2.1	2.3	0.3	120.5
1998–99	47.5	28.6	20.0	9.0	18.2	2.1	2.5	0.3	128.2
1999–00	49.7	30.2	21.5	9.9	18.1	2.5	2.6	0.3	134.8
2000–01	50.2	31.0	22.5	10.4	18.6	2.7	2.5	0.3	138.2
2001–02	52.7	32.4	24.1	11.0	19.5	2.7	2.3	0.3	145.0
2002–03	54.1	33.1	25.2	11.6	21.7	2.6	2.2	0.3	150.9
2003–04	56.8	33.6	27.1	12.2	23.3	3.1	2.2	0.3	158.6
2004–05	58.9	34.9	28.9	12.5	24.4	3.1	2.2	0.3	165.2
2005–06	60.3	36.9	30.5	12.8	25.3	2.8	2.2	0.3	171.2
2006–07	59.8	38.3	33.2	13.1	29.1	3.3	2.1	0.3	179.1
2007–08	63.2	39.5	34.5	13.6	31.0	3.4	2.2	0.3	187.6
2008–09	62.2	37.4	32.1	12.9	29.2	3.1	2.2	0.3	179.3
2009–10	63.6	37.6	33.1	13.3	31.0	3.2	2.2	0.3	184.3
2010–11	61.8	37.9	34.8	13.6	34.6	3.2	2.1	0.3	188.4
2011–12	61.7	37.9	36.3	13.9	37.7	3.0	2.2	0.4	193.0
2012–13	62.7	38.3	37.7	13.5	41.4	3.1	2.3	0.4	199.3
2013–14	63.5	38.6	39.2	13.2	45.4	3.2	2.3	0.4	205.7
2014–15	65.6	39.6	40.3	13.7	46.9	3.2	2.4	0.4	212.0

^{II} See end notes.

Source: BITRE (2016d).

Table T 2.2b Total domestic freight by state/territory, by transport mode—rail

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
billion tonne-kilometres									
1971–72	7.4	2.9	7.0	3.2	22.0	0.2	na	na	42.7
1972–73	8.1	3.2	7.6	3.5	24.1	0.2	na	na	46.7
1973–74	8.5	3.1	7.7	3.9	30.6	0.3	na	na	54.1
1974–75	8.6	3.0	9.0	3.8	34.2	0.3	na	na	59.0
1975–76	8.3	3.0	9.8	3.8	30.4	0.2	na	na	55.6
1976–77	9.1	3.0	10.0	4.0	31.4	0.2	na	na	57.7
1977–78	9.2	3.1	10.4	4.1	32.9	0.2	na	na	59.8
1978–79	9.1	3.3	11.3	4.5	31.4	0.3	na	na	59.8
1979–80	10.6	3.9	11.4	4.7	32.9	0.2	na	na	63.7
1980–81	10.6	3.7	12.0	4.9	34.2	0.2	na	na	65.7
1981–82	10.8	3.5	13.2	4.9	32.7	0.2	na	na	65.4
1982–83	9.2	2.5	13.3	4.6	30.1	0.2	na	na	59.8
1983–84	11.2	3.1	15.5	5.0	30.3	0.2	na	na	65.4
1984–85	12.5	3.6	16.9	5.3	34.0	0.2	na	na	72.6
1985–86	14.1	3.2	18.5	6.1	35.2	0.3	na	na	77.3
1986–87	14.4	3.3	19.8	5.9	36.7	0.3	na	na	80.4
1987–88	14.4	3.4	20.7	6.4	36.7	0.2	na	na	81.9
1988–89	13.6	3.3	21.9	6.7	34.9	0.2	na	na	80.6
1989–90	14.7	3.8	22.8	6.9	39.5	0.2	na	na	87.9
1990–91	14.7	3.8	23.4	6.6	42.4	0.3	na	na	91.1
1991–92	15.4	3.6	27.2	7.2	45.7	0.3	na	na	99.3
1992–93	16.2	4.0	26.7	7.6	46.0	0.3	na	na	100.8
1993–94	17.3	4.5	26.7	8.0	47.5	0.3	na	na	104.2
1994–95	16.9	4.6	28.7	7.9	47.7	0.3	na	na	106.2
1995–96	18.1	4.8	28.4	7.8	50.8	0.4	na	na	110.3
1996–97	20.0	5.5	30.9	10.2	52.7	0.4	na	na	119.6
1997–98	20.0	4.5	32.0	9.8	58.9	0.5	na	na	125.6
1998–99	19.5	4.6	33.2	9.9	60.2	0.5	na	na	128.0
1999–00	19.9	4.8	35.5	9.6	63.3	0.5	na	na	133.6
2000–01	21.0	5.0	39.4	10.0	60.8	0.7	na	na	136.9
2001–02	23.1	5.5	43.3	11.0	66.8	0.8	na	na	150.5
2002–03	24.3	5.7	45.5	11.5	70.2	0.8	na	na	158.1
2003–04	25.8	6.1	48.4	12.3	74.7	0.9	na	na	168.1
2004–05	28.1	6.6	52.7	13.4	81.3	0.9	na	na	183.0
2005–06	29.0	6.9	54.4	13.8	84.0	1.0	na	na	189.0
2006–07	30.5	7.2	57.2	14.5	88.2	1.0	na	na	198.7
2007–08 ⁹	28.9	15.3	52.2	12.8	123.8	0.5	2.4	na	203.5
2008–09	27.4	13.6	56.0	11.4	153.6	0.3	3.1	na	237.2
2009–10	28.2	12.6	60.7	10.5	170.9	0.1	3.2	na	258.6

⁹ See end notes.

na: not available.

Source: ARA (2008), BTRE (2006a) and BITRE (2012a).

Table T 2.2c Total domestic freight by state/territory, by transport mode—shipping

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
billion tonne-kilometres									
1995–96	4.7	8.6	24.1	9.1	54.2	3.7	1.6	na*	106.1
1996–97	5.5	8.8	25.6	9.7	57.6	3.2	2.2	na*	112.6
1997–98	5.6	10.3	25.6	9.7	60.5	2.4	2.8	na*	116.9
1998–99	4.9	7.9	24.8	9.7	55.1	3.5	2.9	na*	108.8
1999–2000	6.4	8.9	30.3	9.6	46.3	4.0	3.3	na*	108.8
2000–01	7.4	9.4	30.7	9.0	41.8	2.9	3.2	na*	104.5
2001–02	5.2	6.6	30.9	9.6	49.9	5.7	2.5	na*	110.5
2002–03	5.7	7.6	31.7	10.1	51.9	5.8	2.3	na*	114.9
2003–04	4.9	6.5	33.8	8.2	55.6	5.5	2.6	na*	117.1
2004–05	5.3	6.6	37.1	8.5	48.0	4.6	3.6	na*	114.1
2005–06	5.3	9.0	41.2	8.9	50.9	4.5	2.4	na*	122.2
2006–07	6.2	9.1	42.0	9.4	56.3	4.4	0.2	na*	127.6
2007–08	6.0	8.0	43.8	10.5	46.4	4.5	2.5	na*	121.9
2008–09	5.0	6.2	42.0	9.3	40.1	3.9	2.8	na*	109.6
2009–10	5.9	6.1	41.2	8.2	49.7	3.5	1.5	na*	116.2
2010–11	4.8	5.7	42.1	8.6	45.6	3.5	2.8	na*	113.4
2011–12	5.3	5.8	43.6	9.1	32.9	3.3	2.3	na*	102.6
2012–13	4.5	5.4	47.6	8.6	32.8	3.0	2.4	na*	104.5
2013–14	4.7	5.1	49.0	9.8	30.9	3.3	2.4	na*	105.4

na*: not applicable.

Source: BITRE (2015d).

Table T 2.2d Total domestic freight by state/territory, by transport mode—total

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
billion tonne-kilometres									
1995–96	64.2	38.9	69.3	24.1	122.5	6.1	3.7	na	329.1
1996–97	68.2	40.4	73.8	27.4	128.1	5.7	4.4	na	348.1
1997–98	70.2	42.0	75.4	27.5	137.7	5.0	5.1	na	363.0
1998–99	71.9	41.2	78.1	28.6	133.5	6.1	5.4	na	365.0
1999–2000	76.0	43.9	87.4	29.1	127.7	7.0	5.9	na	377.1
2000–01	78.6	45.4	92.7	29.4	121.2	6.3	5.7	na	379.6
2001–02	81.0	44.4	98.4	31.6	136.3	9.2	4.8	na	406.0
2002–03	84.1	46.4	102.4	33.3	143.8	9.2	4.5	na	423.9
2003–04	87.5	46.2	109.3	32.7	153.6	9.5	4.8	na	443.9
2004–05	92.2	48.2	118.7	34.4	153.7	8.7	5.8	na	462.2
2005–06	94.6	52.7	126.1	35.6	160.1	8.2	4.6	na	482.4
2006–07	96.4	54.6	132.3	37.0	173.7	8.7	2.3	na	505.4
2007–08	98.1	62.8	130.6	36.9	201.1	8.3	7.1	na	513.0
2008–09	94.5	57.1	130.1	33.7	222.9	7.4	8.0	na	526.1
2009–10	97.7	56.4	135.0	32.0	251.6	6.9	6.9	na	559.2

na: not available.

Source: ARA (2008), BTRE (2006a), BITRE (2012c), BITRE (2015d) and BITRE estimates.

Table T 2.3a Intrastate freight by state/territory, by transport mode—road

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
billion tonne-kilometres									
1972–73	7.4	5.4	3.6	0.9	4.1	0.7	0.4	0.1	22.4
1973–74	8.2	5.9	4.0	1.0	4.5	0.7	0.4	0.1	24.9
1974–75	8.4	6.1	4.1	1.0	4.6	0.8	0.4	0.1	25.4
1975–76	9.0	6.5	4.5	1.1	5.0	0.8	0.5	0.1	27.3
1976–77	10.1	7.3	5.1	1.3	5.7	0.9	0.5	0.1	31.0
1977–78	10.8	7.8	5.5	1.3	6.1	1.0	0.5	0.2	33.0
1978–79	12.1	8.7	6.2	1.5	6.9	1.1	0.6	0.2	37.1
1979–80	12.7	9.2	6.6	1.6	7.4	1.1	0.7	0.2	39.3
1980–81	13.6	9.7	7.1	1.7	7.9	1.2	0.7	0.2	41.9
1981–82	15.4	11.1	8.1	2.0	9.0	1.4	0.8	0.2	47.8
1982–83	15.9	11.4	8.5	2.0	9.4	1.4	0.8	0.2	49.6
1983–84	16.9	12.1	9.0	2.2	10.0	1.5	0.9	0.2	52.7
1984–85	18.1	13.0	9.8	2.3	10.9	1.6	0.9	0.2	56.7
1985–86	18.9	13.5	10.3	2.5	11.5	1.7	1.0	0.2	59.5
1986–87	19.4	13.8	10.7	2.5	11.8	1.7	1.0	0.2	61.1
1987–88	20.7	14.7	11.5	2.7	12.7	1.8	1.1	0.3	65.4
1988–89	21.5	15.3	12.1	2.8	13.3	1.9	1.1	0.3	68.2
1989–90	22.3	15.8	12.6	2.9	13.9	1.9	1.2	0.3	70.8
1990–91	20.3	14.4	11.6	2.7	12.8	1.7	1.1	0.3	64.7
1991–92	20.6	14.6	11.8	2.7	13.0	1.8	1.1	0.3	65.7
1992–93	21.9	15.5	12.6	2.9	13.9	1.9	1.2	0.3	70.1
1993–94	23.3	16.4	13.5	3.1	14.9	2.0	1.2	0.3	74.6
1994–95	24.0	17.0	14.1	3.2	15.5	2.0	1.3	0.2	77.3
1995–96	24.2	17.0	14.3	3.3	15.7	2.1	1.3	0.2	77.9
1996–97	24.3	17.1	14.4	3.3	15.9	2.1	1.3	0.2	78.5
1997–98	24.7	17.3	14.8	3.4	16.3	2.1	1.3	0.2	80.1
1998–99	24.1	17.4	16.4	3.8	16.0	2.1	1.3	0.2	81.5
1999–00	24.8	18.4	17.7	4.4	15.8	2.5	1.3	0.3	85.1
2000–01	25.2	19.1	18.6	5.0	16.3	2.7	1.3	0.2	88.6
2001–02	26.0	19.8	20.0	5.4	17.2	2.7	1.0	0.2	92.4
2002–03	25.9	20.0	20.8	5.8	19.3	2.6	0.8	0.3	95.5
2003–04	26.6	20.1	22.4	6.4	21.0	3.1	0.7	0.3	100.4
2004–05	26.9	21.0	23.8	6.6	21.9	3.1	0.7	0.3	104.4
2005–06	26.2	21.8	25.1	6.7	22.7	2.8	0.6	0.3	106.2
2006–07	26.7	23.7	28.0	7.2	26.6	3.3	0.5	0.3	116.2
2007–08	27.7	23.9	28.9	7.3	28.4	3.4	0.5	0.3	120.4
2008–09	25.2	21.2	26.3	6.6	26.5	3.1	0.4	0.3	109.5
2009–10	26.1	21.4	27.1	6.7	28.2	3.2	0.4	0.3	113.4
2010–11	28.3	22.7	29.5	7.1	31.8	3.2	0.5	0.3	123.4
2011–12	29.9	23.4	31.1	7.3	34.8	3.0	0.5	0.3	130.4
2012–13	30.9	23.4	32.7	7.5	39.0	3.1	0.6	0.3	137.5
2013–14	31.8	23.3	34.3	7.7	43.4	3.2	0.8	0.3	144.7
2014–15	32.6	23.9	35.2	7.9	44.6	3.2	0.8	0.3	148.6

Source: BITRE (2016d).

Table T 2.3b Intrastate freight by state/territory, by transport mode—rail

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
billion tonne-kilometres									
2007–08	16.8	0.7	45.1	2.1	105.0	0.5	0.8	na*	171.0
2008–09	17.6	0.4	50.6	1.8	137.0	0.3	1.1	na*	208.9
2009–10	18.3	0.4	54.9	2.0	154.0	0.1	1.2	na*	231.0

na*: not applicable.

Source: BITRE (2012a).

Table T 2.3c Intrastate freight by state/territory, by transport mode—shipping

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
billion tonne-kilometres									
1995–96	0.1	0.0	19.3	0.1	3.6	0.2	0.0	na*	23.4
1996–97	0.1	0.0	20.9	0.2	3.8	0.0	0.0	na*	25.0
1997–98	0.2	0.0	20.8	0.1	4.0	0.1	0.0	na*	25.3
1998–99	0.1	0.1	19.8	0.1	2.9	0.2	0.1	na*	23.3
1999–2000	0.1	0.0	23.7	0.2	3.3	0.2	0.1	na*	27.6
2000–01	0.1	0.0	24.1	0.2	6.6	0.1	0.1	na*	31.1
2001–02	0.1	0.0	24.1	0.2	5.6	0.6	0.1	na*	30.6
2002–03	0.0	0.0	24.4	0.2	5.7	0.1	0.1	na*	30.6
2003–04	0.0	0.0	24.7	0.2	5.3	0.1	0.0	na*	30.3
2004–05	0.0	0.0	27.5	0.2	4.4	0.1	0.1	na*	32.3
2005–06	0.0	0.0	31.3	0.2	3.7	0.1	0.0	na*	35.3
2006–07	0.0	0.1	32.2	0.2	5.5	0.1	0.0	na*	38.2
2007–08	0.0	0.1	32.1	0.2	5.6	0.1	0.0	na*	38.1
2008–09	0.0	0.1	32.1	0.1	4.1	0.1	0.0	na*	36.6
2009–10	0.0	0.0	32.3	0.1	1.4	0.1	0.0	na*	34.1
2010–11	0.0	0.0	32.4	0.2	1.6	0.1	0.1	na*	34.4
2011–12	0.0	0.1	33.0	0.3	1.3	0.1	0.0	na*	34.8
2012–13	0.0	0.0	39.1	0.2	2.5	0.1	0.0	na*	41.9
2013–14	0.0	0.0	39.6	0.1	4.0	0.1	0.0	na*	43.9

na*: not applicable.

Source: BITRE (2015d).

Table T 2.4a Interstate freight by state/territory, by transport mode—road

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
billion tonne-kilometres									
1971–72	3.0	2.1	0.7	0.7	0.8	0.1	0.0	0.1	7.6
1972–73	4.3	1.9	0.6	0.7	0.3	na*	0.2	0.0	8.0
1973–74	4.6	2.0	0.6	0.8	0.4	na*	0.2	0.0	8.6
1974–75	4.6	2.1	0.7	0.8	0.4	na*	0.2	0.0	8.8
1975–76	4.8	2.2	0.7	0.9	0.5	na*	0.2	0.0	9.3
1976–77	5.1	2.4	0.7	1.0	0.5	na*	0.2	0.0	9.8
1977–78	5.1	2.4	0.7	1.0	0.5	na*	0.2	0.0	10.0
1978–79	5.4	2.6	0.7	1.1	0.6	na*	0.2	0.0	10.6
1979–80	5.6	2.7	0.8	1.2	0.7	na*	0.2	0.0	11.1
1980–81	5.8	2.8	0.8	1.2	0.7	na*	0.3	0.0	11.6
1981–82	6.2	3.0	0.8	1.3	0.8	na*	0.3	0.0	12.5
1982–83	6.2	3.0	0.8	1.4	0.8	na*	0.3	0.0	12.5
1983–84	6.7	3.3	0.9	1.5	0.9	na*	0.3	0.0	13.6
1984–85	7.4	3.6	1.0	1.6	0.9	na*	0.3	0.0	14.9
1985–86	8.1	3.9	1.1	1.8	1.0	na*	0.4	0.0	16.3
1986–87	8.8	4.2	1.2	1.9	1.0	na*	0.4	0.0	17.6
1987–88	9.8	4.7	1.4	2.1	1.1	na*	0.5	0.0	19.7
1988–89	10.7	5.1	1.5	2.3	1.2	na*	0.5	0.0	21.5
1989–90	11.7	5.6	1.7	2.5	1.3	na*	0.6	0.0	23.3
1990–91	12.0	5.8	1.7	2.6	1.3	na*	0.6	0.0	24.1
1991–92	12.4	6.0	1.8	2.8	1.4	na*	0.6	0.0	25.0
1992–93	13.5	6.6	2.0	3.0	1.5	na*	0.7	0.0	27.3
1993–94	14.8	7.2	2.2	3.3	1.6	na*	0.7	0.0	29.9
1994–95	16.1	7.8	2.4	3.6	1.7	na*	0.8	0.0	32.5
1995–96	17.2	8.4	2.6	3.9	1.8	na*	0.8	0.0	34.8
1996–97	18.4	9.0	2.8	4.2	1.9	na*	0.9	0.0	37.3
1997–98	19.9	9.8	3.0	4.6	2.0	na*	1.0	0.0	40.4
1998–99	23.3	11.2	3.6	5.2	2.2	na*	1.1	0.0	46.8
1999–00	24.9	11.8	3.9	5.4	2.3	na*	1.2	0.0	49.6
2000–01	25.0	11.9	3.9	5.4	2.3	na*	1.2	0.0	49.7
2001–02	26.7	12.5	4.2	5.6	2.3	na*	1.3	0.0	52.7
2002–03	28.2	13.1	4.4	5.9	2.4	na*	1.4	0.0	55.4
2003–04	30.2	13.5	4.8	5.8	2.4	na*	1.5	0.0	58.2
2004–05	32.0	13.9	5.1	5.9	2.4	na*	1.5	0.0	60.8
2005–06	34.2	15.1	5.4	6.1	2.5	na*	1.6	0.1	64.9
2006–07	33.1	14.6	5.2	5.9	2.5	na*	1.6	0.0	62.9
2007–08	35.5	15.6	5.6	6.2	2.6	na*	1.7	0.1	67.2
2008–09	37.0	16.2	5.8	6.4	2.6	na*	1.7	0.1	69.8
2009–10	37.5	16.2	6.0	6.6	2.8	na*	1.8	0.1	70.9
2010–11	33.5	15.2	5.4	6.5	2.8	na*	1.7	0.0	65.1
2011–12	31.8	14.5	5.2	6.5	2.9	na*	1.7	0.0	62.6
2012–13	31.8	14.9	5.0	6.0	2.4	na*	1.6	0.0	61.8
2013–14	31.7	15.3	4.9	5.5	2.0	na*	1.6	0.0	61.0
2014–15	33.0	15.7	5.1	5.7	2.3	na*	1.6	0.0	63.4

na*: not applicable.

Source: BITRE (2016d).

Table T 2.4b Interstate freight by state/territory, by transport mode—shipping

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
billion tonne-kilometres									
1995–96	4.6	8.5	4.8	9.0	50.7	3.5	1.6	na*	82.7
1996–97	5.4	8.8	4.7	9.5	53.8	3.2	2.2	na*	87.6
1997–98	5.4	10.3	4.8	9.6	56.5	2.3	2.8	na*	91.7
1998–99	4.8	7.8	4.9	9.6	52.2	3.3	2.8	na*	85.4
1999–2000	6.2	8.8	6.6	9.4	43.0	3.9	3.3	na*	81.2
2000–01	7.3	9.4	6.6	8.9	35.2	2.8	3.1	na*	73.3
2001–02	5.1	6.6	6.8	9.4	44.3	5.1	2.4	na*	79.8
2002–03	5.6	7.5	7.2	9.9	46.1	5.6	2.2	na*	84.3
2003–04	4.9	6.5	9.1	8.0	50.3	5.4	2.6	na*	86.8
2004–05	5.3	6.6	9.6	8.3	43.7	4.5	3.5	na*	81.5
2005–06	5.3	9.0	9.9	8.7	47.2	4.4	2.4	na*	86.9
2006–07	6.2	8.9	9.7	9.2	50.8	4.3	0.2	na*	89.4
2007–08	6.0	8.0	11.7	10.3	40.8	4.4	2.5	na*	83.6
2008–09	5.0	6.1	9.9	9.2	35.9	3.8	2.8	na*	72.7
2009–10	5.9	6.1	8.8	8.1	48.3	3.4	1.4	na*	82.0
2010–11	4.7	5.7	9.7	8.5	44.0	3.4	2.8	na*	78.8
2011–12	5.2	5.8	10.6	8.8	31.7	3.2	2.2	na*	67.5
2012–13	4.5	5.3	8.5	8.4	30.3	2.9	2.3	na*	62.3
2013–14	4.7	5.1	9.4	9.7	26.9	3.2	2.4	na*	61.4

na*: not applicable.

Source: BITRE (2015d).

Table T 2.5 Urban road freight by capital city

Financial year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Total capital cities
<i>billion tonne kilometres</i>									
1971–72	3.0	2.1	0.7	0.7	0.8	0.1	0.0	0.1	7.6
1972–73	3.2	2.2	0.8	0.8	0.9	0.1	0.1	0.1	8.1
1973–74	3.4	2.4	0.8	0.8	1.0	0.2	0.1	0.1	8.8
1974–75	3.5	2.5	0.9	0.8	1.0	0.2	0.1	0.1	9.0
1975–76	3.7	2.7	1.0	0.9	1.1	0.2	0.1	0.1	9.6
1976–77	4.0	2.9	1.2	1.0	1.2	0.2	0.1	0.1	10.6
1977–78	4.1	3.1	1.3	1.0	1.3	0.2	0.1	0.2	11.2
1978–79	4.4	3.4	1.5	1.1	1.4	0.2	0.1	0.2	12.3
1979–80	4.6	3.5	1.7	1.1	1.4	0.2	0.1	0.2	12.8
1980–81	4.8	3.7	1.9	1.0	1.5	0.2	0.1	0.2	13.4
1981–82	4.9	3.9	2.0	1.0	1.6	0.3	0.2	0.2	14.0
1982–83	4.9	3.9	2.0	1.0	1.5	0.3	0.2	0.2	13.9
1983–84	5.1	4.1	2.2	1.0	1.6	0.3	0.2	0.2	14.7
1984–85	5.4	4.4	2.3	1.1	1.7	0.3	0.2	0.2	15.7
1985–86	5.7	4.7	2.5	1.2	1.8	0.3	0.2	0.2	16.6
1986–87	5.9	4.9	2.6	1.2	1.9	0.3	0.2	0.2	17.3
1987–88	6.2	5.3	2.7	1.3	2.0	0.3	0.2	0.3	18.4
1988–89	6.5	5.6	2.9	1.4	2.1	0.3	0.2	0.3	19.3
1989–90	6.7	5.9	3.0	1.4	2.2	0.4	0.2	0.3	20.1
1990–91	6.7	6.0	3.0	1.4	2.3	0.3	0.2	0.3	20.2
1991–92	6.8	6.1	3.0	1.4	2.3	0.3	0.2	0.3	20.4
1992–93	7.1	6.5	3.2	1.5	2.5	0.3	0.2	0.3	21.7
1993–94	7.5	7.0	3.5	1.6	2.6	0.3	0.2	0.3	23.0
1994–95	7.9	7.4	3.7	1.7	2.8	0.3	0.2	0.2	24.3
1995–96	8.2	7.7	3.9	1.8	2.9	0.3	0.2	0.2	25.1
1996–97	8.4	7.9	4.0	1.8	2.9	0.3	0.2	0.2	25.9
1997–98	8.7	8.2	4.3	1.9	3.1	0.3	0.2	0.2	26.9
1998–99	9.0	8.7	4.7	1.9	3.2	0.3	0.2	0.2	28.3
1999–00	9.3	9.1	5.0	2.0	3.4	0.3	0.2	0.3	29.5
2000–01	9.5	9.3	5.3	2.0	3.5	0.3	0.2	0.2	30.3
2001–02	9.7	9.7	5.7	2.1	3.6	0.3	0.2	0.2	31.6
2002–03	10.0	10.0	6.1	2.2	3.8	0.3	0.2	0.3	32.7
2003–04	10.2	10.2	6.5	2.3	4.0	0.3	0.2	0.3	33.9
2004–05	10.4	10.3	6.8	2.4	4.1	0.3	0.2	0.3	34.9
2005–06	10.7	10.7	7.1	2.4	4.5	0.4	0.3	0.3	36.4
2006–07	10.9	11.1	7.7	2.6	5.1	0.4	0.3	0.3	38.2
2007–08	11.1	11.4	8.0	2.7	5.3	0.4	0.3	0.3	39.5
2008–09	10.8	11.1	8.0	2.6	5.3	0.4	0.3	0.3	38.8
2009–10	11.0	11.4	8.3	2.7	5.5	0.4	0.3	0.3	39.8
2010–11	11.3	11.6	8.6	2.8	5.8	0.4	0.3	0.3	41.1
2011–12	11.7	11.9	9.0	2.9	6.0	0.4	0.3	0.3	42.5
2012–13	12.0	12.2	9.1	2.9	6.4	0.4	0.3	0.3	43.7
2013–14	12.4	12.4	9.2	3.0	6.7	0.4	0.3	0.3	44.8
2014–15	12.7	12.7	9.4	3.1	6.9	0.4	0.3	0.3	45.9

Source: BITRE (2016d).

CHAPTER 3

Passengers

Table T 3.1 Total national passenger travel, by transport mode

Financial year	Passenger cars	Buses	Rail	Air	Other ⁱ²	Total
			billion passenger kilometres			
1974–75	125.27	7.43	10.00	8.28	15.89	166.87
1975–76	130.14	7.42	8.93	8.29	16.54	171.31
1976–77	135.96	7.50	8.87	7.99	18.08	178.40
1977–78	140.52	7.60	8.66	8.90	18.99	184.66
1978–79	144.42	7.70	8.50	9.40	19.36	189.38
1979–80	144.94	8.16	8.82	10.36	19.26	191.52
1980–81	147.14	8.72	9.11	10.70	19.69	195.37
1981–82	154.29	9.22	9.09	11.15	20.09	203.84
1982–83	154.81	10.46	8.93	10.27	19.82	204.29
1983–84	161.84	11.71	8.85	10.64	21.08	214.11
1984–85	167.93	13.02	8.83	11.34	21.99	223.11
1985–86	173.05	14.00	9.22	12.34	22.14	230.75
1986–87	176.78	15.03	9.48	13.16	22.23	236.68
1987–88	185.47	16.02	9.94	14.46	22.80	248.68
1988–89	194.41	16.87	10.16	15.07	23.76	260.26
1989–90	200.05	17.73	9.97	11.26	23.73	262.74
1990–91	200.49	17.04	9.99	15.98	22.88	266.37
1991–92	204.51	16.57	9.89	20.72	22.98	274.67
1992–93	210.81	16.51	9.66	20.99	23.39	281.36
1993–94	216.15	16.31	9.87	24.43	24.08	290.84
1994–95	222.87	16.10	10.24	26.98	25.39	301.57
1995–96	226.01	16.62	10.58	28.98	25.90	308.09
1996–97	227.68	16.43	10.85	29.98	25.95	310.89
1997–98	229.90	16.59	10.82	30.44	26.68	314.43
1998–99	235.27	16.65	11.03	31.06	27.16	321.16
1999–00	239.81	17.00	11.40	32.84	27.60	328.66
2000–01	237.16	17.26	11.98	35.68	27.89	329.98
2001–02	243.17	17.35	11.84	33.01	28.90	334.26
2002–03	249.45	17.69	11.84	35.83	29.73	344.54
2003–04	261.37	17.76	11.91	41.15	30.65	362.84
2004–05	262.06	17.84	11.86	45.90	30.89	368.55
2005–06	257.21	18.27	12.36	48.70	31.60	368.15
2006–07	260.42	18.53	12.97	53.01	32.82	377.77
2007–08	261.87	18.88	14.03	57.24	34.71	386.74
2008–09	260.70	19.24	14.77	58.63	36.02	389.36
2009–10	262.23	19.54	14.75	60.22	38.27	395.01
2010–11	264.86	19.93	14.97	64.56	39.35	403.67
2011–12	267.18	20.41	15.26	66.43	40.45	409.73
2012–13	269.62	20.78	15.22	69.67	41.55	416.85
2013–14	271.60	21.17	15.24	70.86	42.58	421.45
2014–15	275.02	21.30	15.67	70.13	43.67	425.80
2015–16	279.07	21.61	16.15	71.44	44.83	433.09

ⁱ² See end notes.

Note: Bus and rail pkm values are trend estimates - subject to later revision when final data become available
Source: BITRE estimates.

Table T 3.2 Inter-capital city passenger travel by city pair

Financial year	Syd–Mel	Syd–Can	Syd–Bne	Mel–Adl	Mel–Bne	Syd–Adl
	<i>thousand passenger movements</i>					
1999–00	7 169	9 519	5 283	2 554	2 008	1 407
2000–01	8 314	8 616	6 171	2 708	2 477	1 737
2001–02	7 293	9 225	5 400	2 664	2 638	1 397
2002–03	7 066	8 556	5 376	2 588	2 630	1 371
2003–04	7 303	8 681	5 459	2 744	2 948	1 533
2004–05	7 652	7 732	5 511	2 756	2 912	1 525
2005–06	7 761	7 230	5 287	2 805	2 911	1 572
2006–07	8 079	7 713	5 307	2 834	3 041	1 648
2007–08	8 301	7 696	5 846	2 903	2 996	1 753
2008–09	8 218	7 938	5 645	2 923	3 027	1 683
2009–10	8 817	8 148	5 815	3 064	3 119	1 897
2010–11	9 186	8 755	5 962	3 124	3 476	1 965
2011–12	8 914	8 974	5 523	2 922	3 465	1 792
2012–13	9 287	9 207	5 643	2 971	3 489	1 822
2013–14	9 513	8 920	5 582	3 092	3 524	1 924
2014–15	9 981	9 904	5 823	3 147	3 619	1 989
2015–16	10 573	10 166	6 242	3 337	3 733	2 042

Source: TRA (2016), BITRE (2016c), BITRE estimates.

Table T 3.3a Total passenger kilometres travelled by capital city—Sydney

Financial year	Passenger cars	Commercial vehicles	Motor cycles	Rail	Light rail	Bus	Ferry	Total
<i>billion passenger kilometres</i>								
1976–77	24.13	2.02	0.24	3.14	0.00	1.57	0.10	31.20
1977–78	24.80	2.10	0.24	3.09	0.00	1.60	0.11	31.94
1978–79	25.59	2.15	0.25	3.09	0.00	1.59	0.11	32.78
1979–80	25.79	2.13	0.27	3.52	0.00	1.63	0.12	33.48
1980–81	26.15	2.18	0.29	3.64	0.00	1.69	0.13	34.07
1981–82	27.17	2.26	0.32	3.76	0.00	1.68	0.14	35.33
1982–83	26.97	2.22	0.33	3.55	0.00	1.72	0.15	34.94
1983–84	28.34	2.37	0.34	3.47	0.00	1.76	0.15	36.42
1984–85	29.65	2.47	0.34	3.44	0.00	1.81	0.15	37.86
1985–86	30.51	2.54	0.31	3.71	0.00	1.84	0.16	39.07
1986–87	31.20	2.56	0.29	3.78	0.00	1.91	0.17	39.91
1987–88	32.59	2.63	0.27	4.08	0.00	1.97	0.15	41.69
1988–89	33.83	2.68	0.27	4.13	0.01	2.00	0.16	43.09
1989–90	34.70	2.63	0.24	4.23	0.01	1.96	0.18	43.95
1990–91	34.69	2.47	0.21	4.30	0.01	2.01	0.15	43.83
1991–92	35.29	2.47	0.20	4.20	0.01	2.01	0.13	44.31
1992–93	36.35	2.51	0.20	4.03	0.01	1.95	0.11	45.17
1993–94	37.20	2.60	0.20	4.13	0.01	1.98	0.11	46.23
1994–95	38.26	2.78	0.19	4.40	0.01	2.02	0.12	47.78
1995–96	38.48	2.91	0.18	4.50	0.01	2.08	0.12	48.30
1996–97	38.43	2.97	0.18	4.64	0.01	2.13	0.13	48.50
1997–98	38.99	3.09	0.17	4.67	0.01	2.18	0.12	49.23
1998–99	2.00	3.19	0.16	4.74	0.02	2.21	0.12	50.38
1999–00	40.94	3.27	0.16	4.90	0.02	2.21	0.12	51.62
2000–01	40.68	3.32	0.16	5.27	0.02	2.21	0.14	51.80
2001–02	41.52	3.40	0.17	4.89	0.02	2.12	0.13	52.24
2002–03	42.18	3.48	0.16	4.89	0.02	2.12	0.13	52.98
2003–04	44.28	3.57	0.17	4.94	0.02	2.10	0.13	55.20
2004–05	44.55	3.56	0.18	4.96	0.02	2.11	0.13	55.52
2005–06	43.70	3.59	0.20	5.05	0.02	2.11	0.13	54.80
2006–07	43.99	3.71	0.22	5.22	0.02	2.15	0.13	55.43
2007–08	44.26	3.89	0.24	5.51	0.02	2.22	0.13	56.26
2008–09	44.20	3.98	0.26	5.49	0.02	2.30	0.13	56.39
2009–10	44.63	4.17	0.28	5.32	0.02	2.31	0.14	56.87
2010–11	45.43	4.29	0.29	5.27	0.02	2.39	0.14	57.84
2011–12	45.71	4.40	0.30	5.47	0.02	2.46	0.14	58.50
2012–13	46.20	4.52	0.31	5.48	0.02	2.48	0.14	59.15
2013–14	46.44	4.65	0.32	5.61	0.01	2.50	0.15	59.68
2014–15	47.08	4.79	0.32	5.84	0.02	2.51	0.14	60.71

Source: BITRE estimates.

Table T 3.3b Total passenger kilometres travelled by capital city—Melbourne

Financial year	Passenger cars	Commercial vehicles	Motor cycles	Rail	Light rail	Bus	Ferry	Total
billion passenger kilometres								
1976–77	21.79	1.96	0.20	1.91	0.53	0.56	na*	26.94
1977–78	22.76	2.09	0.20	1.81	0.53	0.56	na*	27.95
1978–79	23.54	2.09	0.19	1.71	0.53	0.57	na*	28.63
1979–80	23.76	2.00	0.19	1.60	0.52	0.58	na*	28.66
1980–81	24.29	1.95	0.19	1.53	0.53	0.59	na*	29.09
1981–82	25.83	1.95	0.20	1.39	0.54	0.61	na*	30.51
1982–83	26.07	1.86	0.20	1.41	0.53	0.62	na*	30.69
1983–84	27.08	1.97	0.21	1.44	0.54	0.64	na*	31.88
1984–85	27.98	2.05	0.21	1.45	0.60	0.68	na*	32.97
1985–86	29.07	2.21	0.20	1.54	0.62	0.71	na*	34.36
1986–87	29.91	2.34	0.20	1.60	0.63	0.74	na*	35.43
1987–88	31.46	2.54	0.20	1.53	0.65	0.78	na*	37.15
1988–89	32.96	2.71	0.22	1.61	0.66	0.81	na*	38.98
1989–90	33.74	2.74	0.20	1.63	0.53	0.85	na*	39.71
1990–91	33.51	2.68	0.19	1.63	0.59	0.85	na*	39.45
1991–92	33.97	2.73	0.19	1.76	0.59	0.81	na*	40.06
1992–93	34.63	2.80	0.20	1.81	0.51	0.81	na*	40.77
1993–94	35.30	2.89	0.20	1.81	0.51	0.84	na*	41.55
1994–95	36.30	3.02	0.20	1.94	0.51	0.86	na*	42.84
1995–96	37.03	2.96	0.20	1.99	0.52	0.88	na*	43.58
1996–97	37.41	2.92	0.20	1.97	0.52	0.88	na*	43.90
1997–98	38.15	2.97	0.20	1.90	0.52	0.90	na*	44.64
1998–99	39.21	2.98	0.19	1.99	0.53	0.92	na*	45.81
1999–00	40.12	2.98	0.19	2.11	0.56	0.93	na*	46.89
2000–01	40.14	3.04	0.20	2.19	0.58	0.94	na*	47.09
2001–02	40.88	3.12	0.21	2.30	0.59	0.95	na*	48.05
2002–03	41.64	3.18	0.21	2.34	0.60	0.96	na*	48.92
2003–04	43.04	3.26	0.22	2.41	0.60	0.96	na*	50.50
2004–05	43.27	3.30	0.24	2.48	0.61	0.95	na*	50.84
2005–06	42.80	3.38	0.26	2.78	0.62	0.96	na*	50.80
2006–07	42.83	3.52	0.29	3.07	0.63	1.02	na*	51.35
2007–08	43.39	3.69	0.31	3.48	0.65	1.13	na*	52.65
2008–09	42.89	3.80	0.33	3.72	0.71	1.23	na*	52.68
2009–10	43.57	3.99	0.35	3.82	0.70	1.29	na*	53.72
2010–11	44.45	4.12	0.36	3.98	0.73	1.36	na*	55.01
2011–12	45.12	4.23	0.38	3.86	0.77	1.53	na*	55.89
2012–13	45.80	4.31	0.38	3.92	0.73	1.47	na*	56.62
2013–14	46.35	4.45	0.39	3.94	0.71	1.54	na*	57.38
2014–15	47.12	4.59	0.40	3.96	0.73	1.54	na*	58.33

na*: not applicable.

Source: BITRE estimates.

Table T 3.3c Total passenger kilometres travelled by capital city—Brisbane

Financial year	Passenger cars	Commercial vehicles	Motor cycles	Rail	Light rail	Bus	Ferry	Total
billion passenger kilometres								
1976–77	7.82	0.86	0.14	0.38	na*	0.49	0.00	9.70
1977–78	8.21	0.95	0.14	0.37	na*	0.51	0.00	10.17
1978–79	8.60	1.01	0.14	0.35	na*	0.50	0.00	10.61
1979–80	8.78	1.02	0.15	0.38	na*	0.49	0.00	10.83
1980–81	9.16	1.03	0.16	0.42	na*	0.45	0.00	11.23
1981–82	9.88	1.07	0.17	0.46	na*	0.47	0.00	12.05
1982–83	10.07	1.08	0.17	0.47	na*	0.49	0.00	12.29
1983–84	10.50	1.21	0.17	0.52	na*	0.47	0.00	12.87
1984–85	10.82	1.29	0.18	0.55	na*	0.49	0.00	13.33
1985–86	11.40	1.37	0.17	0.62	na*	0.49	0.00	14.04
1986–87	11.68	1.43	0.17	0.68	na*	0.51	0.00	14.47
1987–88	12.39	1.50	0.18	0.74	na*	0.55	0.00	15.36
1988–89	13.23	1.54	0.21	0.85	na*	0.61	0.00	16.44
1989–90	13.69	1.54	0.20	0.78	na*	0.58	0.00	16.80
1990–91	13.94	1.49	0.20	0.79	na*	0.62	0.00	17.04
1991–92	14.53	1.50	0.21	0.75	na*	0.64	0.00	17.63
1992–93	15.28	1.53	0.21	0.74	na*	0.63	0.00	18.39
1993–94	15.80	1.62	0.20	0.72	na*	0.66	0.00	19.00
1994–95	16.46	1.79	0.19	0.70	na*	0.72	0.01	19.86
1995–96	16.87	1.93	0.17	0.74	na*	0.71	0.01	20.43
1996–97	17.01	1.99	0.17	0.79	na*	0.71	0.01	20.68
1997–98	17.34	2.14	0.16	0.80	na*	0.71	0.01	21.15
1998–99	17.70	2.19	0.15	0.81	na*	0.65	0.01	21.51
1999–00	18.21	2.25	0.15	0.87	na*	0.69	0.01	22.17
2000–01	18.24	2.28	0.16	0.94	na*	0.70	0.01	22.32
2001–02	18.81	2.40	0.17	0.96	na*	0.72	0.01	23.06
2002–03	19.36	2.48	0.16	0.97	na*	0.74	0.01	23.73
2003–04	20.70	2.57	0.17	1.01	na*	0.78	0.01	25.25
2004–05	21.12	2.59	0.18	0.99	na*	0.84	0.02	25.74
2005–06	21.10	2.64	0.20	1.07	na*	0.94	0.02	25.96
2006–07	21.75	2.75	0.22	1.05	na*	0.98	0.02	26.78
2007–08	22.35	2.93	0.24	1.08	na*	1.03	0.02	27.65
2008–09	22.18	3.05	0.26	1.17	na*	1.11	0.02	27.80
2009–10	22.34	3.29	0.28	1.13	na*	1.19	0.02	28.25
2010–11	22.59	3.36	0.28	1.10	na*	1.24	0.02	28.58
2011–12	22.94	3.48	0.29	1.10	na*	1.29	0.02	29.11
2012–13	23.33	3.59	0.30	1.06	na*	1.30	0.02	29.60
2013–14	23.53	3.66	0.30	1.05	na*	1.29	0.02	29.87
2014–15	23.91	3.76	0.31	1.07	na*	1.26	0.03	30.33

na*: not applicable.

Source: BITRE estimates.

Table T 3.3d Total passenger kilometres travelled by capital city—Adelaide

Financial year	Passenger cars	Commercial vehicles	Motor cycles	Rail	Light rail	Bus	Ferry	Total
billion passenger kilometres								
1976–77	8.23	0.57	0.11	0.17	0.01	0.42	na*	9.50
1977–78	8.46	0.59	0.11	0.16	0.01	0.43	na*	9.77
1978–79	8.50	0.60	0.11	0.16	0.01	0.44	na*	9.82
1979–80	8.30	0.58	0.11	0.18	0.02	0.46	na*	9.64
1980–81	8.17	0.58	0.11	0.19	0.02	0.51	na*	9.58
1981–82	8.48	0.58	0.12	0.20	0.02	0.52	na*	9.93
1982–83	8.53	0.57	0.12	0.18	0.02	0.47	na*	9.90
1983–84	8.94	0.63	0.12	0.17	0.02	0.48	na*	10.37
1984–85	9.31	0.67	0.12	0.17	0.02	0.46	na*	10.75
1985–86	9.62	0.67	0.11	0.18	0.02	0.47	na*	11.07
1986–87	9.81	0.66	0.10	0.18	0.02	0.47	na*	11.24
1987–88	10.20	0.68	0.10	0.13	0.02	0.50	na*	11.62
1988–89	10.58	0.71	0.10	0.14	0.02	0.47	na*	12.02
1989–90	10.75	0.71	0.09	0.14	0.02	0.50	na*	12.20
1990–91	10.66	0.69	0.08	0.12	0.02	0.53	na*	12.10
1991–92	10.75	0.70	0.08	0.11	0.01	0.53	na*	12.19
1992–93	10.94	0.72	0.07	0.12	0.01	0.51	na*	12.38
1993–94	10.94	0.74	0.07	0.15	0.02	0.52	na*	12.44
1994–95	11.03	0.78	0.07	0.16	0.01	0.54	na*	12.60
1995–96	11.00	0.80	0.07	0.15	0.01	0.54	na*	12.57
1996–97	11.06	0.79	0.06	0.15	0.01	0.54	na*	12.62
1997–98	11.22	0.81	0.06	0.14	0.01	0.54	na*	12.79
1998–99	11.61	0.81	0.06	0.14	0.01	0.53	na*	13.15
1999–00	12.00	0.80	0.06	0.13	0.01	0.53	na*	13.53
2000–01	11.96	0.79	0.06	0.13	0.01	0.55	na*	13.50
2001–02	12.13	0.80	0.06	0.14	0.02	0.56	na*	13.71
2002–03	12.53	0.82	0.06	0.16	0.02	0.57	na*	14.16
2003–04	12.66	0.83	0.07	0.18	0.02	0.57	na*	14.32
2004–05	12.41	0.83	0.07	0.18	0.02	0.58	na*	14.08
2005–06	12.17	0.84	0.08	0.19	0.02	0.61	na*	13.90
2006–07	12.26	0.86	0.08	0.19	0.02	0.62	na*	14.03
2007–08	11.91	0.91	0.09	0.19	0.02	0.63	na*	13.76
2008–09	11.83	0.94	0.10	0.20	0.02	0.64	na*	13.73
2009–10	11.95	0.98	0.10	0.19	0.03	0.65	na*	13.91
2010–11	11.88	1.01	0.11	0.17	0.03	0.65	na*	13.84
2011–12	11.80	1.03	0.11	0.16	0.03	0.65	na*	13.77
2012–13	11.95	1.05	0.11	0.16	0.04	0.64	na*	13.94
2013–14	12.12	1.08	0.11	0.17	0.04	0.64	na*	14.16
2014–15	12.25	1.11	0.11	0.23	0.05	0.65	na*	14.40

na*: not applicable.

Source: BITRE estimates.

Table T 3.3e Total passenger kilometres travelled by capital city—Perth

Financial year	Passenger cars	Commercial vehicles	Motor cycles	Rail	Light rail	Bus	Ferry	Total
billion passenger kilometres								
1976–77	8.19	0.92	0.10	0.09	na*	0.52	0.00	9.82
1977–78	8.61	0.97	0.10	0.10	na*	0.53	0.00	10.31
1978–79	8.86	1.00	0.10	0.10	na*	0.52	0.00	10.58
1979–80	8.88	1.00	0.11	0.08	na*	0.56	0.00	10.63
1980–81	8.95	1.02	0.11	0.07	na*	0.58	0.00	10.74
1981–82	9.45	1.03	0.13	0.07	na*	0.55	0.00	11.22
1982–83	9.53	0.99	0.13	0.08	na*	0.55	0.00	11.29
1983–84	10.15	1.04	0.14	0.11	na*	0.48	0.00	11.91
1984–85	10.52	1.06	0.14	0.11	na*	0.46	0.00	12.29
1985–86	10.90	1.07	0.13	0.12	na*	0.50	0.00	12.72
1986–87	11.19	1.06	0.13	0.12	na*	0.51	0.00	13.02
1987–88	11.78	1.10	0.13	0.12	na*	0.51	0.00	13.64
1988–89	12.36	1.16	0.14	0.11	na*	0.54	0.00	14.32
1989–90	12.73	1.19	0.13	0.11	na*	0.57	0.00	14.73
1990–91	12.65	1.15	0.11	0.09	na*	0.55	0.00	14.56
1991–92	12.85	1.17	0.11	0.12	na*	0.53	0.00	14.77
1992–93	13.31	1.22	0.10	0.17	na*	0.52	0.00	15.32
1993–94	14.06	1.30	0.09	0.30	na*	0.51	0.00	16.26
1994–95	14.96	1.41	0.09	0.30	na*	0.52	0.00	17.29
1995–96	15.28	1.49	0.09	0.34	na*	0.52	0.00	17.71
1996–97	15.44	1.49	0.09	0.38	na*	0.52	0.00	17.91
1997–98	15.66	1.51	0.08	0.39	na*	0.53	0.00	18.17
1998–99	16.08	1.51	0.08	0.38	na*	0.52	0.00	18.58
1999–00	16.31	1.52	0.08	0.39	na*	0.55	0.00	18.85
2000–01	16.11	1.52	0.09	0.41	na*	0.57	0.00	18.71
2001–02	16.44	1.58	0.09	0.41	na*	0.59	0.00	19.11
2002–03	16.89	1.62	0.09	0.42	na*	0.60	0.00	19.62
2003–04	17.74	1.68	0.10	0.42	na*	0.62	0.00	20.56
2004–05	18.02	1.70	0.11	0.44	na*	0.64	0.00	20.91
2005–06	17.68	1.74	0.12	0.46	na*	0.65	0.00	20.65
2006–07	18.08	1.82	0.14	0.50	na*	0.65	0.00	21.20
2007–08	18.18	1.93	0.15	0.66	na*	0.62	0.00	21.54
2008–09	18.69	2.00	0.17	0.87	na*	0.64	0.00	22.36
2009–10	18.56	2.10	0.18	0.90	na*	0.64	0.00	22.38
2010–11	18.79	2.16	0.18	0.94	na*	0.66	0.00	22.74
2011–12	19.18	2.24	0.19	1.02	na*	0.71	0.00	23.34
2012–13	19.31	2.32	0.20	1.06	na*	0.74	0.00	23.63
2013–14	19.50	2.39	0.21	1.03	na*	0.75	0.00	23.88
2014–15	19.74	2.45	0.21	1.05	na*	0.76	0.00	24.21

na*: not applicable.

Source: BITRE estimates.

Table T 3.3f Total passenger kilometres travelled by capital city—Hobart

Financial year	Passenger cars	Commercial vehicles	Motor cycles	Rail	Light rail	Bus	Ferry	Total
billion passenger kilometres								
1976–77	1.23	0.13	0.01	na*	na*	0.12	na*	1.51
1977–78	1.31	0.14	0.01	na*	na*	0.12	na*	1.60
1978–79	1.37	0.15	0.01	na*	na*	0.11	na*	1.64
1979–80	1.39	0.15	0.01	na*	na*	0.11	na*	1.66
1980–81	1.42	0.15	0.01	na*	na*	0.11	na*	1.69
1981–82	1.47	0.16	0.01	na*	na*	0.10	na*	1.74
1982–83	1.47	0.17	0.01	na*	na*	0.09	na*	1.74
1983–84	1.53	0.18	0.01	na*	na*	0.10	na*	1.83
1984–85	1.59	0.20	0.01	na*	na*	0.10	na*	1.90
1985–86	1.67	0.19	0.01	na*	na*	0.11	na*	1.98
1986–87	1.68	0.19	0.01	na*	na*	0.11	na*	1.99
1987–88	1.75	0.19	0.01	na*	na*	0.10	na*	2.05
1988–89	1.82	0.19	0.01	na*	na*	0.10	na*	2.12
1989–90	1.91	0.18	0.01	na*	na*	0.10	na*	2.20
1990–91	1.92	0.17	0.01	na*	na*	0.10	na*	2.20
1991–92	1.95	0.18	0.01	na*	na*	0.10	na*	2.24
1992–93	2.02	0.19	0.01	na*	na*	0.10	na*	2.33
1993–94	2.07	0.21	0.01	na*	na*	0.10	na*	2.38
1994–95	2.10	0.22	0.01	na*	na*	0.10	na*	2.43
1995–96	2.12	0.22	0.01	na*	na*	0.10	na*	2.45
1996–97	2.12	0.22	0.01	na*	na*	0.09	na*	2.45
1997–98	2.09	0.22	0.01	na*	na*	0.09	na*	2.41
1998–99	2.08	0.22	0.01	na*	na*	0.09	na*	2.40
1999–00	2.08	0.22	0.01	na*	na*	0.09	na*	2.40
2000–01	2.02	0.22	0.01	na*	na*	0.09	na*	2.35
2001–02	2.06	0.23	0.01	na*	na*	0.09	na*	2.39
2002–03	2.14	0.23	0.01	na*	na*	0.09	na*	2.47
2003–04	2.25	0.24	0.01	na*	na*	0.09	na*	2.59
2004–05	2.20	0.24	0.01	na*	na*	0.09	na*	2.55
2005–06	2.17	0.24	0.01	na*	na*	0.09	na*	2.52
2006–07	2.19	0.25	0.01	na*	na*	0.09	na*	2.55
2007–08	2.19	0.27	0.01	na*	na*	0.09	na*	2.57
2008–09	2.16	0.28	0.02	na*	na*	0.10	na*	2.55
2009–10	2.14	0.29	0.02	na*	na*	0.10	na*	2.53
2010–11	2.12	0.29	0.02	na*	na*	0.10	na*	2.54
2011–12	2.12	0.30	0.02	na*	na*	0.10	na*	2.54
2012–13	2.11	0.31	0.02	na*	na*	0.10	na*	2.54
2013–14	2.11	0.31	0.02	na*	na*	0.10	na*	2.54
2014–15	2.11	0.32	0.02	na*	na*	0.10	na*	2.55

na*: not applicable.

Source: BITRE estimates.

Table T 3.3g Total passenger kilometres travelled by capital city—Darwin

Financial year	Passenger cars	Commercial vehicles	Motor cycles	Rail	Light rail	Bus	Ferry	Total
billion passenger kilometres								
1976–77	0.33	0.09	0.01	na*	na*	0.01	na*	0.44
1977–78	0.35	0.10	0.01	na*	na*	0.01	na*	0.46
1978–79	0.37	0.10	0.01	na*	na*	0.01	na*	0.49
1979–80	0.38	0.10	0.01	na*	na*	0.02	na*	0.51
1980–81	0.41	0.11	0.01	na*	na*	0.02	na*	0.55
1981–82	0.45	0.11	0.01	na*	na*	0.02	na*	0.60
1982–83	0.47	0.10	0.02	na*	na*	0.03	na*	0.61
1983–84	0.51	0.11	0.02	na*	na*	0.03	na*	0.66
1984–85	0.55	0.11	0.02	na*	na*	0.03	na*	0.71
1985–86	0.61	0.12	0.01	na*	na*	0.03	na*	0.77
1986–87	0.63	0.12	0.01	na*	na*	0.03	na*	0.79
1987–88	0.65	0.12	0.01	na*	na*	0.03	na*	0.82
1988–89	0.66	0.12	0.01	na*	na*	0.04	na*	0.84
1989–90	0.68	0.12	0.01	na*	na*	0.04	na*	0.86
1990–91	0.69	0.12	0.01	na*	na*	0.05	na*	0.86
1991–92	0.70	0.12	0.01	na*	na*	0.05	na*	0.88
1992–93	0.72	0.12	0.01	na*	na*	0.05	na*	0.90
1993–94	0.74	0.13	0.01	na*	na*	0.05	na*	0.93
1994–95	0.79	0.14	0.01	na*	na*	0.05	na*	0.99
1995–96	0.83	0.14	0.01	na*	na*	0.06	na*	1.04
1996–97	0.84	0.15	0.01	na*	na*	0.06	na*	1.06
1997–98	0.86	0.16	0.01	na*	na*	0.06	na*	1.08
1998–99	0.87	0.16	0.01	na*	na*	0.06	na*	1.10
1999–00	0.88	0.16	0.01	na*	na*	0.06	na*	1.11
2000–01	0.85	0.16	0.01	na*	na*	0.06	na*	1.08
2001–02	0.86	0.16	0.01	na*	na*	0.06	na*	1.09
2002–03	0.87	0.17	0.01	na*	na*	0.06	na*	1.10
2003–04	0.89	0.17	0.01	na*	na*	0.06	na*	1.14
2004–05	0.88	0.17	0.01	na*	na*	0.06	na*	1.13
2005–06	0.87	0.18	0.01	na*	na*	0.06	na*	1.13
2006–07	0.90	0.19	0.01	na*	na*	0.06	na*	1.17
2007–08	0.93	0.20	0.01	na*	na*	0.07	na*	1.21
2008–09	0.95	0.21	0.01	na*	na*	0.07	na*	1.24
2009–10	0.95	0.22	0.02	na*	na*	0.07	na*	1.26
2010–11	0.96	0.23	0.02	na*	na*	0.07	na*	1.28
2011–12	0.97	0.23	0.02	na*	na*	0.07	na*	1.29
2012–13	0.98	0.24	0.02	na*	na*	0.09	na*	1.33
2013–14	1.00	0.25	0.02	na*	na*	0.11	na*	1.38
2014–15	1.00	0.26	0.02	na*	na*	0.11	na*	1.38

na*: not applicable.

Source: BITRE estimates.

Table T 3.3h Total passenger kilometres travelled by capital city—Canberra

Financial year	Passenger cars	Commercial vehicles	Motor cycles	Rail	Light rail	Bus	Ferry	Total
billion passenger kilometres								
1976–77	1.99	0.16	0.02	na*	na*	0.09	na*	2.27
1977–78	2.08	0.18	0.02	na*	na*	0.09	na*	2.37
1978–79	2.15	0.18	0.02	na*	na*	0.11	na*	2.46
1979–80	2.17	0.18	0.03	na*	na*	0.12	na*	2.50
1980–81	2.20	0.18	0.03	na*	na*	0.12	na*	2.54
1981–82	2.34	0.19	0.03	na*	na*	0.12	na*	2.68
1982–83	2.37	0.19	0.03	na*	na*	0.14	na*	2.73
1983–84	2.49	0.20	0.04	na*	na*	0.16	na*	2.89
1984–85	2.62	0.21	0.04	na*	na*	0.17	na*	3.03
1985–86	2.74	0.22	0.04	na*	na*	0.16	na*	3.16
1986–87	2.82	0.23	0.03	na*	na*	0.17	na*	3.26
1987–88	2.99	0.24	0.03	na*	na*	0.18	na*	3.44
1988–89	3.16	0.25	0.04	na*	na*	0.18	na*	3.62
1989–90	3.29	0.25	0.03	na*	na*	0.18	na*	3.76
1990–91	3.34	0.25	0.03	na*	na*	0.18	na*	3.81
1991–92	3.45	0.25	0.03	na*	na*	0.18	na*	3.91
1992–93	3.59	0.26	0.03	na*	na*	0.18	na*	4.06
1993–94	3.70	0.26	0.03	na*	na*	0.18	na*	4.16
1994–95	3.79	0.28	0.03	na*	na*	0.19	na*	4.28
1995–96	3.82	0.29	0.03	na*	na*	0.19	na*	4.33
1996–97	3.83	0.28	0.02	na*	na*	0.20	na*	4.34
1997–98	3.84	0.29	0.02	na*	na*	0.20	na*	4.36
1998–99	3.93	0.29	0.02	na*	na*	0.19	na*	4.44
1999–00	4.02	0.30	0.02	na*	na*	0.19	na*	4.53
2000–01	3.95	0.30	0.02	na*	na*	0.19	na*	4.45
2001–02	4.02	0.31	0.03	na*	na*	0.19	na*	4.55
2002–03	4.16	0.32	0.03	na*	na*	0.20	na*	4.70
2003–04	4.34	0.33	0.03	na*	na*	0.20	na*	4.89
2004–05	4.34	0.33	0.03	na*	na*	0.20	na*	4.90
2005–06	4.28	0.33	0.03	na*	na*	0.21	na*	4.85
2006–07	4.33	0.34	0.03	na*	na*	0.20	na*	4.91
2007–08	4.35	0.36	0.04	na*	na*	0.20	na*	4.95
2008–09	4.35	0.37	0.04	na*	na*	0.21	na*	4.97
2009–10	4.38	0.38	0.04	na*	na*	0.22	na*	5.02
2010–11	4.43	0.39	0.05	na*	na*	0.22	na*	5.08
2011–12	4.51	0.41	0.05	na*	na*	0.22	na*	5.18
2012–13	4.58	0.42	0.05	na*	na*	0.22	na*	5.26
2013–14	4.60	0.43	0.05	na*	na*	0.22	na*	5.29
2014–15	4.64	0.44	0.05	na*	na*	0.22	na*	5.35

na*: not applicable.

Source: BITRE estimates.

Table T 3.3i Total passenger kilometres travelled by capital city—Australian capital cities

Financial year	Passenger cars	Commercial vehicles	Motor cycles	Rail	Light rail	Bus ^f	Ferry	Total
billion passenger kilometres								
1976–77	73.73	6.70	0.82	5.68	0.54	3.78	0.12	91.39
1977–78	76.58	7.11	0.83	5.53	0.54	3.86	0.12	94.57
1978–79	78.97	7.28	0.83	5.41	0.54	3.86	0.12	97.01
1979–80	79.45	7.16	0.88	5.77	0.54	3.98	0.13	97.92
1980–81	80.77	7.20	0.92	5.85	0.55	4.07	0.13	99.49
1981–82	85.07	7.35	1.00	5.88	0.56	4.07	0.14	104.06
1982–83	85.48	7.19	1.01	5.69	0.55	4.11	0.15	104.19
1983–84	89.53	7.72	1.04	5.70	0.56	4.12	0.15	108.83
1984–85	93.03	8.07	1.06	5.71	0.62	4.20	0.16	112.84
1985–86	96.53	8.38	0.99	6.16	0.64	4.31	0.16	117.18
1986–87	98.93	8.59	0.96	6.36	0.65	4.45	0.17	120.12
1987–88	103.80	8.99	0.94	6.60	0.67	4.62	0.15	125.77
1988–89	108.61	9.35	1.00	6.84	0.70	4.75	0.17	131.42
1989–90	111.50	9.37	0.92	6.88	0.56	4.79	0.18	134.20
1990–91	111.40	9.02	0.84	6.93	0.62	4.88	0.15	133.84
1991–92	113.50	9.11	0.84	6.94	0.62	4.85	0.13	135.99
1992–93	116.86	9.35	0.83	6.88	0.54	4.74	0.11	139.32
1993–94	119.80	9.75	0.81	7.11	0.54	4.82	0.12	142.94
1994–95	123.70	10.41	0.79	7.50	0.54	5.00	0.13	148.06
1995–96	125.43	10.75	0.75	7.73	0.55	5.08	0.13	150.41
1996–97	126.16	10.81	0.74	7.93	0.54	5.13	0.14	151.46
1997–98	128.15	11.19	0.71	7.90	0.54	5.21	0.13	153.84
1998–99	131.42	11.35	0.68	8.06	0.56	5.16	0.13	157.37
1999–00	134.57	11.49	0.69	8.39	0.60	5.23	0.13	161.10
2000–01	133.95	11.63	0.71	8.94	0.61	5.30	0.15	161.29
2001–02	136.72	12.00	0.75	8.70	0.62	5.27	0.14	164.20
2002–03	139.75	12.30	0.74	8.78	0.63	5.34	0.14	167.69
2003–04	145.90	12.65	0.78	8.96	0.63	5.38	0.14	174.44
2004–05	146.80	12.71	0.84	9.06	0.64	5.48	0.15	175.67
2005–06	144.77	12.95	0.91	9.56	0.66	5.63	0.15	174.62
2006–07	146.33	13.45	1.01	10.03	0.67	5.78	0.15	177.42
2007–08	147.56	14.18	1.10	10.93	0.69	5.98	0.15	180.59
2008–09	147.25	14.62	1.19	11.45	0.76	6.30	0.16	181.72
2009–10	148.52	15.41	1.27	11.35	0.75	6.48	0.16	183.94
2010–11	150.65	15.85	1.30	11.47	0.78	6.70	0.16	186.91
2011–12	152.35	16.32	1.34	11.60	0.82	7.03	0.16	189.62
2012–13	154.27	16.75	1.38	11.68	0.79	7.02	0.17	192.07
2013–14	155.66	17.23	1.42	11.79	0.76	7.14	0.18	194.17
2014–15	157.85	17.72	1.44	12.14	0.80	7.13	0.17	197.26

^f Total bus pkt values are calculated as the sum of urban passenger transport (UPT) bus values and private bus usage. The UPT bus values refer solely to public route buses, where as private bus values include private bus usage such as by charter buses.

Source: BITRE estimates.

Table T 3.4a Method of travel to work, by state/territory—New South Wales

Census year	Public transport	One method only							Public transport and other method ¹³
		Taxi	Car, as driver	Car, as passenger	Truck	Motor bike/motor scooter	Bicycle	Walked only	
Number of employed persons									
1981	256 812	11 767	1 105 606	188 679	na	32 294	15 682	122 544	na
1986	225 068	10 632	1 164 920	171 024	na	26 294	18 851	118 626	na
1991	211 372	8 407	1 197 033	168 743	na	17 269	16 970	123 248	86 035
1996	225 515	9 496	1 396 204	176 686	na	16 423	17 305	114 538	97 989
2001	249 096	8 223	1 487 981	168 862	54 094	14 157	17 730	114 927	112 728
2006	265 113	8 219	1 639 528	166 871	45 953	16 495	19 274	127 446	93 564
2011	317 806	7 730	1 807 359	157 359	38 584	19 629	23 358	128 340	113 376

¹³ See end notes.

na: not available.

Source: ABS (2012b).

Table T 3.4b Method of travel to work, by state/territory—Victoria

Census year	Public transport	One method only							Public transport and other method ¹³
		Taxi	Car, as driver	Car, as passenger	Truck	Motor bike/motor scooter	Bicycle	Walked only	
Number of employed persons									
1981	157 446	6 894	890 359	151 666	na	13 757	23 737	83 208	na
1986	134 654	5 873	986 891	132 471	na	12 132	24 022	79 580	na
1991	106 427	4 022	1 008 838	114 370	na	8 704	18 334	74 133	41 684
1996	103 778	4 989	1 157 773	114 478	na	8 414	17 190	63 668	46 918
2001	119 408	4 520	1 276 600	109 752	25 682	8 376	18 910	64 732	57 770
2006	143 412	4 555	1 394 017	111 030	22 806	10 838	25 180	80 539	63 067
2011	190 018	4 887	1 554 490	116 099	20 122	10 645	30 913	83 525	87 112

¹³ See end notes.

na: not available.

Source: ABS (2012b).

Table T 3.4c Method of travel to work, by state/territory—Queensland

Census year	Public transport	One method only							Public transport and other method ¹³
		Taxi	Car, as driver	Car, as passenger	Truck	Motor bike/motor scooter	Bicycle	Walked only	
Number of employed persons									
1981	53 762	5 213	462 167	93 082	na	23 462	15 586	56 752	na
1986	59 836	5 131	553 352	90 210	na	20 495	19 469	62 369	na
1991	55 908	3 787	624 144	93 935	na	16 819	22 964	62 908	16 016
1996	62 621	5 255	809 145	111 524	na	16 608	20 454	62 025	18 470
2001	68 732	4 020	906 073	112 409	30 538	15 601	20 252	60 529	24 510
2006	91 302	4 531	1 090 011	123 254	29 283	20 071	20 580	72 981	27 915
2011	113 051	4 335	1 248 540	125 270	25 604	19 101	21 576	75 561	39 650

¹³ See end notes.

na: not available.

Source: ABS (2012b).

Table T 3.4d Method of travel to work, by state/territory—South Australia

Census year	One method only								Public transport and other method ¹³
	Public transport	Taxi	Car, as driver	Car, as passenger	Truck	Motor bike/motor scooter	Bicycle	Walked only	
Number of employed persons									
1981	49 234	1 740	289 771	48 814	na	10 922	10 700	25 988	na
1986	41 952	1 954	322 855	44 187	na	9 376	10 415	28 744	na
1991	33 062	1 453	322 141	41 368	na	5 600	8 662	26 514	7 033
1996	27 567	1 840	363 074	39 302	na	3 740	5 962	21 015	6 539
2001	28 282	1 475	392 511	37 455	7 298	2 904	5 889	21 553	7 837
2006	36 140	1 458	429 822	38 720	6 609	4 324	7 942	24 862	8 298
2011	39 880	1 549	471 362	39 168	5 881	4 059	7 503	23 623	9 931

¹³ See end notes.

na: not available.

Source: ABS (2012b).

Table T 3.4e Method of travel to work, by state/territory—Western Australia

Census year	One method only								Public transport and other method ¹³
	Public transport	Taxi	Car, as driver	Car, as passenger	Truck	Motor bike/motor scooter	Bicycle	Walked only	
Number of employed persons									
1981	37 945	2 060	312 381	51 664	na	7 083	6 560	26 188	na
1986	36 629	2 191	324 791	48 071	na	6 925	7 830	27 995	na
1991	33 026	1 206	361 689	46 036	na	6 022	9 102	26 828	7 113
1996	33 163	1 865	453 690	55 553	na	4 817	7 152	28 440	13 566
2001	34 294	1 521	498 685	51 929	11 019	4 247	8 279	28 307	17 701
2006	47 087	1 972	570 271	58 748	10 910	5 176	9 294	31 757	19 833
2011	65 538	2 218	662 949	63 485	10 485	6 508	11 758	35 995	37 158

¹³ See end notes.

na: not available.

Source: ABS (2012b).

Table T 3.4f Method of travel to work, by state/territory—Tasmania

Census year	One method only								Public transport and other method ¹³
	Public transport	Taxi	Car, as driver	Car, as passenger	Truck	Motor bike/motor scooter	Bicycle	Walked only	
Number of employed persons									
1981	11 166	645	94 613	18 579	na	1 207	1 043	11 541	na
1986	8 622	693	101 797	17 505	na	1 108	1 244	12 265	na
1991	5 924	546	97 245	14 746	na	779	1 012	10 712	858
1996	5 342	551	109 633	14 441	na	838	964	9 466	811
2001	4 290	416	110 241	12 645	2 740	825	1 145	10 070	779
2006	5 156	495	125 485	14 506	2 572	1 089	1 478	11 693	805
2011	5 672	560	137 140	14 799	2 040	1 144	1 372	10 850	1 134

¹³ See end notes.

na: not available.

Source: ABS (2012b).

Table T 3.4g Method of travel to work, by state/territory—Northern Territory

Census year	Public transport	Taxi	Car, as driver	Car, as passenger	One method only			Walked only	Public transport and other method ¹³
					Truck	Motor bike/motor scooter	Bicycle		
Number of employed persons									
1981	2 907	396	24 170	5 847	na	1 387	1 641	6 738	na
1986	2 429	537	32 209	7 021	na	1 391	2 185	6 934	na
1991	2 389	317	31 781	6 118	na	1 146	2 908	6 938	218
1996	2 887	477	40 865	7 445	na	1 040	2 636	9 369	381
2001	2 711	411	44 343	7 261	1 050	918	2 846	10 561	483
2006	3 082	328	46 702	7 114	795	978	2 579	10 347	369
2011	3 306	327	55 435	7 750	727	1 419	2 742	10 863	518

¹³ See end notes.

na: not available.

Source: ABS (2012b).

Table T 3.4h Method of travel to work, by state/territory—Australian Capital Territory

Census year	Public transport	Taxi	Car, as driver	Car, as passenger	One method only			Walked only	Public transport and other method ¹³
					Truck	Motor bike/motor scooter	Bicycle		
Number of employed persons									
1981	8 642	405	61 213	10 194	na	1 417	1 902	3 802	na
1986	9 614	540	77 313	11 524	na	1 310	2 185	4 084	na
1991	9 680	325	78 981	12 363	na	906	2 043	4 726	1 440
1996	8 638	540	89 613	12 713	na	986	2 760	5 373	1 728
2001	7 506	561	99 585	12 845	1 695	1 069	3 115	5 741	1 595
2006	10 374	411	107 608	13 011	1 471	1 766	3 757	7 399	1 362
2011	11 208	463	122 109	13 626	1 284	1 800	4 671	8 164	1 899

¹³ See end notes.

na: not available.

Source: ABS (2012b).

Table T 3.4i Method of travel to work by state/territory—total Australia

Census year	Public transport	Taxi	Car, as driver	Car, as passenger	One method only			Walked only	Public transport and other method ¹³
					Truck	Motor bike/motor scooter	Bicycle		
Number of employed persons									
1981	577 914	29 120	3 240 280	568 525	na	91 529	76 851	336 761	na
1986	518 804	27 551	3 564 128	522 013	na	79 031	86 201	340 597	na
1991	457 788	20 063	3 721 852	497 679	na	57 245	81 995	336 007	160 397
1996	469 511	25 013	4 419 997	532 142	na	52 866	74 423	313 894	186 402
2001	514 320	21 147	4 816 019	513 158	134 116	48 097	78 166	316 420	223 403
2006	601 666	21 969	5 403 443	533 252	120 399	60 741	90 085	367 020	215 213
2011	746 479	22 069	6 059 384	537 556	104 727	64 305	103 893	376 921	290 778

¹³ See end notes.

na: not available.

Source: ABS (2012b).

Table T 3.4j Method of travel to work, by state/territory—total employed persons

Month and year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total Australia
Number of employed persons									
June 1981	2 258 262	1 724 384	962 389	560 940	574 751	174 612	56 726	101 881	6 413 945
June 1986	2 378 161	1 856 220	1 118 679	606 673	660 945	182 977	74 271	129 752	7 007 678
August 1991	2 588 182	1 963 645	1 296 483	627 912	728 773	194 338	75 287	146 082	7 620 703
August 1996	2 770 218	2 064 961	1 497 430	645 811	845 583	199 774	87 090	154 997	8 265 865
August 2001	3 007 640	2 240 409	1 663 074	671 810	925 757	193 121	98 703	171 382	8 971 895
August 2006	3 226 341	2 505 369	2 036 215	751 359	1 067 806	221 511	101 650	195 523	10 105 773
August 2011	3 478 967	2 786 526	2 260 729	801 295	1 241 835	234 673	119 989	206 656	11 130 669
August 2015	3 709 530	2 919 569	2 336 461	801 087	1 349 951	240 356	134 888	206 456	11 698 299

Source: ABS (2015c).

CHAPTER 4

Road

Figure T 4 Map of national road network

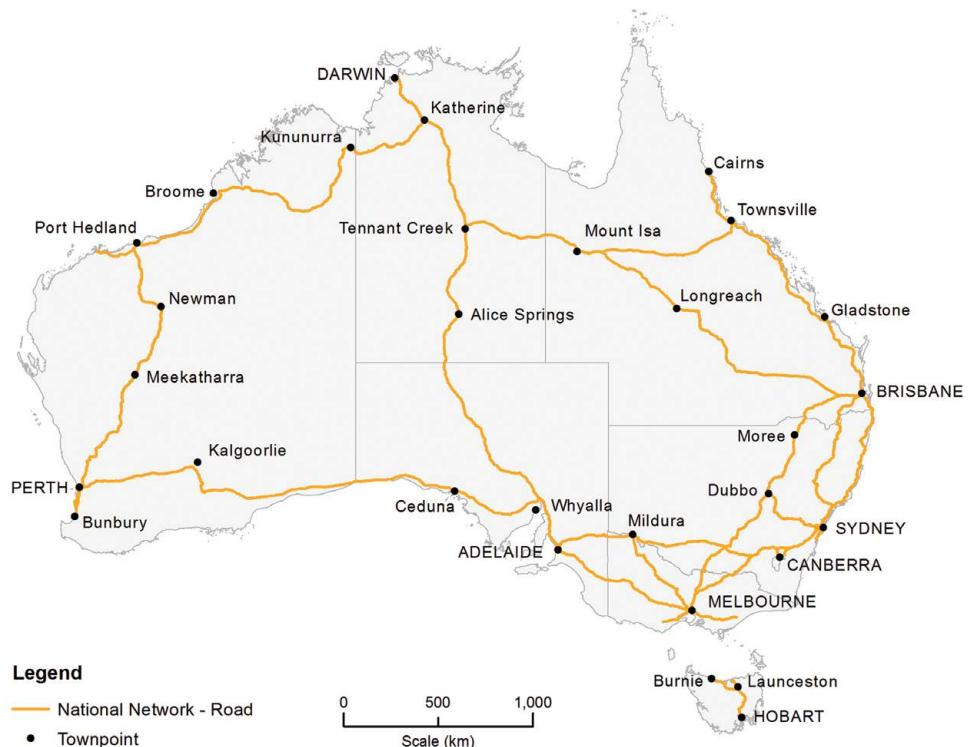


Table T 4.1 Intercapital road distances

	Sydney km	Melbourne km	Brisbane km	Adelaide km	Perth km	Darwin km	Canberra km
Sydney	-	875	922	1 405	4 036	3 986	285
Melbourne	-	-	1 677	726	3 416	3 750	660
Brisbane	-	-	-	2 051	4 682	3 421	1 197
Adelaide	-	-	-	-	2 690	3 024	1 193
Perth	-	-	-	-	-	3 984	3 824
Darwin	-	-	-	-	-	-	4 156

Source: Whereis.com.

Table T 4.2 Total vehicle kilometres travelled, by vehicle type

Financial year	Passenger cars	Motor cycles	Buses	Light commercial vehicles	Rigid trucks	Articulated trucks	Total
billion vehicle kilometres travelled							
1970–71	60.73	1.01	0.66	9.84	4.70	1.66	78.61
1971–72	64.80	1.10	0.65	10.42	4.69	1.76	83.43
1972–73	67.33	1.20	0.68	11.01	4.71	1.80	86.72
1973–74	71.99	1.30	0.69	12.02	4.87	1.90	92.76
1974–75	75.21	1.40	0.69	12.96	5.03	1.91	97.19
1975–76	78.40	1.64	0.69	13.12	5.25	2.03	101.12
1976–77	82.08	1.68	0.70	14.83	5.15	2.20	106.64
1977–78	85.02	1.73	0.71	16.11	5.10	2.22	110.90
1978–79	87.56	1.77	0.73	16.67	5.13	2.60	114.46
1979–80	88.06	1.90	0.77	16.79	5.65	2.80	115.97
1980–81	89.57	2.00	0.82	17.34	6.13	2.88	118.74
1981–82	94.14	2.18	0.86	17.86	6.97	3.06	125.07
1982–83	94.64	2.20	0.95	17.89	6.22	3.03	124.94
1983–84	99.13	2.25	1.05	19.32	6.17	3.41	131.32
1984–85	103.07	2.28	1.14	20.52	6.34	3.59	136.95
1985–86	106.47	2.10	1.22	21.23	6.22	3.67	140.91
1986–87	109.00	2.00	1.30	21.72	6.28	3.69	144.00
1987–88	114.57	1.92	1.39	22.77	6.69	3.95	151.29
1988–89	120.30	2.00	1.47	23.73	6.73	4.05	158.28
1989–90	124.00	1.80	1.56	23.90	6.84	4.13	162.23
1990–91	124.47	1.62	1.52	23.30	6.12	4.07	161.10
1991–92	127.18	1.61	1.48	24.17	5.91	4.10	164.46
1992–93	131.33	1.62	1.49	24.95	5.82	4.39	169.61
1993–94	134.91	1.59	1.55	25.76	6.02	4.53	174.35
1994–95	139.38	1.57	1.59	27.27	6.32	4.82	180.95
1995–96	141.59	1.52	1.64	28.28	6.65	5.02	184.71
1996–97	142.87	1.52	1.65	28.65	7.15	5.21	187.06
1997–98	144.51	1.46	1.69	29.94	7.24	5.40	190.24
1998–99	148.08	1.40	1.71	30.69	7.17	5.55	194.61
1999–00	151.17	1.42	1.76	31.33	7.29	5.70	198.67
2000–01	149.75	1.46	1.80	31.70	7.17	5.62	197.51
2001–02	153.63	1.55	1.82	32.94	7.44	5.81	203.19
2002–03	157.71	1.52	1.86	34.02	7.70	5.97	208.78
2003–04	165.35	1.60	1.89	35.15	7.85	6.16	218.00
2004–05	166.02	1.72	1.91	35.38	8.10	6.32	219.45
2005–06	162.91	1.88	1.96	36.28	8.39	6.46	217.89
2006–07	164.94	2.08	2.00	37.64	8.62	6.72	221.99
2007–08	165.73	2.28	2.06	39.26	8.86	6.91	225.10
2008–09	165.08	2.44	2.13	40.19	8.75	6.83	225.43
2009–10	166.15	2.63	2.20	41.85	8.99	6.95	228.77
2010–11	168.03	2.68	2.27	43.12	9.21	7.20	232.51
2011–12	169.58	2.77	2.36	44.48	9.45	7.45	236.10
2012–13	171.20	2.86	2.40	45.83	9.65	7.65	239.60
2013–14	172.50	2.93	2.44	47.08	9.84	7.84	242.63
2014–15	174.70	2.98	2.46	48.36	10.06	8.07	246.62
2015–16	177.32	3.05	2.48	49.71	10.32	8.32	251.20

Note: 2015–16 data are preliminary/provisional.

Source: BITRE (2015b) and BITRE estimates.

Table T 4.3 Total vehicle kilometres travelled, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
billion vehicle kilometres travelled									
1970–71	27.76	21.45	10.77	7.42	7.49	2.30	0.51	0.91	78.61
1971–72	29.31	22.78	11.52	7.76	8.04	2.42	0.57	1.02	83.43
1972–73	30.24	23.65	12.17	8.00	8.43	2.50	0.61	1.12	86.72
1973–74	31.99	25.24	13.23	8.61	9.10	2.65	0.68	1.26	92.76
1974–75	33.18	26.38	14.11	9.09	9.65	2.74	0.67	1.37	97.19
1975–76	34.00	27.48	14.95	9.49	10.17	2.82	0.75	1.47	101.12
1976–77	35.60	28.96	15.84	9.98	10.91	2.95	0.84	1.57	106.64
1977–78	36.77	30.05	16.70	10.29	11.49	3.07	0.89	1.64	110.90
1978–79	38.12	30.76	17.56	10.40	11.84	3.15	0.94	1.70	114.46
1979–80	38.83	30.83	18.18	10.28	11.97	3.16	0.99	1.72	115.97
1980–81	39.90	31.30	19.12	10.27	12.16	3.19	1.04	1.76	118.74
1981–82	41.72	32.99	20.60	10.68	12.79	3.32	1.12	1.86	125.07
1982–83	41.18	33.15	20.85	10.69	12.73	3.33	1.13	1.89	124.94
1983–84	43.23	34.73	21.91	11.28	13.45	3.52	1.21	1.99	131.32
1984–85	45.11	36.22	22.79	11.80	13.94	3.69	1.28	2.10	136.95
1985–86	46.03	37.47	23.59	12.14	14.35	3.79	1.34	2.20	140.91
1986–87	46.70	38.63	24.20	12.36	14.66	3.82	1.36	2.27	144.00
1987–88	48.65	40.92	25.65	12.87	15.43	3.97	1.40	2.41	151.29
1988–89	50.42	42.99	27.29	13.32	16.16	4.12	1.42	2.54	158.28
1989–90	51.48	44.02	28.22	13.51	16.63	4.28	1.45	2.64	162.23
1990–91	50.93	43.54	28.49	13.30	16.48	4.26	1.43	2.67	161.10
1991–92	51.80	44.20	29.73	13.43	16.74	4.34	1.46	2.76	164.46
1992–93	53.38	45.13	31.30	13.69	17.25	4.49	1.50	2.87	169.61
1993–94	54.82	46.06	32.55	13.77	18.07	4.60	1.54	2.95	174.35
1994–95	56.71	47.38	34.31	13.99	19.17	4.73	1.62	3.04	180.95
1995–96	57.43	48.45	35.52	14.06	19.69	4.79	1.70	3.08	184.71
1996–97	57.76	49.38	36.10	14.19	20.00	4.81	1.73	3.09	187.06
1997–98	58.85	49.88	37.03	14.43	20.41	4.77	1.76	3.11	190.24
1998–99	60.24	51.06	37.86	14.84	20.89	4.76	1.78	3.17	194.61
1999–00	61.72	51.70	38.99	15.26	21.19	4.77	1.80	3.23	198.67
2000–01	61.50	51.06	39.15	15.20	21.00	4.67	1.75	3.18	197.51
2001–02	62.85	52.86	40.64	15.50	21.52	4.79	1.78	3.26	203.19
2002–03	64.01	54.53	41.98	16.01	22.10	4.97	1.82	3.36	208.78
2003–04	66.72	56.67	44.62	16.26	23.14	5.20	1.87	3.51	218.00
2004–05	67.15	56.82	45.32	16.07	23.54	5.16	1.86	3.52	219.45
2005–06	66.45	56.10	45.59	15.86	23.42	5.12	1.86	3.49	217.89
2006–07	67.32	56.74	47.04	16.11	24.06	5.25	1.92	3.55	221.99
2007–08	67.94	57.68	48.25	15.92	24.46	5.28	1.99	3.58	225.10
2008–09	68.03	57.38	48.12	15.90	25.13	5.26	2.04	3.59	225.43
2009–10	68.99	58.62	48.86	16.13	25.25	5.24	2.05	3.63	228.77
2010–11	70.42	59.90	49.27	16.16	25.74	5.27	2.06	3.68	232.51
2011–12	71.20	61.02	50.15	16.19	26.40	5.30	2.07	3.76	236.10
2012–13	72.21	61.85	51.09	16.38	26.83	5.30	2.11	3.82	239.60
2013–14	72.97	62.79	51.62	16.66	27.30	5.32	2.12	3.86	242.63
2014–15	74.16	63.89	52.55	16.88	27.74	5.34	2.14	3.91	246.62
2015–16	75.61	65.09	53.61	17.08	28.31	5.36	2.16	3.96	251.20

Note: 2015–16 data are preliminary/provisional.

NSW includes Jervis Bay.

Source: BITRE (2015b) and BITRE estimates.

Table T 4.4 Total vehicle kilometres travelled, by capital city

Financial year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Total
billion vehicle kilometres travelled									
1970–71	14.79	12.31	4.34	4.57	4.52	0.72	0.21	0.90	42.36
1971–72	15.64	13.08	4.68	4.81	4.87	0.76	0.23	1.01	45.09
1972–73	16.15	13.60	4.98	5.00	5.13	0.78	0.26	1.11	47.02
1973–74	17.10	14.51	5.43	5.43	5.58	0.84	0.29	1.25	50.43
1974–75	17.76	15.36	5.76	5.76	5.95	0.89	0.25	1.36	53.10
1975–76	18.23	16.21	6.14	6.04	6.28	0.94	0.31	1.46	55.61
1976–77	19.07	17.23	6.51	6.35	6.72	1.00	0.34	1.56	58.78
1977–78	19.68	18.06	6.88	6.53	7.07	1.08	0.35	1.63	61.29
1978–79	20.36	18.63	7.23	6.57	7.28	1.12	0.38	1.69	63.24
1979–80	20.69	18.78	7.41	6.44	7.37	1.14	0.40	1.71	63.95
1980–81	21.15	19.18	7.72	6.39	7.50	1.17	0.43	1.75	65.27
1981–82	22.14	20.33	8.29	6.63	7.91	1.22	0.47	1.85	68.84
1982–83	21.94	20.40	8.44	6.66	7.94	1.23	0.47	1.88	68.97
1983–84	23.09	21.28	8.91	7.03	8.42	1.30	0.51	1.98	72.54
1984–85	24.19	22.12	9.31	7.37	8.74	1.37	0.55	2.09	75.75
1985–86	24.85	23.10	9.82	7.59	9.03	1.43	0.59	2.19	78.60
1986–87	25.39	23.94	10.12	7.74	9.24	1.44	0.61	2.26	80.75
1987–88	26.54	25.41	10.76	8.07	9.75	1.49	0.63	2.40	85.05
1988–89	27.50	26.73	11.43	8.38	10.27	1.54	0.64	2.53	89.03
1989–90	28.05	27.38	11.77	8.52	10.57	1.60	0.65	2.64	91.18
1990–91	27.76	27.11	11.88	8.41	10.44	1.59	0.65	2.66	90.52
1991–92	28.25	27.59	12.38	8.51	10.63	1.63	0.67	2.75	92.39
1992–93	29.10	28.23	12.99	8.67	11.03	1.70	0.69	2.86	95.27
1993–94	29.89	28.88	13.50	8.71	11.66	1.75	0.71	2.94	98.05
1994–95	30.95	29.81	14.23	8.85	12.45	1.79	0.76	3.03	101.88
1995–96	31.45	30.34	14.77	8.87	12.83	1.82	0.79	3.08	103.95
1996–97	31.69	30.68	15.05	8.94	13.03	1.82	0.82	3.09	105.11
1997–98	32.30	31.31	15.52	9.08	13.25	1.79	0.84	3.11	107.19
1998–99	33.12	32.03	15.83	9.34	13.55	1.78	0.85	3.17	109.69
1999–2000	33.97	32.70	16.31	9.61	13.75	1.79	0.86	3.23	112.21
2000–01	33.89	32.80	16.38	9.57	13.62	1.75	0.84	3.18	112.03
2001–02	34.65	33.53	16.99	9.74	13.97	1.79	0.85	3.25	114.77
2002–03	35.30	34.21	17.54	10.05	14.37	1.85	0.87	3.36	117.55
2003–04	36.88	35.35	18.66	10.18	15.08	1.94	0.89	3.50	122.49
2004–05	37.12	35.65	19.05	10.03	15.35	1.92	0.89	3.51	123.52
2005–06	36.64	35.50	19.19	9.90	15.22	1.90	0.90	3.49	122.75
2006–07	37.04	35.79	19.85	10.01	15.64	1.94	0.93	3.54	124.74
2007–08	37.44	36.42	20.50	9.84	15.84	1.95	0.97	3.57	126.52
2008–09	37.47	36.17	20.53	9.81	16.27	1.94	0.99	3.59	126.77
2009–10	37.98	36.89	20.93	9.94	16.31	1.93	1.00	3.62	128.62
2010–11	38.78	37.76	21.27	9.94	16.59	1.94	1.02	3.68	130.97
2011–12	39.18	38.49	21.73	9.93	17.00	1.94	1.03	3.76	133.05
2012–13	39.72	39.10	22.21	10.06	17.23	1.95	1.06	3.82	135.15
2013–14	40.11	39.71	22.48	10.23	17.51	1.96	1.08	3.85	136.93
2014–15	40.78	40.46	22.91	10.37	17.80	1.97	1.09	3.90	139.29
2015–16	41.62	41.24	23.45	10.50	18.22	1.98	1.11	3.96	142.10

Note: 2015–16 data are preliminary/provisional.

Source: BITRE (2015b) and BITRE estimates.

Table T 4.5 Total road freight, by vehicle type

Financial year	Light commercial vehicles	Rigid trucks	Articulated trucks	Total ^{II}
billion tonne-kilometres				
1974–75	1.0	10.9	19.5	31.4
1975–76	1.0	11.4	21.4	33.9
1976–77	1.2	11.8	23.9	36.8
1977–78	1.2	12.4	24.4	38.0
1978–79	1.3	13.3	29.1	43.8
1979–80	1.4	14.2	31.7	47.2
1980–81	1.5	14.8	35.1	51.4
1981–82	1.5	15.9	37.6	55.1
1982–83	1.5	15.2	38.3	55.1
1983–84	1.7	16.2	44.4	62.3
1984–85	1.8	17.7	48.3	67.9
1985–86	2.0	18.1	51.5	71.7
1986–87	2.2	18.9	52.5	73.7
1987–88	2.5	20.5	57.8	80.7
1988–89	2.6	20.9	60.7	84.3
1989–90	2.7	22.0	63.2	87.9
1990–91	2.7	20.2	62.5	85.3
1991–92	2.7	19.5	63.0	85.2
1992–93	2.8	19.2	68.0	90.0
1993–94	2.9	19.8	71.4	94.1
1994–95	3.1	20.9	77.4	101.4
1995–96	3.2	22.1	82.1	107.4
1996–97	3.2	23.8	86.4	113.4
1997–98	3.4	24.3	91.7	119.3
1998–99	3.5	24.3	97.2	125.0
1999–00	3.6	25.2	103.9	132.6
2000–01	3.5	25.1	106.3	134.9
2001–02	3.7	26.2	112.6	142.5
2002–03	3.9	27.3	117.7	148.9
2003–04	4.1	28.1	124.0	156.2
2004–05	4.1	29.2	129.1	162.4
2005–06	4.2	30.5	134.0	168.7
2006–07	4.2	31.6	141.4	177.1
2007–08	4.2	32.6	146.4	183.1
2008–09	4.2	32.3	145.4	181.9
2009–10	4.3	33.2	147.8	185.4
2010–11	4.4	33.9	152.9	191.2
2011–12	4.6	34.6	157.3	196.5
2012–13	4.7	35.2	160.7	200.6
2013–14	4.8	35.9	164.8	205.5
2014–15	4.9	36.7	169.5	211.2
2015–16	5.1	37.7	176.3	219.1

^{II} See end notes.

Source: BTRE (2006a) and BITRE estimates.

Table T 4.6 Private vehicle ownership and operating cost indices

June reference month	Australia motor vehicle producer price	Private motoring	Motor vehicle retail price	Automotive fuel	Motor vehicle repair and servicing	Motor vehicle parts and accessories	Other motoring services	Urban transport fares
base of each index: 2011–12 = 100.0								
1973		11.6	22.1	6.8				8.1
1974		13.1	24.0	8.0				8.4
1975		16.0	28.2	9.5				9.5
1976		18.5	34.5	10.3				11.1
1977		20.3	38.2	10.7				10.8
1978		21.8	41.7	11.8				11.7
1979		24.4	43.0	16.2				12.3
1980		27.6	45.6	21.6				14.3
1981		30.1	48.4	25.1	29.3	43.4	19.4	16.6
1982		32.6	53.2	24.8	33.6	44.3	23.3	19.1
1983	43.0	35.9	58.5	27.7	36.5	47.3	24.7	21.2
1984	44.8	39.1	61.2	32.1	38.8	51.7	26.6	24.1
1985	47.0	42.5	66.6	35.9	41.0	54.4	28.6	25.4
1986	53.9	44.3	75.5	32.3	45.3	56.6	30.0	27.2
1987	61.8	50.7	89.1	36.3	50.1	60.3	33.1	29.9
1988	67.1	53.4	97.9	35.5	53.2	65.9	34.2	32.3
1989	70.6	56.1	103.8	37.3	55.6	68.6	35.4	35.3
1990	82.5	60.5	107.7	42.2	60.0	71.2	36.3	38.5
1991	85.2	62.1	108.7	42.9	62.9	71.4	38.8	44.1
1992	88.1	63.9	111.7	44.8	63.6	71.1	41.9	46.6
1993	92.8	65.7	118.8	45.3	64.3	71.0	45.7	49.3
1994	96.2	67.5	122.1	46.0	65.3	72.6	46.9	50.9
1995	99.2	69.6	128.1	46.8	66.1	74.2	48.1	52.4
1996	98.4	72.6	130.0	49.1	68.6	73.5	50.0	54.4
1997	97.0	72.2	120.6	49.4	69.1	74.4	52.1	57.8
1998	98.5	71.5	116.5	47.8	69.2	74.0	53.9	58.6
1999	96.6	71.4	112.2	47.2	71.3	74.9	56.7	59.8
2000	100.1	76.8	111.7	57.5	69.4	74.1	59.1	62.7
2001	102.3	80.9	112.8	63.9	74.3	75.4	61.3	69.5
2002	106.5	80.6	113.9	60.7	76.5	77.7	63.6	71.7
2003	108.0	80.6	112.2	59.9	78.9	79.0	65.8	73.1
2004	105.5	83.2	108.9	66.9	81.1	79.2	69.9	76.8
2005	103.8	86.1	106.0	73.9	84.5	80.9	72.0	78.1
2006	104.2	92.9	105.0	92.2	86.3	83.8	73.5	80.6
2007	104.7	92.9	106.5	88.3	88.6	86.8	77.1	83.6
2008	106.1	99.4	105.2	104.5	91.6	91.0	81.1	87.7
2009	105.0	92.8	104.2	83.1	95.4	99.1	84.3	92.2
2010	103.8	95.8	103.4	89.4	97.5	99.5	90.8	94.5
2011	99.3	99.2	101.9	99.4	95.8	99.5	96.5	97.2
2012	99.9	101.2	100.3	101.9	100.7	100.0	102.7	102.3
2013	98.9	100.4	96.9	98.5	105.3	100.4	107.4	106.8
2014	96.7	103.1	96.2	106.1	103.1	102.3	111.2	109.5
2015	97.7	100.7	94.9	94.9	105.2	106.1	118.7	105.1
2016	93.7	97.7	95.0	83.9	107.4	106.2	121.1	105.2

Note: Data are not readily available for missing years.

Source: ABS (2016d) and ABS (2016e).

Table T 4.7 Stock of registered motor vehicles, by vehicle type

	Passenger cars	Motor cycles	LCVs	Rigid trucks thousands	Articulated trucks	Other trucks	Buses	All vehicles
1971	3 990.9	152.6	532.7	365.8	32.0	10.0	22.8	5 106.8
1972								
1973								
1974								
1975								
1976	5 102.2	293.4	758.2	372.2	39.0	25.1	31.4	6 621.5
1977								
1978								
1979	5 669.6	288.3	879.2	419.9	43.7	36.3	37.8	7 374.7
1980								
1981								
1982	6 233.4	366.9	1 003.0	479.0	47.2	42.0	46.2	8 217.7
1983								
1984								
1985	6 734.2	361.6	1 140.5	543.7	50.2	49.4	80.1	8 959.7
1986								
1987								
1988	7 158.8	304.0	1 183.5	576.3	48.9	53.4	93.2	9 418.0
1989								
1990								
1991	7 860.7	284.1	1 479.2	333.2	51.7	47.0	42.3	10 098.2
1992								
1993	8 279.4	288.8	1 453.8	336.5	52.5	46.6	46.6	10 504.2
1994								
1995	8 628.8	296.6	1 527.2	337.4	58.3	47.0	52.2	10 947.5
1996	8 989.1	303.9	1 601.6	341.0	58.4	48.3	58.8	11 401.1
1997	9 206.2	313.1	1 632.2	342.4	59.3	50.0	61.1	11 664.4
1998	9 526.7	328.8	1 686.4	347.2	62.3	51.3	64.1	12 066.9
1999	9 686.2	333.8	1 721.2	346.8	63.3	51.3	65.9	12 268.5
2000								
2001	9 835.9	350.9	1 769.6	338.4	62.6	51.8	67.6	12 476.8
2002	10 101.4	371.0	1 820.0	341.5	63.9	54.0	70.2	12 822.0
2003	10 365.9	377.3	1 879.8	348.7	64.3	56.9	70.1	13 163.0
2004	10 629.4	396.3	1 952.5	357.6	66.3	59.6	71.3	13 533.1
2005	10 896.4	421.9	2 030.3	368.5	69.7	60.7	72.6	13 920.1
2006	11 188.9	463.1	2 114.3	383.5	71.7	61.8	75.4	14 358.7
2007	11 466.6	512.4	2 190.1	394.5	74.5	64.5	77.6	14 780.2
2008	11 803.5	567.6	2 288.2	410.9	79.1	66.6	80.6	15 296.5
2009	12 023.1	624.1	2 371.1	421.7	81.2	68.8	84.4	15 674.4
2010	12 269.3	660.1	2 460.6	431.3	82.4	71.0	86.4	16 061.1
2011	12 474.0	678.8	2 530.6	437.8	86.0	73.3	87.9	16 368.4
2012	12 714.2	709.3	2 617.8	446.4	88.0	75.3	90.6	16 741.6
2013	13 000.0	744.7	2 717.7	457.1	90.9	77.1	93.0	17 180.6
2014	13 297.3	780.2	2 824.1	465.1	93.9	78.9	94.1	17 633.5
2015	13 549.4	807.2	2 907.0	472.3	95.0	81.6	95.1	18 007.8
2016	13 815.1	829.0	2 985.6	480.2	96.2	84.5	96.6	18 387.1

Note: Data are not readily available for missing years.

Source: ABS (2016).

Table T 4.8 Stock of registered motor vehicles, by state/territory

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
	thousands								
1982	2 708.1	2 127.2	1 440.0	744.0	783.4	244.3	60.9	109.7	8 217.7
1983									
1984									
1985	2 900.5	2 376.3	1 479.4	848.7	887.6	268.7	71.1	127.6	8 959.7
1986									
1987									
1988	2 993.6	2 556.0	1 567.2	869.1	947.0	284.3	60.7	140.2	9 418.0
1989									
1990									
1991	3 106.9	2 756.4	1 694.1	922.7	1 072.0	300.4	84.3	161.5	10 098.2
1992									
1993	3 172.4	2 864.7	1 847.2	932.8	1 114.5	311.9	84.2	176.5	10 504.2
1994									
1995	3 332.5	2 869.9	2 012.9	962.8	1 175.5	319.9	90.4	183.8	10 947.5
1996	3 448.9	3 050.2	2 082.0	984.5	1 225.0	325.5	96.2	188.8	11 401.1
1997	3 530.1	3 119.0	2 132.2	992.2	1 269.6	325.0	99.1	197.2	11 664.4
1998	3 682.6	3 177.4	2 228.8	1 031.1	1 327.2	322.7	102.2	194.8	12 066.9
1999	3 679.3	3 266.5	2 315.6	1 032.5	1 344.8	329.6	103.2	197.0	12 268.5
2000									
2001	3 745.5	3 317.7	2 354.4	1 050.6	1 371.3	331.1	102.8	203.4	12 476.8
2002	3 847.1	3 413.7	2 445.5	1 063.1	1 405.7	335.1	103.8	208.0	12 822.0
2003	3 944.9	3 494.3	2 552.1	1 077.2	1 438.4	338.5	104.3	213.4	13 163.0
2004	4 063.6	3 565.2	2 656.0	1 095.9	1 480.2	350.4	106.0	215.7	13 533.1
2005	4 170.4	3 649.6	2 767.3	1 111.7	1 529.6	362.1	109.8	219.6	13 920.1
2006	4 268.6	3 740.7	2 897.9	1 138.0	1 600.6	374.8	114.0	224.1	14 358.7
2007	4 361.2	3 818.1	3 033.4	1 157.0	1 676.5	381.2	118.2	234.6	14 780.2
2008	4 520.0	3 921.6	3 173.4	1 178.9	1 746.6	391.3	123.0	241.8	15 296.5
2009	4 567.4	4 010.3	3 283.2	1 208.9	1 828.3	400.5	128.8	247.0	15 674.4
2010	4 681.5	4 112.9	3 358.2	1 239.7	1 870.1	410.2	134.7	253.8	16 061.1
2011	4 778.4	4 198.4	3 401.9	1 261.9	1 912.7	419.0	137.1	258.9	16 368.4
2012	4 870.0	4 286.3	3 492.3	1 275.0	1 977.8	432.0	141.1	267.2	16 741.6
2013	4 984.6	4 383.6	3 606.1	1 298.4	2 048.4	437.0	148.6	273.9	17 180.6
2014	5 102.4	4 483.1	3 705.4	1 326.2	2 142.3	442.6	152.2	279.4	17 633.5
2015	5 247.2	4 567.3	3 771.3	1 347.5	2 185.4	450.4	155.0	283.6	18 007.8
2016	5 374.4	4 681.3	3 854.2	1 364.7	2 208.8	457.6	157.7	288.3	18 387.1

Source: ABS (2016i).

Table T 4.9 New motor vehicles sales, excluding motor cycles, by vehicle type

Financial year	Passenger cars	Sports utility vehicles	Other vehicles	Total vehicles excluding motor cycles
<i>thousands</i>				
1994–95	487.3	45.6	112.1	645.0
1995–96	487.7	46.1	105.5	639.4
1996–97	503.3	58.7	108.2	670.2
1997–98	570.1	87.7	119.1	776.9
1998–99	575.7	101.8	128.3	805.8
1999–00	509.4	97.6	135.6	742.6
2000–01	571.0	114.8	122.9	808.7
2001–02	537.6	129.1	137.9	804.6
2002–03	560.2	144.0	156.4	860.5
2003–04	594.4	160.9	184.8	940.1
2004–05	604.0	182.0	195.8	981.8
2005–06	599.4	173.3	198.7	971.4
2006–07	624.1	180.4	199.4	1 003.9
2007–08	631.8	210.9	225.5	1 068.3
2008–09	542.8	176.1	205.9	924.7
2009–10	582.1	216.2	215.0	1 013.3
2010–11	566.3	230.6	203.7	1 000.6
2011–12	568.0	282.5	209.6	1 060.1
2012–13	572.0	323.1	242.8	1 137.9
2013–14	554.3	338.4	229.8	1 122.5
2014–15	523.3	376.6	231.8	1 131.7
2015–16	502.1	431.2	241.8	1 175.1

Source: ABS (2016).

Table T 4.10 New motor vehicles sales excluding motor cycles, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
<i>thousands</i>									
1994–95	237.6	150.8	116.9	41.7	64.1	13.8	7.3	12.7	645.0
1995–96	230.1	152.7	117.1	42.7	64.4	12.8	7.5	12.0	639.4
1996–97	239.7	164.3	121.2	43.0	68.6	13.9	7.6	12.0	670.2
1997–98	273.3	193.1	141.0	51.0	79.1	15.5	8.9	15.0	776.9
1998–99	287.3	207.7	145.9	50.7	76.9	14.5	8.6	14.2	805.8
1999–00	268.2	195.5	133.3	44.3	64.7	13.9	7.9	14.8	742.6
2000–01	284.8	224.4	140.3	49.6	72.8	14.6	7.5	14.6	808.7
2001–02	280.3	221.2	144.4	50.8	71.9	14.8	7.5	13.7	804.6
2002–03	290.2	234.8	164.7	56.6	76.7	15.4	7.7	14.5	860.5
2003–04	308.3	246.7	193.2	63.1	86.7	18.8	8.4	14.9	940.1
2004–05	308.8	256.3	212.7	64.1	95.2	20.6	9.3	14.7	981.8
2005–06	297.0	250.2	212.8	62.4	105.4	19.6	9.3	14.7	971.4
2006–07	305.9	252.5	223.4	60.8	117.2	18.8	9.7	15.6	1 003.9
2007–08	323.7	276.9	233.7	64.6	122.5	20.0	10.5	16.5	1 068.3
2008–09	280.6	243.4	194.1	59.4	105.3	17.7	9.4	14.9	924.7
2009–10	309.2	272.3	211.0	66.1	110.3	18.8	9.9	15.7	1 013.3
2010–11	310.6	269.3	202.7	62.8	111.6	17.9	10.0	15.7	1 000.6
2011–12	329.1	280.2	224.2	65.3	117.6	16.1	10.9	16.6	1 060.1
2012–13	348.0	302.3	238.3	70.3	130.9	18.7	11.4	18.0	1 137.9
2013–14	353.0	304.5	227.4	70.1	119.8	18.9	11.3	17.5	1 122.5
2014–15	366.8	308.7	229.7	69.3	110.4	18.3	11.1	17.5	1 131.7
2015–16	394.7	321.2	236.4	70.4	103.9	19.4	10.5	18.6	1 175.1

Source: ABS (2016).

Table T 4.11a Licence holders¹⁴, by age and gender—New South Wales

Date	Age										Total
	16–19	20–24	25–29	30–39	40–49	50–59	60–69	70–79	80+		
<i>Female</i>											
30 June 2010	136 254	186 532	208 155	457 993	456 544	400 051	283 479	139 556	46 758	2 315 322	
30 June 2011	137 008	193 069	212 912	460 906	463 234	410 543	296 446	144 943	50 676	2 369 737	
30 June 2012	137 689	197 443	215 084	461 701	469 189	421 116	309 668	152 765	53 743	2 418 398	
30 June 2013	139 198	198 294	214 947	465 003	472 387	430 366	323 208	160 449	56 239	2 460 091	
30 June 2014	140 367	199 350	216 933	471 747	475 479	438 574	333 489	170 423	58 377	2 504 739	
30 June 2015	141 662	201 665	221 972	481 869	481 264	444 563	343 801	180 209	60 713	2 557 718	
<i>Male</i>											
30 June 2010	144 248	191 066	210 538	461 910	472 941	427 968	325 847	174 314	67 336	2 476 168	
30 June 2011	144 838	197 014	214 158	465 444	477 713	436 375	337 695	179 275	71 439	2 523 951	
30 June 2012	144 815	201 827	215 802	466 699	481 561	446 717	348 551	186 071	74 532	2 566 575	
30 June 2013	144 415	202 781	215 411	470 168	482 750	455 140	360 292	192 797	76 917	2 600 671	
30 June 2014	144 666	202 942	217 932	476 857	483 801	462 110	368 163	202 195	78 991	2 637 657	
30 June 2015	145 142	205 116	223 392	488 552	489 526	467 314	376 425	211 174	81 355	2 687 996	
<i>Persons</i>											
30 June 2010	280 502	377 598	418 693	919 903	929 485	828 019	609 326	313 870	114 094	4 791 490	
30 June 2011	281 846	390 083	427 070	926 350	940 947	846 918	634 141	324 218	122 115	4 893 688	
30 June 2012	282 504	399 270	430 886	928 400	950 750	867 833	658 219	338 836	128 275	4 984 973	
30 June 2013	283 613	401 075	430 358	935 171	955 137	885 506	683 500	353 246	133 156	5 060 762	
30 June 2014	285 033	402 292	434 865	948 604	959 280	900 684	701 652	372 618	137 368	5 142 396	
30 June 2015	286 804	406 781	445 364	970 421	970 801	911 892	720 235	391 388	142 069	5 245 755	

¹⁴ See end notes.

Source: BITRE estimates based on NSW Roads and Maritime Services data (2016).

Table T 4.11b Licence holders¹⁴, by age and gender—Victoria

Date	Age										Total
	16–19	20–24	25–29	30–39	40–49	50–59	60–69	70–79	80+		
<i>Female</i>											
30 June 2010	107 699	167 949	185 030	383 814	379 942	323 517	225 482	113 917	53 530	1 940 880	
30 June 2011	107 718	170 829	189 697	383 649	386 840	330 975	237 310	118 398	57 282	1 982 698	
30 June 2012	106 561	172 828	193 490	387 392	393 330	338 903	247 450	124 303	57 363	2 021 620	
30 June 2013	105 888	173 604	197 944	397 253	399 368	347 912	260 558	130 354	59 060	2 071 941	
30 June 2014	105 605	174 835	201 073	406 378	403 234	354 991	269 879	138 019	59 905	2 113 919	
30 June 2015	105 444	175 998	204 668	416 987	407 574	360 248	278 850	145 692	57 662	2 153 123	
<i>Male</i>											
30 June 2010	114 885	174 814	192 335	385 617	382 897	330 759	247 722	139 757	68 651	2 037 437	
30 June 2011	115 106	177 714	198 189	388 550	388 434	337 924	256 308	143 596	72 059	2 077 880	
30 June 2012	113 479	179 156	203 208	394 661	393 913	345 262	264 146	148 396	71 881	2 114 102	
30 June 2013	112 710	178 658	207 022	406 988	398 659	353 550	273 778	152 996	71 926	2 156 287	
30 June 2014	112 017	181 058	209 702	418 036	402 445	360 467	281 094	158 908	73 038	2 196 765	
30 June 2015	111 681	182 835	212 747	428 943	405 740	365 539	287 633	165 404	70 952	2 231 474	
<i>Persons</i>											
30 June 2010	222 584	342 764	377 366	769 433	762 839	654 276	473 204	253 675	122 181	3 978 322	
30 June 2011	222 824	348 543	387 888	772 201	775 274	668 899	493 618	261 994	129 341	4 060 582	
30 June 2012	220 040	351 984	396 698	782 056	787 243	684 165	511 596	272 699	129 244	4 135 725	
30 June 2013	218 598	352 262	404 966	804 243	798 027	701 462	534 336	283 350	130 986	4 228 230	
30 June 2014	217 622	355 894	410 775	824 416	805 679	715 458	550 973	296 927	132 943	4 310 687	
30 June 2015	217 127	358 834	417 418	845 931	813 317	725 789	566 483	311 096	128 614	4 384 609	

¹⁴ See end notes.

Source: BITRE estimates based on VicRoads data (2016).

Table T 4.11c Licence holders¹⁴, by age and gender—Queensland

Date	Age										Total
	16–19	20–24	25–29	30–39	40–49	50–59	60–69	70–79	80+		
<i>Female</i>											
30 June 2010	93 039	132 299	142 416	293 772	298 476	260 418	187 206	85 623	26 206	1 519 455	
30 June 2011	94 553	135 325	147 302	298 109	307 090	269 114	197 947	90 744	28 734	1 568 918	
30 June 2012	93 614	136 149	148 254	298 259	311 710	277 259	207 584	97 747	31 293	1 601 869	
30 June 2013	95 254	139 032	149 712	302 964	316 032	284 082	216 522	103 355	33 535	1 640 488	
30 June 2014	95 689	138 142	146 726	301 129	314 733	286 496	221 341	109 817	35 750	1 649 823	
30 June 2015	96 771	139 252	147 566	305 423	317 081	290 502	228 135	117 610	36 010	1 678 350	
<i>Male</i>											
30 June 2010	96 949	135 188	148 533	300 453	305 891	271 547	209 880	105 119	39 326	1 612 886	
30 June 2011	98 754	140 007	155 769	308 402	316 609	280 258	219 737	110 136	42 349	1 672 021	
30 June 2012	97 569	139 312	155 589	308 626	320 873	286 986	228 101	116 553	45 526	1 699 135	
30 June 2013	97 514	142 117	157 590	313 499	325 075	293 339	236 053	121 277	47 872	1 734 336	
30 June 2014	96 958	141 315	153 301	309 645	322 040	295 354	238 600	127 248	49 987	1 734 448	
30 June 2015	97 176	142 628	152 981	312 395	323 433	298 649	243 220	134 572	48 767	1 753 821	
<i>Persons</i>											
30 June 2010	189 988	267 487	290 949	594 225	604 367	531 965	397 086	190 742	65 532	3 132 341	
30 June 2011	193 307	275 332	303 071	606 511	623 699	549 372	417 684	200 880	71 083	3 240 939	
30 June 2012	191 183	275 461	303 843	606 885	632 583	564 245	435 685	214 300	76 819	3 301 004	
30 June 2013	192 768	281 149	307 302	616 463	641 107	577 421	452 575	224 632	81 407	3 374 824	
30 June 2014	192 647	279 457	300 027	610 774	636 773	581 850	459 941	237 065	85 737	3 384 271	
30 June 2015	193 947	281 880	300 547	617 818	640 514	589 151	471 355	252 182	84 777	3 432 171	

¹⁴ See end notes.

Source: BITRE estimates based on Department of Transport and Main Roads (QLD) data (2016).

Table T 4.11d Licence holders¹⁴, by age and gender—South Australia

Date	Age										Total
	16–19	20–24	25–29	30–39	40–49	50–59	60–69	70–79	80+		
<i>Female</i>											
30 June 2010	32 569	44 088	45 925	94 811	106 125	99 565	72 861	35 314	13 708	544 966	
30 June 2011	32 434	44 430	46 939	93 918	106 017	100 558	76 144	35 929	13 967	550 336	
30 June 2012	31 889	44 671	47 536	93 976	106 366	101 726	79 185	37 841	14 355	557 545	
30 June 2013	31 954	46 009	48 541	95 431	107 309	103 706	83 256	40 661	15 605	572 472	
30 June 2014	31 678	46 325	48 299	96 716	106 450	105 093	86 145	43 074	16 024	579 804	
30 June 2015	31 371	46 291	48 317	97 818	105 528	105 761	88 307	46 172	16 640	586 205	
<i>Male</i>											
30 June 2010	34 346	46 014	48 384	98 330	110 336	103 646	81 359	44 366	19 173	585 954	
30 June 2011	34 226	46 758	49 351	97 669	109 910	104 526	83 383	43 750	18 804	588 377	
30 June 2012	33 645	46 873	49 942	97 933	110 053	105 571	85 726	45 382	19 151	594 276	
30 June 2013	33 392	47 885	50 952	99 905	110 905	108 033	89 528	48 624	21 596	610 820	
30 June 2014	33 024	47 960	50 782	101 102	110 017	109 529	91 649	50 632	22 055	616 750	
30 June 2015	32 110	48 110	50 344	101 727	108 989	109 747	93 284	52 953	22 639	619 903	
<i>Persons</i>											
30 June 2010	66 915	90 102	94 309	193 141	216 461	203 211	154 220	79 680	32 881	1 130 920	
30 June 2011	66 660	91 188	96 290	191 587	215 927	205 084	159 527	79 679	32 771	1 138 713	
30 June 2012	65 534	91 544	97 478	191 909	216 419	207 297	164 911	83 223	33 506	1 151 821	
30 June 2013	65 346	93 894	99 493	195 336	218 214	211 739	172 784	89 285	37 201	1 183 292	
30 June 2014	64 702	94 285	99 081	197 818	216 467	214 622	177 794	93 706	38 079	1 196 554	
30 June 2015	63 501	94 408	98 674	199 566	214 527	215 517	181 594	99 128	39 279	1 206 194	

¹⁴ See end notes.

Source: BITRE estimates based on Department of Planning, Transport and Infrastructure (SA) data (2016).

Table T 4.11e Licence holders¹⁴, by age and gender—Western Australia

Date	Age										Total
	16–19	20–24	25–29	30–39	40–49	50–59	60–69	70–79	80+		
<i>Female</i>											
30 June 2010	22 405	63 305	70 869	147 316	153 888	135 206	91 493	45 146	13 315	742 943	
30 June 2011	21 329	64 067	73 131	148 221	156 939	138 723	96 481	47 350	14 367	760 608	
30 June 2012	20 359	63 475	74 314	149 324	158 874	141 849	100 898	49 970	15 497	774 560	
30 June 2013	20 879	65 165	79 043	156 500	162 653	146 369	106 245	52 866	16 541	806 261	
30 June 2014	20 994	64 456	81 366	161 477	164 217	149 425	110 700	56 568	17 451	826 654	
30 June 2015	21 079	63 733	82 195	166 430	165 384	151 251	115 009	59 919	19 070	844 070	
<i>Male</i>											
30 June 2010	26 147	69 621	79 860	159 425	165 955	143 835	103 801	53 491	19 263	821 398	
30 June 2011	25 372	71 201	83 785	161 487	169 921	147 485	108 605	54 906	20 377	843 139	
30 June 2012	23 276	67 623	82 865	161 301	170 909	150 066	112 263	57 264	21 148	846 715	
30 June 2013	24 913	72 375	92 303	174 870	177 780	156 024	117 579	59 860	22 005	897 709	
30 June 2014	24 535	71 010	93 642	181 719	178 908	159 668	121 197	63 529	22 785	916 993	
30 June 2015	24 380	69 631	93 344	187 251	179 647	162 264	124 244	66 741	24 157	931 659	
<i>Persons</i>											
30 June 2010	48 556	132 960	150 778	306 966	320 360	279 629	195 751	98 845	32 620	1 566 465	
30 June 2011	46 703	135 289	156 966	309 917	327 335	286 781	205 556	102 466	34 780	1 605 793	
30 June 2012	43 637	131 116	157 227	310 812	330 205	292 454	213 651	107 443	36 681	1 623 226	
30 June 2013	45 797	137 561	171 410	331 549	340 841	302 934	224 293	112 946	38 584	1 705 915	
30 June 2014	45 530	135 482	175 076	343 359	343 492	309 596	232 382	120 323	40 283	1 745 523	
30 June 2015	45 460	133 372	175 592	353 832	345 356	314 026	239 707	126 888	43 282	1 777 515	

Note: Sum of female and male licence holders does not equal to total i, since it includes the number of licence holders of unknown gender.

¹⁴ See end notes.

Source: BITRE estimates based on Department of Transport (WA) data (2016).

Table T 4.11f Licence holders¹⁴, by age and gender—Tasmania

Date	Age										Total
	16–19	20–24	25–29	30–39	40–49	50–59	60–69	70–79	80+		
<i>Female</i>											
30 June 2010	10 868	14 173	13 896	29 298	34 329	33 810	25 718	12 968	4 177	179 237	
30 June 2011	10 662	14 148	13 968	28 851	34 283	34 699	26 903	13 534	4 400	181 448	
30 June 2012	10 387	13 810	13 503	27 942	33 654	34 944	27 806	14 122	4 702	180 870	
30 June 2013	10 155	13 471	13 435	27 297	33 087	35 005	28 883	14 701	4 997	181 031	
30 June 2014	10 134	13 254	13 192	27 046	32 439	35 187	29 763	15 516	5 352	181 883	
30 June 2015	10 177	13 468	13 033	27 207	32 301	35 147	30 694	16 609	5 784	184 420	
<i>Male</i>											
30 June 2010	11 033	14 365	13 728	28 504	33 986	34 185	27 704	14 952	5 597	184 054	
30 June 2011	10 885	14 344	13 971	28 105	33 870	34 707	28 764	15 373	5 829	185 848	
30 June 2012	10 752	13 844	13 600	27 026	33 010	34 642	29 645	15 892	6 078	184 489	
30 June 2013	10 540	13 751	13 319	26 705	32 217	34 626	30 413	16 462	6 231	184 264	
30 June 2014	10 218	13 679	13 110	26 354	31 570	34 893	30 710	17 322	6 492	184 348	
30 June 2015	10 184	13 740	13 111	26 406	31 118	34 930	31 396	18 170	6 821	185 876	
<i>Persons</i>											
30 June 2010	21 901	28 538	27 624	57 802	68 315	67 995	53 422	27 920	9 774	363 291	
30 June 2011	21 547	28 492	27 939	56 956	68 153	69 406	55 667	28 907	10 229	367 296	
30 June 2012	21 139	27 654	27 103	54 968	66 664	69 586	57 451	30 014	10 780	365 359	
30 June 2013	20 695	27 222	26 754	54 002	65 304	69 631	59 296	31 163	11 228	365 295	
30 June 2014	20 352	26 933	26 302	53 400	64 009	70 080	60 473	32 838	11 844	366 231	
30 June 2015	20 361	27 208	26 144	53 613	63 419	70 077	62 090	34 779	12 605	370 296	

¹⁴ See end notes.

Source: BITRE estimates based on Department of State Growth (TAS) data (2016).

Table T 4.11g Licence holders¹⁴, by age and gender—Northern Territory

Date	Age										Total
	16–19	20–24	25–29	30–39	40–49	50–59	60–69	70–79	80+		
<i>Female</i>											
30 June 2010	3 162	5 458	7 235	14 042	12 754	10 291	5 038	1 304	289	59 573	
30 June 2011	3 142	5 426	7 318	13 817	12 830	10 429	5 348	1 435	319	60 064	
30 June 2012	3 182	5 736	7 573	14 396	13 076	10 863	5 686	1 609	343	62 464	
30 June 2013	3 099	6 167	8 068	15 256	13 404	11 352	6 091	1 791	374	65 602	
30 June 2014	3 113	6 225	8 316	15 754	13 526	11 499	6 441	1 966	405	67 245	
30 June 2015	2 990	6 222	8 441	16 224	13 459	11 606	6 617	2 087	443	68 089	
<i>Male</i>											
30 June 2010	3 535	7 034	8 187	15 715	15 307	12 974	7 587	2 179	470	72 988	
30 June 2011	3 539	6 936	8 291	15 360	15 090	13 001	7 908	2 348	498	72 971	
30 June 2012	3 589	7 302	8 861	15 834	15 233	13 344	8 350	2 555	545	75 613	
30 June 2013	3 522	7 840	9 702	17 425	15 896	14 109	8 913	2 822	573	80 802	
30 June 2014	3 482	7 892	10 322	18 168	16 196	14 442	9 243	3 054	609	83 408	
30 June 2015	3 448	7 508	10 476	18 668	16 306	14 486	9 482	3 172	633	84 179	
<i>Persons</i>											
30 June 2010	6 697	12 492	15 422	29 757	28 061	23 265	12 625	3 483	759	132 561	
30 June 2011	6 681	12 362	15 609	29 177	27 920	23 430	13 256	3 783	817	133 035	
30 June 2012	6 771	13 038	16 434	30 230	28 309	24 207	14 036	4 164	888	138 077	
30 June 2013	6 621	14 007	17 770	32 681	29 300	25 461	15 004	4 613	947	146 404	
30 June 2014	6 595	14 117	18 638	33 922	29 722	25 941	15 684	5 020	1 014	150 653	
30 June 2015	6 438	13 730	18 917	34 892	29 765	26 092	16 099	5 259	1 076	152 268	

¹⁴ See end notes.

Source: BITRE estimates based on Department of Transport (NT) data (2016).

Table T 4.11h Licence holders¹⁴, by age and gender—Australian Capital Territory

Date	Age										Total
	16–19	20–24	25–29	30–39	40–49	50–59	60–69	70–79	80+		
<i>Female</i>											
30 June 2010	8 543	13 928	15 520	28 977	26 512	23 188	14 971	6 305	2 780	140 724	
30 June 2011	8 706	14 072	15 763	29 561	26 972	23 532	15 788	6 636	3 048	144 078	
30 June 2012	8 581	14 401	16 193	30 372	27 560	23 826	16 582	7 125	3 307	147 947	
30 June 2013	8 336	14 421	16 489	31 080	28 214	24 003	17 301	7 562	3 576	150 982	
30 June 2014	8 199	14 419	16 448	31 843	29 544	24 387	17 878	8 082	3 903	154 703	
30 June 2015	8 290	14 442	16 454	31 843	28 544	24 384	17 867	8 078	3 903	153 805	
<i>Male</i>											
30 June 2010	9 186	14 594	15 948	29 876	26 886	23 056	16 164	7 203	3 497	146 410	
30 June 2011	9 022	15 067	16 457	30 452	27 571	23 405	16 831	7 442	3 849	150 096	
30 June 2012	8 887	15 245	16 913	31 435	28 147	23 842	17 383	7 938	4 104	153 894	
30 June 2013	8 555	15 397	17 050	32 390	28 711	24 059	17 996	8 294	4 400	156 852	
30 June 2014	8 452	15 182	17 050	33 306	29 204	24 416	18 459	8 749	4 723	159 541	
30 June 2015	8 515	15 049	16 864	33 045	29 036	24 302	18 360	8 623	4 668	158 462	
<i>Persons</i>											
30 June 2010	17 729	28 522	31 468	58 853	53 398	46 244	31 135	13 508	6 277	287 134	
30 June 2011	17 728	29 139	32 220	60 013	54 543	46 937	32 619	14 078	6 897	294 174	
30 June 2012	17 468	29 646	33 106	61 807	55 707	47 668	33 965	15 063	7 411	301 841	
30 June 2013	16 891	29 818	33 539	63 470	56 925	48 062	35 297	15 856	7 976	307 834	
30 June 2014	16 651	29 601	33 498	65 149	58 748	48 803	36 337	16 831	8 626	314 244	
30 June 2015	16 805	29 491	33 318	64 888	57 580	48 686	36 227	16 701	8 571	312 267	

¹⁴ See end notes.

Source: BITRE estimates based on ACT Office of Regulatory Services data (2016).

Table T 4.11i Licence holders¹⁴, by age and gender—Australia

Date	Age										Total
	16–19	20–24	25–29	30–39	40–49	50–59	60–69	70–79	80+		
<i>Female</i>											
30 June 2010	414 539	627 732	689 046	1 450 023	1 468 570	1 286 046	906 248	440 133	160 763	7 443 100	
30 June 2011	415 552	641 366	707 030	1 457 032	1 494 205	1 318 573	952 367	458 969	172 793	7 617 887	
30 June 2012	412 262	648 513	715 947	1 463 362	1 513 759	1 350 486	994 859	485 482	180 603	7 765 273	
30 June 2013	414 763	656 163	728 179	1 490 784	1 532 454	1 382 795	1 042 064	511 739	189 927	7 948 868	
30 June 2014	415 779	657 006	732 353	1 512 090	1 539 622	1 405 652	1 075 636	543 465	197 167	8 078 770	
30 June 2015	417 784	661 071	742 646	1 543 801	1 551 135	1 423 462	1 109 280	576 376	200 225	8 225 780	
<i>Male</i>											
30 June 2010	440 329	652 696	717 513	1 479 830	1 514 199	1 347 970	1 020 064	541 381	223 313	7 937 295	
30 June 2011	441 742	669 041	739 971	1 495 469	1 539 118	1 377 681	1 059 231	556 826	235 204	8 114 283	
30 June 2012	436 012	671 182	746 780	1 503 515	1 553 699	1 406 430	1 094 165	580 051	242 965	8 234 799	
30 June 2013	435 561	680 804	763 349	1 541 950	1 571 993	1 438 880	1 134 552	603 132	251 520	8 421 741	
30 June 2014	433 352	681 038	765 841	1 565 187	1 574 181	1 460 879	1 159 115	631 637	258 680	8 529 910	
30 June 2015	432 636	684 617	773 259	1 596 987	1 583 795	1 477 231	1 184 044	660 809	259 992	8 653 370	
<i>Persons</i>											
30 June 2010	854 872	1 280 463	1 406 609	2 930 080	2 983 286	2 634 604	1 926 769	981 723	384 118	15 382 524	
30 June 2011	857 296	1 310 428	1 447 053	2 952 712	3 033 798	2 696 827	2 012 068	1 016 005	408 033	15 734 220	
30 June 2012	848 276	1 319 713	1 462 775	2 967 067	3 067 880	2 757 455	2 089 514	1 065 742	423 604	16 002 026	
30 June 2013	850 329	1 336 988	1 491 592	3 032 915	3 104 855	2 822 216	2 177 085	1 115 091	441 485	16 372 556	
30 June 2014	849 132	1 338 061	1 498 262	3 077 442	3 114 170	2 867 034	2 235 236	1 175 328	455 894	16 610 559	
30 June 2015	850 443	1 345 704	1 515 974	3 140 961	3 135 279	2 901 230	2 293 790	1 237 421	460 273	16 881 075	

¹⁴ See end notes.

Source: BITRE estimates based on state/territory licensing data (2016).

Table T 4.12a Licensed vehicle operators, by vehicle type—New South Wales¹⁵

Date	Highest class of heavy vehicle licence							Multi Combination
	Car	Motorcycle	Light Rigid	Medium Rigid	Heavy Rigid	Heavy Combination	Multi Combination	
<i>Full licence</i>								
30 June 2010	4 141 994	451 630	82 835	121 937	201 164	113 554	18 960	
30 June 2011	4 219 148	461 252	84 913	124 294	200 038	111 704	19 978	
30 June 2012	4 286 343	471 975	86 022	126 495	202 116	110 908	21 054	
30 June 2013	4 358 073	483 321	89 597	127 577	200 451	108 849	22 073	
30 June 2014	4 433 197	497 469	90 810	129 138	201 400	107 581	22 959	
30 June 2015	4 519 456	512 932	93 057	130 642	200 719	106 026	24 099	
<i>Provisional licence</i>								
30 June 2010	393 815	18 264	112	1 111	616	0	0	
30 June 2011	400 474	22 400	145	1 162	712	0	0	
30 June 2012	410 282	25 568	164	1 184	776	0	0	
30 June 2013	418 195	28 600	160	1 174	868	0	0	
30 June 2014	422 097	29 563	140	1 105	867	0	0	
30 June 2015	438 304	30 256	128	1 165	991	0	0	
<i>L Permits</i>								
30 June 2010	251 377	26 355	0	0	0	0	0	
30 June 2011	270 010	25 460	0	0	0	0	0	
30 June 2012	284 370	27 459	0	0	0	0	0	
30 June 2013	280 321	28 079	0	0	0	0	0	
30 June 2014	282 832	27 552	0	0	0	0	0	
30 June 2015	283 601	26 120	0	0	0	0	0	

Note: Some licence holders may appear under more than one vehicle type (car, motorcycle and heavy vehicle).

¹⁵ See end notes.

Source: BITRE estimates based on NSW Roads and Maritime Services data (2016).

Table T 4.12b Licensed vehicle operators, by vehicle type—Victoria¹⁵

Date	Car	Motorcycle	Highest class of heavy vehicle licence				
			Light Rigid	Medium Rigid	Heavy Rigid	Heavy Combination	Multi Combination
<i>Full licence</i>							
30 June 2010	3 507 752	321 289	28 575	85 073	159 569	134 079	20 234
30 June 2011	3 586 011	333 286	29 805	87 926	163 805	133 691	21 443
30 June 2012	3 598 026	343 439	31 393	89 818	168 585	132 852	23 011
30 June 2013	3 654 040	355 194	33 249	91 344	171 765	131 558	24 763
30 June 2014	3 719 847	367 222	35 270	92 525	173 629	129 679	26 134
30 June 2015	3 786 036	380 241	38 566	93 409	176 151	127 679	27 508
<i>Provisional licence</i>							
30 June 2010	207 895	3 233	51	734	304	62	9
30 June 2011	201 678	3 388	33	668	328	56	5
30 June 2012	259 188	5 169	60	1 114	859	159	15
30 June 2013	276 379	5 689	51	1 343	1 066	182	36
30 June 2014	286 231	6 118	43	1 365	1 125	173	26
30 June 2015	290 357	6 790	48	1 382	1 227	194	19
<i>L Permits</i>							
30 June 2010	282 381	18 811	0	0	0	0	0
30 June 2011	292 842	18 005	0	0	0	0	0
30 June 2012	295 094	18 599	0	0	0	0	0
30 June 2013	297 533	18 177	0	0	0	0	0
30 June 2014	304 305	19 572	0	0	0	0	0
30 June 2015	308 119	18 022	0	0	0	0	0

Note: Some licence holders may appear under more than one vehicle type (car; motorcycle and heavy vehicle).

¹⁵ See end notes.

Source: BITRE estimates based on VicRoads data (2016).

Table T 4.12c Licensed vehicle operators, by vehicle type—Queensland¹⁵

Date	Car	Motorcycle	Highest class of heavy vehicle licence				
			Light Rigid	Medium Rigid	Heavy Rigid	Heavy Combination	Multi Combination
<i>Full licence</i>							
30 June 2010	2 787 982	463 820	41 811	86 459	233 136	90 612	37 954
30 June 2011	2 877 954	476 740	43 729	89 726	237 179	90 475	40 948
30 June 2012	2 931 268	na	45 113	91 204	241 747	89 729	43 788
30 June 2013	2 993 716	496 720	46 511	92 758	244 520	88 487	46 649
30 June 2014	3 006 333	499 173	47 365	91 952	242 767	85 169	48 633
30 June 2015	3 056 436	507 300	48 760	92 297	244 038	82 943	50 691
<i>Provisional licence</i>							
30 June 2010	168 352	5 974	272	1 539	2 034	586	457
30 June 2011	184 089	5 869	302	1 657	2 003	574	449
30 June 2012	194 110	na	275	1 568	1 754	481	412
30 June 2013	204 231	6 079	295	1 638	1 980	489	459
30 June 2014	205 550	6 477	285	1 664	2 131	541	533
30 June 2015	202 169	6 249	278	1 548	2 061	519	521
<i>L Permits</i>							
30 June 2010	178 367	134 203	0	0	7	244	20
30 June 2011	180 665	141 855	0	0	4	232	20
30 June 2012	175 603	na	0	0	1	211	16
30 June 2013	178 236	148 949	0	0	0	188	15
30 June 2014	173 507	148 246	0	0	0	0	0
30 June 2015	174 731	150 497	0	0	1	178	15

Note: Some licence holders may appear under more than one vehicle type (car; motorcycle and heavy vehicle).

na: not available.

¹⁵ See end notes.

Source: BITRE estimates based on Department of Transport and Main Roads (QLD) data (2016).

Table T 4.12d Licensed vehicle operators, by vehicle type—South Australia¹⁵

Date	Car	Motorcycle	Highest class of heavy vehicle licence				
			Light Rigid	Medium Rigid	Heavy Rigid	Heavy Combination	Multi Combination
<i>Full licence</i>							
30 June 2010	1 022 537	159 869	21 054	39 416	58 872	39 827	8 909
30 June 2011	1 027 761	159 253	21 776	39 643	58 566	38 988	9 258
30 June 2012	1 038 857	160 282	23 305	39 724	58 489	38 369	9 722
30 June 2013	1 070 037	164 730	26 056	40 467	59 502	38 273	10 425
30 June 2014	1 083 808	166 083	27 775	40 705	59 803	37 585	11 013
30 June 2015	1 107 312	163 142	25 625	40 830	59 149	36 953	11 548
<i>Provisional licence</i>							
30 June 2010	70 352	1 137	12	361	175	140	27
30 June 2011	71 912	1 040	16	418	212	146	23
30 June 2012	68 404	1 102	18	420	285	161	33
30 June 2013	67 831	1 247	16	427	308	149	44
30 June 2014	68 636	1 325	23	446	338	141	35
30 June 2015	54 095	1 120	10	281	240	90	27
<i>L Permits</i>							
30 June 2010	37 935	5 739	1	3	9	422	0
30 June 2011	38 544	6 168	1	4	10	353	0
30 June 2012	43 408	7 029	0	6	7	367	0
30 June 2013	42 872	7 588	0	2	7	306	0
30 June 2014	42 914	7 897	0	2	10	272	0
30 June 2015	42 872	7 781	0	2	6	220	0

Note: Some licence holders may appear under more than one vehicle type (car, motorcycle and heavy vehicle).

¹⁵ See end notes.

Source: BITRE estimates based on Department of Planning, Transport and Infrastructure (SA) data (2016).

Table T 4.12e Licensed vehicle operators, by vehicle type—Tasmania¹⁵

Date	Car	Motorcycle	Highest class of heavy vehicle licence				
			Light Rigid	Medium Rigid	Heavy Rigid	Heavy Combination	Multi Combination
<i>Full licence</i>							
30 June 2010	325 777	40 857	4 383	28 678	13 382	13 380	1 746
30 June 2011	329 539	41 936	5 333	28 575	13 708	13 140	1 861
30 June 2012	328 079	42 428	6 214	28 084	13 868	12 644	1 935
30 June 2013	328 360	43 102	7 063	27 713	13 930	12 300	2 005
30 June 2014	328 797	44 173	7 921	27 341	13 995	12 060	2 077
30 June 2015	331 881	45 476	8 274	27 400	14 150	12 032	2 173
<i>Provisional licence</i>							
30 June 2010	18 737	2 654	11	75	7	3	0
30 June 2011	17 583	2 925	7	76	19	5	0
30 June 2012	16 059	2 869	2	77	15	6	0
30 June 2013	15 076	3 264	6	95	15	5	0
30 June 2014	15 231	3 482	6	88	8	6	0
30 June 2015	15 543	3 502	13	81	11	6	0
<i>L Permits</i>							
30 June 2010	18 265	1 705	0	0	0	0	0
30 June 2011	19 578	1 788	0	0	0	0	0
30 June 2012	20 615	2 024	0	0	0	0	0
30 June 2013	21 292	2 172	0	0	0	0	0
30 June 2014	21 591	1 958	0	0	0	0	0
30 June 2015	22 116	1 911	0	0	0	0	0

Note: Some licence holders may appear under more than one vehicle type (car, motorcycle and heavy vehicle).

¹⁵ See end notes.

Source: BITRE estimates based on Department of State Growth (TAS) data (2016).

Table T 4.12f Licensed vehicle operators, by vehicle type—Northern Territory¹⁵

Date	Car	Motorcycle	Highest class of heavy vehicle licence				
			Light Rigid	Medium Rigid	Heavy Rigid	Heavy Combination	Multi Combination
<i>Full licence</i>							
30 June 2010	117 915	21 294	5 554	7 081	11 164	5 544	4 105
30 June 2011	118 551	21 164	5 588	6 913	11 267	5 407	4 142
30 June 2012	122 841	21 484	5 651	6 797	12 263	5 337	4 270
30 June 2013	126 917	22 091	5 807	6 685	12 988	5 311	4 491
30 June 2014	136 502	24 570	6 236	6 984	14 422	5 478	5 038
30 June 2015	138 374	24 824	6 301	6 876	15 013	5 367	5 152
<i>Provisional licence</i>							
30 June 2010	5 744	73	1	5	4	2	2
30 June 2011	6 020	76	5	5	5	1	4
30 June 2012	6 108	70	5	3	7	0	2
30 June 2013	5 796	115	0	3	3	0	0
30 June 2014	6 319	134	5	8	2	0	0
30 June 2015	6 342	154	3	13	7	0	1
<i>L Permits</i>							
30 June 2010	6 321	1 425	0	0	2	0	0
30 June 2011	5 911	1 445	0	0	3	0	1
30 June 2012	6 265	1 570	0	0	1	0	1
30 June 2013	6 766	1 674	0	1	0	0	1
30 June 2014	6 976	2 339	0	0	0	0	0
30 June 2015	6 605	2 195	0	0	0	0	0

Note: Some licence holders may appear under more than one vehicle type (car; motorcycle and heavy vehicle).

¹⁵ See end notes.

Source: BITRE estimates based on Department of Transport (NT) data (2016).

Table T 4.12g Licensed vehicle operators, by vehicle type—Australian Capital Territory¹⁵

Date	Car	Motorcycle	Highest class of heavy vehicle licence				
			Light Rigid	Medium Rigid	Heavy Rigid	Heavy Combination	Multi Combination
<i>Full licence</i>							
30 June 2010	254 370	28 381	2 498	6 854	9 723	3 494	524
30 June 2011	261 032	29 258	2 595	6 903	9 734	3 418	523
30 June 2012	268 621	30 180	2 695	6 958	9 787	3 347	530
30 June 2013	275 825	31 032	2 718	6 983	9 748	3 252	517
30 June 2014	281 602	31 921	2 762	7 022	9 755	3 191	523
30 June 2015	287 703	32 849	2 820	7 068	9 722	3 132	526
<i>Provisional licence</i>							
30 June 2010	20 719	1 246	2	32	6	0	32
30 June 2011	21 203	1 268	2	19	5	0	0
30 June 2012	21 255	1 148	4	32	6	0	0
30 June 2013	20 196	1 293	4	27	6	1	0
30 June 2014	19 976	1 440	1	21	4	0	0
30 June 2015	19 756	1 240	1	16	6	0	0
<i>L Permits</i>							
30 June 2010	10 734	3 673	0	0	0	0	0
30 June 2011	10 615	3 322	0	0	0	0	0
30 June 2012	10 810	3 437	0	0	0	0	0
30 June 2013	10 769	3 325	0	0	0	0	0
30 June 2014	10 513	1 874	0	0	0	0	0
30 June 2015	10 994	1 874	0	0	0	0	0

Note: Some licence holders may appear under more than one vehicle type (car; motorcycle and heavy vehicle).

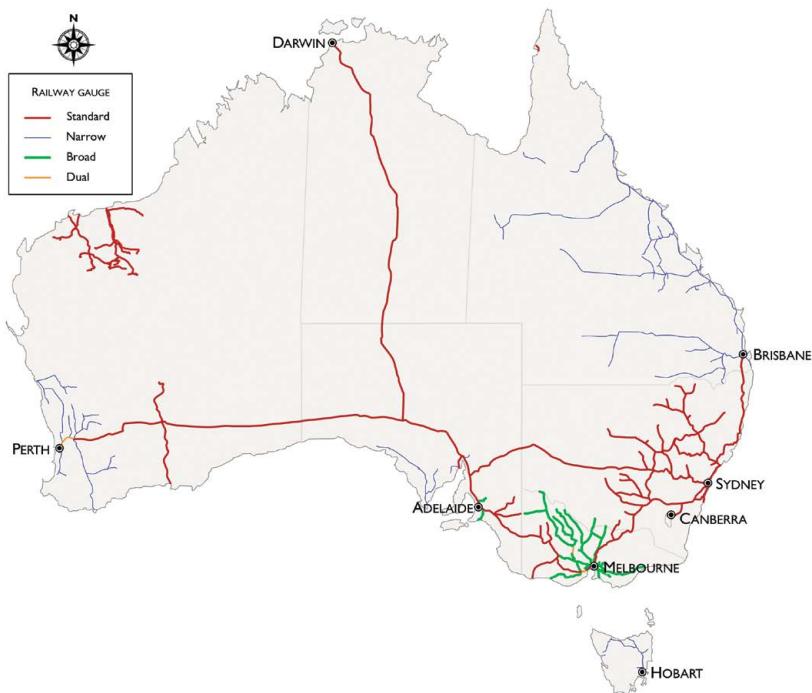
¹⁵ See end notes.

Source: BITRE estimates based on ACT Office of Regulatory Services data (2016).

CHAPTER 5

Rail

Figure T 5 Australia's railways, by gauge



Note: The lines shown here are the railways that were open for traffic at September 2016. The BHP Goldsworthy line in the Pilbara is shown on the map but was mothballed in 2014. The Roy Hill line in the Pilbara region of Western Australia opened in December 2015. The two South Australian Mallee grain lines are also shown but they became non-operational in August 2015.

Table T 5.1a Intercapital rail distances—freight terminals

	Sydney	Melbourne	Brisbane	Adelaide	Perth	Darwin	Canberra
				kilometres			
Sydney		929	965	1 868	4 137	4 459	316
Melbourne			1 901	832	3 468	3 790	811
Brisbane				2 816	5 101	5 424	1 281
Adelaide					2 637	2 959	1 643
Perth						4 174	4 019
Darwin							4 341

Source: BITRE estimates.

Table T 5.1b Intercapital rail distances—passenger terminals

	Sydney	Melbourne	Brisbane	Adelaide kilometres	Perth	Darwin	Canberra
Sydney		953	987	1 711	4 156	4 285	329
Melbourne			1 914	828	3 485	3 798	822
Brisbane				2 672	4 933	5 247	1 291
Adelaide					2 657	2 971	1 629
Perth						4 178	4 025
Darwin							4 339

Source: BITRE estimates.

Table T 5.2a Route-kilometres of open railway 2014–15¹⁶, by jurisdiction and gauge¹⁷

Jurisdiction	Gauge					Total
	1 067	1 435	1 600	Dual	Other	
New South Wales		7 093	73		1	7 167
Victoria	16	1 222	2 921	32	30	4 221
Queensland	8 164	117		36	4	8 321
South Australia	561	2 561	253	22		3 397
Western Australia	2 970	4 558		207		7 735
Tasmania	808				7	815
Northern Territory	3	1 690				1 693
ACT		6				6
Total	12 522	17 247	3 247	297	42	33 355

^{16,17} See end notes.

Source: BITRE (2016b).

Table T 5.2b Route-kilometres of open railway 2014–15¹⁶, by jurisdiction and single or double (or more) trackage¹⁷

Jurisdiction	Trackage			Total
	Double (or more)	Single		
New South Wales	1 188	5 979		7 167
Victoria	875	3 346		4 221
Queensland	840	7 481		8 321
South Australia	122	3 275		3 397
Western Australia	953	6 782		7 735
Tasmania	0	815		815
Northern Territory	0	1 693		1 693
ACT	0	6		6
Total	3 978	29 377		33 355

^{16,17} See end notes.

Source: BITRE estimates.

Table T 5.2c Route-kilometres of open railway 2014–15¹⁶, by jurisdiction and overhead electrical system used¹⁷

Jurisdiction	Electrical system					Total
	1 500 V DC	25 kV AC, 50 Hz	33 kV AC	De- electrified	Not electrified	
New South Wales	641		8	2	6 516	7 167
Victoria	375			100	3 746	4 221
Queensland		2 138			6 183	8 321
South Australia		44			3 353	3 397
Western Australia		171			7 564	7 735
Tasmania					815	815
Northern Territory					1 693	1 693
ACT					6	6
Total	1 016	2 353	8	102	29 876	33 355

^{16,17} See end notes.

Source: BITRE (2016b).

Table T 5.3 Network characteristics of heavy urban passenger railways

	Route-kilometres in metropolitan area				Route- kilometres, electrified	Metropolitan Stations
	Passenger-only lines	Freight-only lines	Shared passenger/ freight	Total		
Sydney	190	70	156	416	346	178
Melbourne	232	59	171	462	373	218
Brisbane	103	81	140	324	243	129
Adelaide	126	62	530	188	44	86
Perth	173	121	1	295	176	70

^g Broad gauge freight services over this track ceased during 2014.

Note: Brisbane route kilometres and stations includes the recently opened Petrie - Kippa-Ring line.

Source: BITRE (2016b).

Table T 5.4 Interstate non-bulk rail freight by state/territory of origin

Financial year	NSW	VIC	QLD	SA	WA	NT	ACT	Total
million tonne-kilometres								
1971–72	1 208	1 550	414	1 212	288	63	na*	4 735
1972–73	1 318	1 688	413	1 281	472	67	na*	5 238
1973–74	1 429	1 822	412	1 344	657	70	na*	5 733
1974–75	1 542	1 952	411	1 404	841	74	na*	6 223
1975–76	1 656	2 079	410	1 458	1 026	77	na*	6 706
1976–77	1 706	2 066	429	1 537	961	82	na*	6 780
1977–78	1 756	2 052	448	1 614	897	87	na*	6 853
1978–79	1 806	2 040	467	1 689	832	91	na*	6 927
1979–80	1 857	2 020	487	1 763	768	96	na*	6 991
1980–81	1 877	2 125	443	1 692	931	93	na*	7 161
1981–82	1 670	2 045	464	1 520	1 111	85	na*	6 895
1982–83	1 464	1 964	485	1 352	1 292	76	na*	6 632
1983–84	1 671	2 134	495	1 575	1 164	94	na*	7 134
1984–85	1 646	2 177	555	1 488	1 155	87	na*	7 108
1985–86	1 846	2 106	681	1 321	1 345	79	na*	7 379
1986–87	2 007	2 171	737	1 628	1 402	93	na*	8 038
1987–88	2 545	2 468	760	1 865	1 404	107	na*	9 149
1988–89	2 864	2 970	865	2 059	1 580	113	na*	10 451
1989–90	2 623	2 846	952	2 242	1 467	112	na*	10 241
1990–91	2 381	2 844	978	1 970	1 540	117	na*	9 829
1991–92	2 416	2 968	1 100	2 013	1 728	122	na*	10 346
1992–93	2 576	2 967	1 162	2 235	1 952	132	na*	11 023
1993–94	2 698	3 167	1 225	2 344	2 167	139	na*	11 740
1994–95	2 851	3 396	1 288	2 454	2 382	147	na*	12 518
1995–96	2 873	3 329	1 352	2 448	2 107	154	na*	12 264
1996–97	2 884	3 679	1 443	2 347	2 300	120	na*	12 772
1997–98	2 916	3 997	1 641	2 338	2 583	150	na*	13 624
1998–99	2 926	4 469	1 444	2 262	3 130	138	na*	14 369
1999–00	2 918	4 620	1 580	2 348	3 422	154	na*	15 042
2000–01	2 910	4 775	1 703	2 432	3 708	170	na*	15 697
2001–02	2 917	4 934	1 803	2 513	4 285	185	na*	16 636
2002–03	2 922	5 091	1 903	2 592	4 859	200	na*	17 567
2003–04	2 930	5 251	2 002	2 672	5 437	214	na*	18 506
2004–05	2 939	5 410	2 102	2 751	6 008	214	na*	19 426
2005–06	2 948	5 570	2 202	2 832	6 586	214	na*	20 353
2006–07	4 074	8 409	2 365	4 985	6 570	454	na*	26 857
2007–08 ⁹	4 342	7 242	2 677	4 079	6 642	621	na*	25 603
2008–09	3 851	6 586	2 041	4 229	5 913	550	na*	23 170
2009–10	3 948	6 688	2 206	3 867	6 008	513	na*	23 230

⁹ See end notes.

na*: not applicable.

Source: BITRE (2012a).

Table T 5.5a Public transit patronage on heavy rail, Australian capital cities

Financial year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Metropolitan
	million passenger movements								
1979–80	201.3	100.8	28.0	13.1	7.2				350.4
1980–81	207.9	97.4	30.3	13.8	6.5				355.9
1981–82	214.9	89.0	32.4	14.7	6.1				357.1
1982–83	202.8	91.4	33.1	12.9	6.8				347.0
1983–84	198.1	94.4	35.8	12.4	8.7				349.4
1984–85	196.5	97.5	37.4	11.8	8.7				351.9
1985–86	213.9	102.9	40.3	12.8	9.8				379.7
1986–87	220.5	106.0	43.0	12.5	9.7				391.7
1987–88	240.2	100.1	45.0	9.5	9.4				404.2
1988–89	240.6	105.7	49.4	10.1	8.8				414.6
1989–90	244.6	107.1	43.3	10.0	8.4				413.4
1990–91	246.5	106.9	42.1	8.9	7.6				411.9
1991–92	238.8	109.0	40.1	8.4	9.6				405.8
1992–93	227.7	106.1	39.4	9.1	13.6				395.8
1993–94	231.3	101.1	38.4	10.5	22.9				404.3
1994–95	244.6	105.5	37.0	10.9	23.4				421.4
1995–96	249.9	109.3	39.2	10.8	25.9				435.1
1996–97	257.0	112.7	41.5	10.7	29.0				450.9
1997–98	258.4	113.1	41.5	10.5	29.2				452.7
1998–99	261.9	118.4	41.0	10.3	28.9				460.5
1999–00	270.4	125.4	42.2	10.3	29.5				477.7
2000–01	293.1	130.5	44.2	10.2	31.2				509.3
2001–02	267.1	135.4	45.0	10.5	31.0				489.0
2002–03	263.7	138.3	45.7	11.0	31.4				490.0
2003–04	263.6	139.8	47.1	11.3	31.1				492.9
2004–05	259.9	145.1	47.2	11.3	32.7				496.3
2005–06	261.9	162.4	50.2	11.9	34.1				520.4
2006–07	269.0	178.6	52.0	11.8	35.8				547.2
2007–08	283.3	201.2	53.6	11.8	42.6				592.6
2008–09	292.2	213.7	57.6	12.1	54.8				630.4
2009–10	289.1	219.3	55.3	11.8	56.4				631.9
2010–11	294.5	228.9	54.1	10.7	58.9				647.0
2011–12	303.7	222.0	54.0	9.6	63.0				652.4
2012–13	306.2	225.5	51.9	9.6	65.7				658.9
2013–14	314.1	232.0	51.8	10.1	63.5				671.5

Note: Values denote total UPT train passenger trips (including concessions and transfers) on all metropolitan (heavy) rail network services.

Source: BITRE (2015e).

Table T 5.5b Public transit patronage on light rail, Australian capital cities

Financial year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Metropolitan
	million passenger movements								
1979–80	0.0	98.9		3.0					101.9
1980–81	0.0	100.1		2.9					103.0
1981–82	0.0	102.4		2.9					105.3
1982–83	0.0	101.3		2.8					104.1
1983–84	0.0	102.1		2.8					104.9
1984–85	0.0	109.4		2.7					112.1
1985–86	0.0	112.4		2.6					115.0
1986–87	0.0	113.3		2.6					115.9
1987–88	0.0	115.6		2.4					118.0
1988–89	3.5	118.9		2.7					125.1
1989–90	3.5	95.6		2.2					101.3
1990–91	3.4	107.6		2.2					113.2
1991–92	3.4	112.0		2.1					117.5
1992–93	3.4	100.9		1.8					106.1
1993–94	3.4	104.0		1.8					109.2
1994–95	3.4	108.6		2.0					113.9
1995–96	4.0	114.1		1.9					120.0
1996–97	4.7	115.4		1.9					122.0
1997–98	5.4	117.2		1.9					124.5
1998–99	5.8	121.6		1.9					129.3
1999–00	6.2	129.8		1.9					138.0
2000–01	6.7	133.9		2.0					142.6
2001–02	6.3	137.2		2.0					145.5
2002–03	6.2	140.6		2.0					148.8
2003–04	5.1	142.5		2.2					149.7
2004–05	6.2	145.3		2.1					153.6
2005–06	5.7	151.1		2.1					158.8
2006–07	6.3	154.9		2.4					163.6
2007–08	6.2	158.3		2.6					167.0
2008–09	6.0	178.1		2.6					186.7
2009–10	5.8	175.6		3.0					184.4
2010–11	5.6	182.7		3.3					191.6
2011–12	5.9	191.6		2.9					200.4
2012–13	5.7	182.7		2.8					191.2
2013–14	3.9	176.9		2.9					183.7

Note: Values denote total UPT passenger trips (including concessions and transfers) on all metropolitan light rail networks (such as tram services and the Sydney monorail).

Sydney Monorail closed in June 2013.

Source: BITRE (2015e).

CHAPTER 6

Aviation

Figure T 6 Australia's top 40 airports in 2015–16, passengers

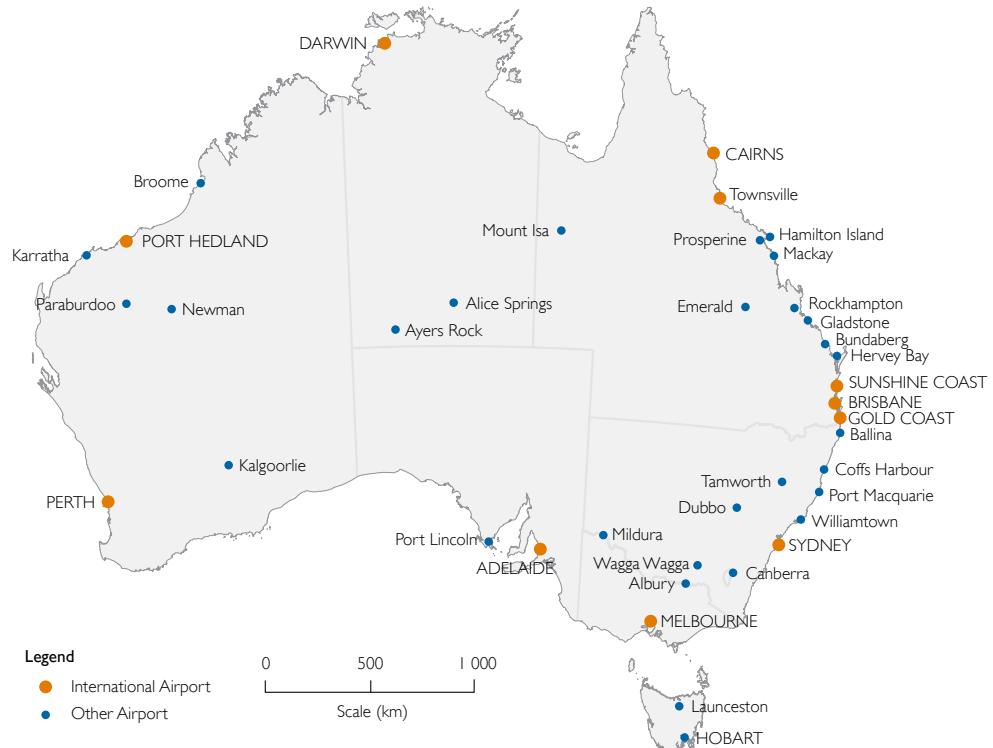


Table T 6.1 Intercapital air distances (great circle distances)

	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra
				km				
Sydney		706	753	1 167	3 284	1 039	3 155	236
Melbourne			1 381	643	2 706	618	3 131	470
Brisbane				1 622	3 615	1 791	2 852	956
Adelaide					2 120	1 172	2 619	972
Perth						3 022	2 651	3 091
Hobart							3 742	850
Darwin								3 141

Source: BITRE (2015f).

Table T 6.2 International airline activity

Financial year	Flights no.	Revenue passengers ¹⁸ no.	Available seats no.	Load factor ¹⁹ per cent	Freight '000 tonnes
1970–71	17 067	1 199 148			33.4
1971–72	18 573	1 433 739			36.3
1972–73	19 735	1 769 816			44.7
1973–74	20 474	2 160 876			58.1
1974–75	27 013	2 392 102			65.8
1975–76	23 267	2 801 883			71.1
1976–77	21 938	2 894 965			78.5
1977–78	24 082	3 036 960			89.2
1978–79	20 764	3 506 753			111.8
1979–80	20 478	4 019 316			122.0
1980–81	20 487	4 108 265			127.8
1981–82	22 346	4 186 171			157.7
1982–83	21 486	4 249 249			166.7
1983–84	21 082	4 451 708			193.9
1984–85	22 385	4 988 998			222.9
1985–86	25 308	5 424 377			235.8
1986–87	29 698	6 194 981			268.4
1987–88	33 848	7 211 743			296.1
1988–89	38 854	7 930 588	11 435 873	69.3	324.6
1989–90	42 353	8 252 769	12 257 200	67.3	353.9
1990–91	45 300	8 424 511	12 991 767	64.8	357.5
1991–92	48 419	9 042 889	13 773 493	65.7	379.8
1992–93	52 295	9 759 065	15 023 875	65.0	432.8
1993–94	54 781	10 621 976	15 709 444	67.6	476.3
1994–95	60 658	11 565 753	17 443 065	66.9	543.5
1995–96	68 387	12 679 451	19 610 366	66.0	564.9
1996–97	74 347	13 718 480	20 792 015	67.4	614.9
1997–98	77 811	14 080 113	21 604 059	66.7	645.6
1998–99	80 476	14 564 061	21 621 816	68.9	645.6
1999–00	86 751	15 583 694	22 895 592	69.3	687.2
2000–01	93 828	17 126 504	24 565 665	71.1	665.7
2001–02	87 557	16 486 343	22 892 570	73.8	634.3
2002–03	89 374	16 108 417	23 062 891	71.8	635.1
2003–04	100 336	18 131 286	25 885 687	71.5	627.0
2004–05	116 087	20 309 733	29 691 278	69.7	702.4
2005–06	117 790	21 096 951	30 041 002	71.3	726.0
2006–07	119 330	22 137 767	29 768 595	75.6	754.5
2007–08	124 176	23 264 573	30 625 242	77.1	781.0
2008–09	131 560	23 486 506	32 174 834	74.2	709.4
2009–10	141 194	25 625 654	34 309 383	75.7	760.0
2010–11	150 440	27 549 289	36 923 253	75.5	822.5
2011–12	156 100	28 882 348	38 574 696	76.6	856.8
2012–13	161 101	30 309 898	40 433 560	77.3	882.8
2013–14	174 045	32 422 133	43 732 584	76.5	882.4
2014–15	175 251	33 864 637	44 226 790	79.0	939.8
2015–16	183 207	36 228 774	46 945 958	79.7	996.9

^{18,19} See end notes.

Note: Data are not readily available for missing years.

Source: BITRE (2016e).

Table T 6.3 Domestic airline activity

Financial year	Flights	Revenue passengers ¹⁸	Revenue passenger kilometres ²⁰	Available seats '000	Available seat kilometres '000	Domestic load factor ²¹ per cent	Cargo '000 tonnes
1977–78	374 866	11 958 560	8 313 930		12 465 976	66.7	
1978–79	397 242	12 587 854	8 787 099		12 795 744	68.7	
1979–80	415 879	13 540 872	9 692 782		13 526 185	71.7	
1980–81	416 282	13 563 340	9 979 054		13 627 596	73.2	
1981–82	416 291	13 695 462	10 406 883		14 933 230	69.7	
1982–83	411 027	12 644 727	9 586 535		14 247 860	67.3	
1983–84	406 679	13 037 551	9 940 350		13 966 231	71.2	
1984–85	411 621	13 768 268	10 604 648	21 123	14 733 094	72.0	
1985–86	426 450	14 798 619	11 588 920	22 642	16 109 845	71.9	
1986–87	427 149	15 267 094	12 372 645	23 352	17 316 196	71.5	
1987–88	435 622	16 471 140	13 623 398	24 130	18 321 841	74.4	
1988–89	452 433	16 844 631	14 168 630	24 430	18 821 360	75.3	
1989–90	364 595	12 272 726	10 490 243	18 836	14 846 965	70.7	
1990–91	444 183	16 935 005	15 139 951	26 123	21 748 111	69.6	
1991–92	490 740	20 997 030	19 806 981	29 384	25 703 400	77.1	
1992–93	522 879	21 475 685	19 849 262	30 943	26 293 801	75.5	
1993–94	543 428	24 788 627	23 862 333	35 549	32 153 754	74.2	
1994–95	572 035	26 997 493	26 394 411	39 610	36 685 149	71.9	
1995–96	589 501	28 611 325	28 372 962	41 964	39 670 986	71.5	
1996–97	592 477	29 040 584	29 344 131	43 024	41 423 354	70.8	
1997–98	589 262	29 358 221	29 780 624	42 291	41 077 354	72.5	
1998–99	596 302	29 733 510	30 390 004	42 322	41 276 389	73.6	
1999–00	595 629	31 365 384	32 203 645	43 442	42 669 709	75.5	
2000–01	625 903	34 105 561	35 014 922	47 541	46 709 057	75.0	
2001–02	493 750	30 510 909	32 300 227	41 596	42 265 977	76.4	
2002–03	484 895	32 104 317	35 103 726	43 207	45 534 719	77.1	
2003–04	501 771	36 410 853	40 402 092	47 683	51 741 384	78.1	
2004–05	544 317	40 435 504	45 047 723	53 859	58 303 803	77.3	
2005–06	545 410	42 531 425	47 782 489	56 532	61 808 822	77.3	
2006–07	541 497	45 827 236	52 022 148	59 121	65 670 698	79.2	
2007–08	562 366	49 278 702	56 191 023	63 873	71 066 014	79.1	
2008–09	563 245	50 238 810	57 551 830	65 493	73 180 717	78.6	
2009–10	577 968	51 744 281	59 007 388	66 577	74 182 141	79.5	
2010–11	610 889	54 733 463	63 132 736	70 604	80 236 667	78.7	253
2011–12	615 706	54 972 783	64 330 105	71 105	81 619 449	78.8	236
2012–13	641 532	57 101 239	67 150 979	76 656	87 503 289	76.7	215
2013–14	640 486	57 716 013	68 079 156	77 724	89 535 414	76.0	197
2014–15	633 147	57 232 928	67 439 197	76 561	88 256 070	76.4	196
2015–16	637 005	58 406 349	68 834 143	77 147	88 880 652	77.4	

^{18,20,21} See end notes.

Note: Cargo data has been under-reported since November 2013. Data from November 2013 to June 2015 has been estimated. From July 2015 cargo statistics are no longer available..

Data are not readily available for missing years.

Source: BITRE (2016).

Table T 6.4a Activity at major airports—revenue passengers (thousand)

Financial year	Sydney	Melbourne	Brisbane	Perth	Adelaide	Gold Coast	Cairns	Canberra	Darwin	Hobart	Townsville
1985–86	9 498	6 476	3 457	1 939	2 082	778	578	1 008	506	407	1 030
1986–87	10 187	6 776	3 728	2 098	2 083	930	742	1 043	494	420	1 010
1987–88	11 510	7 448	4 325	2 226	2 239	1 120	934	1 117	539	469	1 007
1988–89	12 100	7 743	4 834	2 338	2 290	1 259	1 054	1 089	544	496	908
1989–90	10 108	6 511	3 933	1 999	1 825	659	840	721	455	398	455
1990–91	12 361	8 346	5 246	2 508	2 461	1 090	1 288	1 124	590	496	512
1991–92	15 070	10 196	6 644	3 026	3 006	1 495	1 776	1 361	684	563	482
1992–93	15 486	10 255	6 900	2 997	3 033	1 564	1 948	1 382	706	610	555
1993–94	16 650	10 884	7 493	3 429	3 251	1 711	2 223	1 514	743	707	514
1994–95	18 335	11 992	8 509	3 833	3 500	1 879	2 419	1 679	815	824	577
1995–96	19 878	12 972	9 236	4 145	3 743	1 993	2 595	1 750	850	932	598
1996–97	20 637	13 419	9 683	4 484	3 768	1 937	2 657	1 735	841	984	607
1997–98	21 013	13 791	9 737	4 624	3 949	1 868	2 598	1 825	854	1 011	628
1998–99	21 585	14 131	9 834	4 677	4 046	1 864	2 656	1 821	860	1 028	653
1999–00	23 098	15 146	10 534	4 891	4 186	1 959	2 718	1 969	909	1 057	682
2000–01	25 814	16 881	12 467	5 162	4 443	1 888	2 891	2 107	974	1 078	732
2001–02	23 150	15 967	11 774	4 766	4 175	1 736	2 642	1 841	958	963	696
2002–03	23 447	16 382	11 841	5 189	4 351	2 178	2 900	1 916	1 010	985	778
2003–04	26 090	18 631	13 780	5 889	4 893	2 504	3 222	2 303	1 226	1 073	923
2004–05	27 954	20 274	15 358	6 525	5 363	3 142	3 551	2 479	1 523	1 211	1 055
2005–06	28 996	21 041	16 016	7 005	5 767	3 515	3 731	2 550	1 606	1 219	1 161
2006–07	31 016	22 157	17 380	7 977	6 181	3 778	3 782	2 687	1 629	1 404	1 279
2007–08	32 701	23 943	18 298	8 952	6 619	4 323	3 777	2 853	1 758	1 562	1 366
2008–09	32 346	24 448	18 720	9 359	6 784	4 618	3 654	3 062	1 869	1 539	1 436
2009–10	34 461	25 918	18 897	9 993	7 016	5 186	3 550	3 258	1 856	1 557	1 518
2010–11	35 958	27 963	19 975	10 890	7 279	5 486	3 859	3 241	1 903	1 666	1 630
2011–12	35 987	27 956	20 874	11 997	6 947	5 327	3 943	3 159	1 815	2 045	1 627
2012–13	37 603	29 492	21 145	12 832	7 171	5 805	4 158	3 014	2 027	1 903	1 570
2013–14	38 629	30 896	21 821	12 980	7 577	5 784	4 296	2 858	2 107	2 045	1 523
2014–15	39 022	31 936	21 918	12 730	7 670	5 867	4 391	2 804	2 186	2 057	1 498
2015–16	41 091	33 705	22 320	12 558	7 778	6 274	4 711	2 815	2 313	2 041	1 530

Source: BITRE (2016g).

Table T 6.4b Activity at major airports—aircraft movements²²

Financial year	Sydney	Melbourne	Brisbane	Perth	Adelaide	Gold Coast	Cairns	Canberra	Darwin	Hobart	Townsville
1985–86	137 898	86 391	51 460	45 124	52 360	12 926	11 358	20 615	12 200	10 781	17 471
1986–87	144 160	88 271	55 946	36 222	50 587	16 715	14 568	21 568	11 728	12 294	17 644
1987–88	152 972	92 487	65 359	32 184	47 688	19 653	17 551	21 642	11 556	12 125	16 482
1988–89	163 946	95 555	70 241	31 799	49 656	22 224	19 694	20 726	10 095	10 794	17 425
1989–90	139 038	79 854	57 931	28 193	41 827	16 540	14 805	15 092	8 445	5 284	10 732
1990–91	165 921	102 204	77 181	35 522	50 315	22 609	25 480	22 432	10 140	7 199	13 732
1991–92	182 968	110 530	94 527	39 472	55 797	26 299	32 547	25 988	10 681	13 162	14 299
1992–93	202 555	119 862	99 854	39 590	58 533	26 358	35 854	29 054	10 929	15 323	14 386
1993–94	206 660	118 507	105 662	44 900	59 633	27 228	38 776	31 275	11 325	17 954	15 137
1994–95	221 208	127 155	116 880	50 002	63 253	26 828	41 903	35 625	12 381	20 663	15 928
1995–96	235 398	132 411	125 827	54 088	66 866	26 446	43 119	37 057	11 230	23 781	17 103
1996–97	243 592	136 339	125 108	57 286	68 970	24 203	44 009	38 173	9 468	24 303	18 035
1997–98	248 791	138 252	125 581	55 893	72 544	22 581	42 152	38 446	8 965	23 729	17 373
1998–99	249 175	141 560	129 230	53 609	73 258	22 260	41 594	38 077	9 697	25 138	17 943
1999–00	255 600	150 657	133 352	55 806	71 543	21 320	41 415	40 941	10 776	22 374	17 994
2000–01	283 408	174 663	151 552	56 176	73 666	20 417	41 859	51 867	15 205	22 126	19 013
2001–02	227 644	147 150	125 469	45 051	66 533	16 153	35 161	39 716	12 266	17 253	12 687
2002–03	225 872	146 751	116 552	47 854	66 231	21 225	38 594	35 986	11 444	17 243	15 208
2003–04	241 787	157 524	123 901	51 283	67 051	20 837	41 965	39 418	12 729	16 508	17 402
2004–05	257 630	176 038	139 984	56 445	70 761	27 728	45 474	38 512	15 889	16 501	20 101
2005–06	258 923	175 435	141 785	57 972	70 829	27 471	46 547	38 182	14 335	16 416	22 156
2006–07	264 401	176 112	144 359	61 659	72 508	27 279	44 952	38 257	13 497	17 981	21 108
2007–08	275 226	186 431	150 895	68 985	74 772	31 691	43 488	41 177	14 488	19 270	20 120
2008–09	271 029	189 011	157 675	78 623	74 654	32 083	39 511	45 191	15 027	22 727	21 044
2009–10	279 356	194 298	157 756	82 349	74 504	35 297	38 958	44 345	15 166	25 973	25 840
2010–11	290 501	206 798	168 342	87 863	76 110	37 737	42 611	43 280	16 064	26 894	29 327
2011–12	291 310	205 916	178 195	93 590	72 259	35 698	43 529	42 938	14 529	26 829	28 110
2012–13	305 006	215 414	188 320	98 974	75 518	39 035	44 914	41 816	16 410	25 823	27 483
2013–14	306 703	222 851	194 688	101 380	76 955	38 831	44 767	40 498	16 375	26 997	26 350
2014–15	306 685	228 444	194 842	96 942	78 072	38 809	44 539	38 718	17 379	26 565	25 555
2015–16	314 352	234 789	192 917	94 747	78 695	41 370	48 473	37 147	18 170	27 129	25 255

²² See end notes.

Source: BITRE (2016g).

Table T 6.5 Domestic on-time performance²³

Financial year	Sectors scheduled	Cancellations	Sectors flown	On-time arrivals per cent	On-time departures per cent
		per cent			
2004–05	430 714	0.9	426 662	86.4	87.0
2005–06	457 817	1.0	453 406	85.7	87.0
2006–07	467 907	0.8	463 981	85.6	86.9
2007–08	496 564	1.7	488 112	78.8	80.6
2008–09	502 291	1.7	493 710	79.7	81.1
2009–10	502 106	1.0	497 268	84.4	85.6
2010–11	527 708	1.6	519 255	78.8	80.6
2011–12	530 101	1.5	522 374	80.0	81.4
2012–13	563 636	1.7	554 258	78.8	81.1
2013–14	574 385	1.6	565 077	81.9	83.8
2014–15	573 966	1.4	565 695	85.1	86.5
2015–16	579 884	1.6	570 449	86.1	86.7

²³ See end notes.

Source: BITRE (2016h).

Table T 6.6 BITRE airfare index

Financial year	Business index	Economy index	Restricted economy index	Best discount index
1993–94	59.1	67.4		96.7
1994–95	62.8	69.1		95.8
1995–96	65.6	71.5		94.9
1996–97	71.6	76.1		104.3
1997–98	76.2	78.7		114.9
1998–99	79.2	80.9		114.3
1999–00	80.0	81.8		114.0
2000–01	89.0	91.5		100.5
2001–02	92.5	96.0		109.1
2002–03	96.8	97.1	102.7	105.5
2003–04	103.0	100.2	100.1	102.3
2004–05	109.8	106.7	106.7	87.8
2005–06	106.6	112.8	99.6	95.0
2006–07	111.9	120.0	103.5	100.4
2007–08	117.4	112.9	111.3	100.1
2008–09	124.6	104.1	115.9	87.1
2009–10	116.1	108.2	113.2	74.8
2010–11	124.3	114.4	111.8	70.5
2011–12	116.9	131.0	84.9	87.7
2012–13	89.4	154.7	91.5	83.7
2013–14	108.6	157.8	97.0	82.1
2014–15	120.5	*	103.8	81.0
2015–16	127.0	*	108.8	81.7

Note: Data are not readily available for missing years.

Base of index: July 2003 = 100.00

Airfare Indices are not adjusted by ABS Consumer Price Index.

Source: BITRE (2016f).

* From the middle of February 2015, Qantas Airways ceased offering Full Economy fares for domestic travel. Since the Full Economy fare category was mainly made up of Qantas fares, it is no longer possible to continue producing the index for this fare category. In the future, if Full Economy fares are offered on sufficient routes, the index for this fare category could be reinstated.

Table T 6.7 Number of Australian registered aircraft, by aircraft type

Date	Aeroplane				Helicopter	Balloon	Glider
	Piston	Turbofan	Turbojet	Turboprop			
14 December 1998	8 244	257	31	519	779	296	1 056
20 December 1999	8 347	268	34	534	870	308	1 063
17 December 2000	8 394	293	34	549	942	323	1 060
17 December 2001	8 440	310	37	553	980	332	1 060
16 December 2002	8 440	303	42	549	1 034	337	1 082
13 December 2003	8 684	308	51	576	1 195	351	1 106
20 December 2004	8 688	308	51	576	1 196	350	1 106
4 December 2005	8 798	323	52	611	1 284	350	1 115
7 November 2006	8 691	337	52	628	1 303	318	1 047
14 December 2007	8 928	370	52	693	1 479	335	1 085
31 December 2008	9 123	426	52	737	1 635	336	1 122
31 December 2009	9 202	458	54	746	1 696	339	1 143
13 December 2010	9 413	516	55	778	1 797	350	1 172
14 December 2011	9 663	559	54	845	1 909	361	1 193
19 November 2012	9 808	579	51	882	2 003	368	1 201
23 December 2013	9 918	611	48	908	2 077	379	1 220
27 October 2014	9 945	617	45	899	2 107	379	1 240
16 October 2015	9 927	620	45	910	2 134	395	1 258

Source: CASA (2015).

CHAPTER 7

Shipping

Figure T 7 Principal Australian ports, by commodity

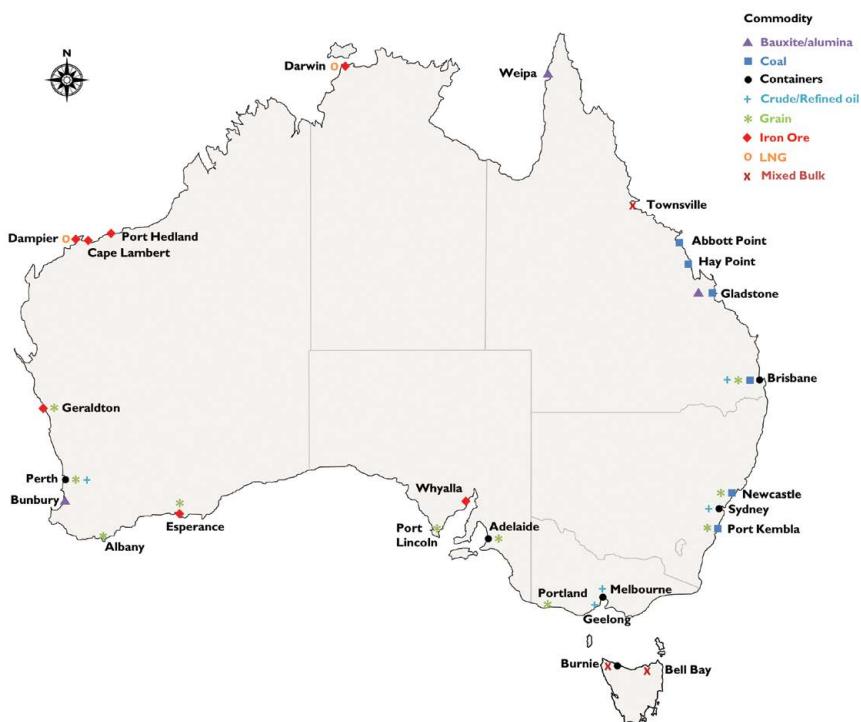


Table T 7.1 Intercapital sea distances

	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin
	kilometres						
Sydney		1 114	977	1 833	3 991	1 195	4 595
Melbourne			2 042	988	3 111	878	5 661
Brisbane				2 761	4 920	2 120	3 845
Adelaide					2 509	1 436	na*
Perth						3 367	3 426
Hobart							5 739

na*: not applicable.

Source: BITRE estimates, Australian Chamber of Shipping (1993).

Table T 7.2a Number of cargo ships involved in coastal or international voyages that made port calls, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	Other ^h	Total ⁱ
1998–99	1 689	1 123	2 351	615	2 396	363	308	81	3 291
1999–00	1 560	1 090	2 459	588	2 470	373	293	93	3 207
2000–01	1 514	1 058	2 417	679	2 332	383	286	80	3 167
2001–02	1 522	1 024	2 368	740	2 047	370	265	77	3 136
2002–03	1 565	1 006	2 517	677	2 208	407	306	55	3 189
2003–04	1 622	1 054	2 701	699	2 360	362	286	39	3 448
2004–05	1 629	1 121	2 751	670	2 445	387	319	26	3 552
2005–06	1 587	1 010	2 888	684	2 540	330	315	39	3 440
2006–07	1 726	1 071	3 123	595	2 738	370	330	32	3 796
2007–08	1 789	1 112	3 255	600	2 690	369	349	20	3 852
2008–09	1 839	1 033	3 311	673	2 968	337	353	30	4 048
2009–10	1 855	994	3 432	590	3 044	327	432	5	4 343
2010–11	2 050	1 192	3 344	783	3 395	338	417	0	4 502
2011–12	2 214	1 386	3 560	862	3 857	265	405	2	5 082
2012–13	2 343	1 389	3 694	809	4 093	286	392	0	5 246
2013–14	2 206	1 437	3 771	858	4 352	303	483	0	5 530
2014–15	2 192	1 249	3 768	814	4 242	308	432	0	5 475

^h "Other" includes state/territory not clearly specified in the source data.ⁱ "Total" refers to the number of cargo ships that visited at least one Australian port. The "Total" value is less than the sum of all states/territory values as some cargo ships may visit multiple jurisdictions.

Note: Data may change slightly from year to year due revisions to historical data.

Source: BITRE estimates based on Lloyds List Intelligence data.

Table T 7.2b Number of port calls made by ships involved in coastal or international voyages, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	Other ^h	Total
1998–99	3 996	3 497	4 582	1 093	4 333	1 314	599	91	19 505
1999–00	3 908	3 753	5 025	1 091	4 338	1 568	705	106	20 494
2000–01	3 877	3 707	5 039	1 201	4 309	1 610	642	91	20 476
2001–02	3 755	3 575	5 041	1 271	3 600	1 651	562	88	19 543
2002–03	3 768	3 889	5 473	1 242	3 700	1 951	558	74	20 655
2003–04	3 850	3 818	5 159	1 250	3 925	1 767	497	46	20 312
2004–05	4 076	4 098	5 224	1 194	4 037	2 024	517	28	21 198
2005–06	4 202	4 137	5 809	1 277	4 338	1 957	529	52	22 301
2006–07	4 218	4 211	6 405	1 210	4 662	1 929	577	32	23 244
2007–08	4 457	4 264	6 841	1 254	4 840	1 933	626	24	24 239
2008–09	4 273	3 738	6 441	1 216	5 288	1 736	639	34	23 365
2009–10	4 152	3 495	6 672	1 135	5 379	1 567	721	6	23 127
2010–11	4 522	4 164	6 554	1 376	6 000	1 682	668		24 966
2011–12	4 658	4 148	6 788	1 637	6 833	1 390	616	2	26 072
2012–13	5 074	4 226	6 961	1 723	7 471	1 516	688		27 659
2013–14	5 055	4 207	7 319	1 790	8 210	1 553	799		28 933
2014–15	5 102	3 997	7 820	1 831	8 418	1 569	858		29 595

^h "Other" includes state/territory not clearly specified in the source data.

Note: Data may change slightly from year to year due revisions to historical data.

Source: BITRE estimates based on Lloyds List Intelligence data.

Table T 7.3a Number of ships involved in coastal or international voyages that made port calls, by major ports

Financial year	Melbourne	Brisbane	Sydney	Fremantle	Newcastle	Gladstone	Dampier	Port Hedland
1998–99	670	767	658	734	658	407	467	310
1999–00	596	763	627	719	594	422	507	326
2000–01	587	727	579	678	583	459	477	361
2001–02	589	678	560	670	619	469	240	343
2002–03	575	688	590	703	662	531	254	376
2003–04	613	717	618	712	686	637	394	332
2004–05	672	756	617	716	685	652	405	437
2005–06	597	780	606	687	654	679	460	517
2006–07	697	786	671	745	706	737	513	491
2007–08	655	794	662	709	706	795	533	485
2008–09	653	841	555	838	760	852	621	550
2009–10	634	824	476	810	810	879	652	590
2010–11	689	891	506	795	905	832	731	679
2011–12	827	993	577	905	977	906	709	801
2012–13	839	1007	543	964	1026	947	729	858
2013–14	818	905	523	946	1049	999	750	957
2014–15	734	872	512	834	1046	944	731	990

Note: Data may change slightly from year to year due to revisions to historical data.

Source: BITRE estimates based on Lloyds List Intelligence data.

Table T 7.3b Number of port calls made by ships involved in coastal or international voyages, by major ports

Financial year	Melbourne	Brisbane	Sydney	Fremantle	Newcastle	Gladstone	Dampier	Port Hedland
1998–99	2 595	1 981	2 111	1 705	1 221	606	870	602
1999–00	2 812	2 148	2 157	1 609	1 130	668	956	589
2000–01	2 776	2 052	2 053	1 611	1 153	810	950	677
2001–02	2 810	1 934	1 967	1 589	1 184	919	350	617
2002–03	3 037	2 005	1 972	1 527	1 233	1 015	345	672
2003–04	2 901	1 970	2 074	1 548	1 224	1 055	645	541
2004–05	3 191	2 078	2 149	1 447	1 337	1 096	645	800
2005–06	3 296	2 317	2 327	1 460	1 284	1 215	851	883
2006–07	3 386	2 410	2 294	1 565	1 307	1 368	929	879
2007–08	3 390	2 395	2 233	1 594	1 481	1 504	963	953
2008–09	3 032	2 265	1 886	1 688	1 490	1 518	1 184	1 172
2009–10	2 846	2 219	1 608	1 635	1 538	1 495	1 226	1 168
2010–11	3 274	2 380	1 703	1 603	1 774	1 422	1 408	1 312
2011–12	3 238	2 460	1 697	1 698	1 903	1 559	1 439	1 672
2012–13	3 313	2 469	1 781	1 816	2 119	1 628	1 500	1 913
2013–14	3 209	2 475	1 792	1 790	2 282	1 726	1 494	2 385
2014–15	3 109	2 498	1 741	1 634	2 391	1 704	1 412	2 719

Note: Data may change slightly from year to year due to revisions to historical data.

Source: BITRE estimates based on Lloyds List Intelligence data.

Table T 7.4a Cargo loaded (including exports) at Australian ports, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	Other	Total
	million tonnes								
1995–96	76.6	18.5	106.1	13.1	190.1	9.0	6.1	1.2	420.7
1996–97	80.7	13.8	98.2	8.5	191.5	3.9	6.0	1.2	453.1
1997–98	96.3	20.6	119.0	13.8	213.7	8.6	6.4	1.2	479.6
1998–99	93.0	20.2	126.1	14.9	207.6	10.3	6.4	1.6	480.2
1999–00	90.6	22.5	141.2	14.2	225.5	11.5	6.2	1.6	513.3
2000–01	95.7	25.3	156.0	15.4	235.7	11.2	6.0	1.7	547.0
2001–02	94.6	23.7	159.5	17.0	238.1	13.5	5.4	1.5	553.4
2002–03	93.2	20.7	166.7	14.7	265.8	13.8	5.8	1.5	582.2
2003–04	98.1	21.6	172.8	15.2	282.2	13.8	6.3	1.4	611.5
2004–05	101.9	21.0	186.2	15.0	318.1	13.3	7.3	1.6	664.3
2005–06 ²⁵	106.7	23.1	186.0	15.6	328.7	12.0	7.6	1.8	681.6
2006–07	106.5	22.0	197.0	14.7	351.9	11.9	10.3	1.8	716.1
2007–08	114.7	20.6	199.5	16.8	386.2	13.1	11.2	2.3	764.5
2008–09	117.1	19.1	205.3	18.3	419.4	11.7	12.7	2.2	805.9
2009–10	125.4	19.2	228.8	19.2	493.9	10.9	15.0	1.9	914.3
2010–11	139.3	21.8	210.2	23.8	511.8	10.5	14.5	1.4	933.3
2011–12	155.8	26.1	218.3	27.6	571.8	8.9	13.8	1.6	1 023.8
2012–13	172.6	25.5	237.5	25.9	634.7	8.2	15.9	0.7	1 121.1
2013–14	180.0	26.3	261.6	32.2	745.6	9.4	18.6	0.0	1 273.8

²⁵ See end notes.

Note: Small differences exist in historical estimates due to revised coastal freight estimates for some years.

Source: ABS (2015d) and BITRE (2015d).

Table T 7.4b Cargo discharged (including imports) at Australian ports, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	Total	
	million tonnes								
1995–96	31.8	15.2	24.9	6.8	11.2	3.8	1.5	95.1	
1995–96	31.8	15.2	24.9	6.8	11.2	3.8	1.5	95.1	
1996–97	13.3	10.3	12.2	3.6	8.5	0.4	1.4	99.9	
1997–98	34.2	18.0	26.9	8.4	12.0	4.3	1.8	105.6	
1998–99	30.7	21.2	27.7	7.2	11.7	4.0	1.9	104.4	
1999–00	31.0	20.4	29.7	7.8	12.0	4.5	2.1	107.5	
2000–01	30.9	21.2	28.8	7.5	12.0	3.9	2.1	106.5	
2001–02	30.7	21.2	29.3	8.4	13.0	6.2	1.9	110.6	
2002–03	31.2	22.8	31.8	8.0	14.6	5.6	1.7	115.7	
2003–04	32.1	25.9	31.6	6.9	15.0	6.0	1.8	119.3	
2004–05	32.5	25.8	34.3	7.3	15.2	6.7	2.2	123.9	
2005–06 ²⁵	32.3	26.2	37.4	8.8	14.7	5.2	3.1	127.8	
2006–07	34.4	26.9	39.2	7.6	16.8	4.3	6.5	135.8	
2007–08	34.4	28.4	39.8	8.2	19.0	5.6	6.6	142.0	
2008–09	30.1	26.2	38.5	6.9	18.5	5.4	7.7	133.2	
2009–10	34.5	25.7	40.9	7.6	17.9	4.9	6.8	138.4	
2010–11	35.1	28.2	41.8	7.6	19.1	5.1	7.4	144.3	
2011–12	31.3	28.7	43.3	8.4	20.4	4.8	6.9	143.8	
2012–13	30.1	28.4	48.1	8.4	22.2	4.8	7.9	149.9	
2013–14	29.7	29.4	47.1	8.7	24.3	4.9	7.5	151.4	

²⁵ See end notes.

Note: Small differences exist in historical estimates due to revised coastal freight estimates for some years.

Source: ABS (2015d) and BITRE (2015d).

Table T 7.5a Cargo loaded (including exports), by selected Australian ports²⁶

Financial year	Port Hedland	Dampier	Newcastle	Hay Point	Gladstone	Port Walcott	Weipa	Port Kembla
million tonnes								
1995–96	63.9	70.2	53.0	45.8	27.3	25.1	9.9	17.0
1996–97	68.3	78.0	60.4	46.3	28.3	25.0	10.7	18.7
1997–98	69.5	87.5	70.0	52.0	30.2	22.2	10.9	17.7
1998–99	66.9	87.2	71.3	53.9	32.5	17.9	10.6	15.4
1999–00	65.0	92.7	68.6	64.1	35.0	26.4	13.3	14.9
2000–01	72.5	90.4	70.6	70.3	41.3	28.7	13.1	17.6
2001–02	72.5	96.4	72.0	70.3	43.2	27.0	12.9	15.3
2002–03	81.6	101.2	74.0	76.3	44.1	39.6	13.2	13.8
2003–04	89.4	101.6	79.6	78.0	48.0	43.9	13.4	12.7
2004–05	107.9	104.2	81.1	84.8	49.7	56.4	15.4	14.6
2005–06 ²⁵	110.2	112.1	83.1	80.3	52.0	55.2	17.8	16.2
2006–07	111.4	128.2	82.8	86.4	58.4	53.9	19.3	16.2
2007–08	129.9	137.9	90.3	80.3	60.4	56.4	22.1	16.6
2008–09	158.0	141.9	92.5	82.0	62.6	56.9	20.5	16.9
2009–10	178.1	169.4	99.8	99.3	67.0	78.7	20.4	18.0
2010–11	197.2	166.7	111.7	87.8	59.6	80.9	22.4	19.6
2011–12	243.9	173.6	126.2	83.3	66.5	81.8	24.9	20.9
2012–13	286.5	181.2	146.3	96.4	65.3	84.8	29.0	18.4
2013–14	366.6	175.7	157.1	108.3	77.1	120.3	30.7	15.7

^{25,26} See end notes.

Source: ABS (2015d) and BITRE (2015d).

Table T 7.5b Cargo discharged (including imports), by selected Australian ports²⁶

Financial year	Gladstone	Port Kembla	Geelong	Townsville	Newcastle	Bunbury	Devonport	Dampier
million tonnes								
1995–96	9.3	9.5	3.8	4.3	6.4	0.8	0.7	0.3
1996–97	9.9	9.1	4.7	4.8	6.2	0.6	0.9	0.3
1997–98	9.4	11.5	5.1	4.4	6.6	0.9	0.9	0.2
1998–99	10.1	8.7	5.9	4.9	6.4	0.8	1.1	0.3
1999–00	10.9	9.4	5.8	4.9	4.3	0.9	1.1	0.4
2000–01	11.0	9.6	6.0	4.7	3.4	1.2	1.2	0.2
2001–02	11.0	9.5	6.3	4.8	3.5	1.1	1.1	0.2
2002–03	10.9	9.7	6.1	5.6	3.1	1.1	1.3	0.7
2003–04	11.5	9.7	6.9	5.3	2.7	1.0	1.3	0.6
2004–05	13.3	9.9	7.3	5.3	2.9	1.2	1.3	0.5
2005–06 ²⁵	15.4	9.1	7.6	5.6	2.7	1.1	1.3	0.6
2006–07	16.1	9.4	6.8	5.2	3.2	1.2	1.0	0.8
2007–08	16.0	9.8	7.1	5.3	3.2	1.5	1.4	1.3
2008–09	16.5	7.1	6.5	4.8	3.1	1.6	1.4	1.3
2009–10	16.7	9.9	6.3	5.9	3.2	1.4	1.4	1.6
2010–11	17.0	10.2	7.4	6.0	3.3	1.6	1.4	1.0
2011–12	17.9	6.5	7.3	6.2	3.6	1.3	1.4	2.2
2012–13	21.0	5.6	7.9	6.7	3.2	1.7	1.4	1.7
2013–14	20.9	5.5	8.5	5.5	3.4	1.8	1.4	1.8

^{25,26} See end notes.

Source: ABS (2015d) and BITRE (2015d).

Table T 7.6a Cargo loaded (including exports), by capital city ports²⁶

Financial year	Sydney	Melbourne	Brisbane	Adelaide million tonnes	Perth	Hobart	Darwin
1995–96	3.8	7.7	9.4	3.4	10.9	0.7	0.9
1996–97	4.7	8.8	10.3	4.4	11.9	0.3	1.3
1997–98	5.1	9.8	9.7	4.0	13.3	0.6	0.9
1998–99	4.3	9.5	9.7	4.2	12.9	0.7	0.7
1999–00	5.1	10.5	10.7	4.6	12.9	0.9	0.6
2000–01	5.8	11.1	11.4	5.3	12.5	0.6	0.4
2001–02	5.7	11.9	11.6	6.0	12.1	1.6	0.3
2002–03	4.7	10.8	11.0	5.3	12.9	1.3	0.4
2003–04	5.0	11.4	10.8	4.7	14.2	1.4	0.8
2004–05	5.1	11.8	11.5	4.5	14.2	1.8	1.1
2005–06 ²⁵	6.2	12.8	12.1	5.1	14.3	1.5	1.4
2006–07	6.2	11.3	11.6	4.4	12.6	1.5	4.2
2007–08	6.7	11.5	13.4	4.4	15.2	1.8	4.6
2008–09	5.4	12.2	15.3	4.2	15.6	1.6	6.1
2009–10	6.3	12.3	15.3	4.7	15.4	1.2	6.4
2010–11	6.8	13.4	15.4	6.8	13.0	1.3	6.5
2011–12	7.5	15.1	19.2	9.2	14.3	0.9	5.5
2012–13	6.9	14.9	19.4	8.3	18.1	0.7	6.7
2013–14	6.4	15.0	17.0	8.9	19.3	0.7	7.0

^{25,26} See end notes.

Source: ABS (2015d) and BITRE (2015d).

Table T 7.6b Cargo discharged (including imports), by capital city ports²⁶

Financial year	Sydney	Melbourne	Brisbane	Adelaide million tonnes	Perth	Hobart	Darwin
1995–96	12.2	10.4	9.4	5.2	8.4	1.1	0.8
1996–97	15.7	10.6	9.6	5.8	9.9	0.2	0.8
1997–98	16.0	10.8	11.4	6.3	9.2	1.1	0.8
1998–99	15.6	12.6	11.1	5.4	9.2	0.8	0.9
1999–00	17.3	12.4	12.3	5.9	9.1	0.9	1.0
2000–01	17.9	11.6	11.4	5.8	9.0	0.5	1.0
2001–02	17.6	12.4	11.7	6.2	10.1	1.1	0.8
2002–03	18.4	14.2	13.4	5.9	11.4	1.0	0.7
2003–04	19.7	15.4	13.1	4.9	11.6	1.0	1.0
2004–05	19.6	16.2	13.9	5.1	12.0	1.1	1.4
2005–06 ²⁵	20.5	16.2	14.4	6.4	11.1	1.1	2.1
2006–07	21.8	17.7	16.2	7.5	12.4	1.1	5.3
2007–08	21.4	18.8	16.4	8.4	13.6	1.2	5.4
2008–09	19.9	17.3	16.0	5.0	12.5	1.1	6.2
2009–10	21.3	17.3	16.6	5.6	12.1	1.0	5.3
2010–11	21.5	18.6	17.2	5.7	13.0	1.1	6.2
2011–12	21.2	19.3	17.4	6.3	13.7	0.9	5.4
2012–13	21.3	19.0	18.3	6.4	13.9	1.0	6.3
2013–14	20.7	19.3	18.2	6.6	14.4	0.9	6.6

^{25,26} See end notes.

Source: ABS (2015d) and BITRE (2015d).

Table T 7.7 Containers exchanged, selected Australian ports

Financial year	Melbourne	Sydney twenty foot equivalent units (TEU) exchanged	Brisbane	Fremantle	Adelaide	Five ports
1993–94	801 344	587 670	228 055	169 174	64 619	1 850 862
1994–95	880 151	666 586	232 693	189 272	66 525	2 035 227
1995–96	923 142	684 714	249 439	202 680	69 355	2 129 330
1996–97	984 394	730 446	272 632	209 564	88 497	2 285 533
1997–98	1 040 810	798 209	317 568	250 802	107 912	2 515 301
1998–99	1 121 161	878 580	357 703	275 697	120 586	2 753 727
1999–00	1 287 795	1 010 509	414 449	297 363	115 506	3 125 622
2000–01	1 316 665	988 967	453 257	354 144	133 236	3 246 269
2001–02	1 420 781	1 009 453	481 623	381 809	145 226	3 438 892
2002–03	1 593 798	1 160 513	570 204	431 342	148 333	3 904 190
2003–04	1 717 718	1 270 256	639 272	457 305	169 108	4 253 659
2004–05	1 910 441	1 375 610	726 147	467 313	170 585	4 650 096
2005–06	1 929 925	1 445 465	766 278	455 428	189 391	4 786 487
2006–07	2 093 611	1 620 121	875 045	505 082	219 117	5 312 976
2007–08	2 256 644	1 778 425	940 760	573 527	280 121	5 829 477
2008–09	2 157 352	1 783 920	896 167	565 491	276 545	5 679 475
2009–10	2 236 635	1 927 520	919 242	557 039	274 501	5 768 095
2010–11	2 392 974	2 020 151	978 815	598 250	297 701	6 137 455
2011–12	2 579 098	2 036 064	1 025 069	656 918	323 834	6 620 983
2012–13	2 512 926	2 126 284	1 069 881	670 296	339 061	6 718 448
2013–14	2 532 669	2 206 401	1 097 365	703 081	382 681	6 922 197
2014–15	2 578 839	2 289 673	1 138 706	743 562	365 874	7 116 654

Source: BITRE (2016i).

Table T 7.8a Summary of the Australian trading fleet—number of vessels

Financial year	Vessel capacity		Flag		
	Major trading fleet (greater than 2000 dwt)	Other (minor) trading ships (greater than 150 gross registered tonnage and less than or equal to 2000 dwt)	Total Australian trading fleet	Total Australian registered	Total Overseas registered
2001–02	94	23	117	62	55
2002–03	93	25	118	58	60
2003–04	89	26	115	60	55
2004–05	86	21	107	58	49
2005–06	82	23	105	59	46
2006–07	86	24	110	59	51
2007–08	91	20	111	55	56
2008–09	89	22	111	56	55
2009–10	95	22	117	54	63
2010–11	93	22	115	54	61
2011–12	84	27	111	52	59
2012–13	81	26	107	49	58
2013–14	79	30	109	51	58

Note: Historical vessel list data are reviewed by BITRE each year as new information becomes available. This sometimes results in revisions to historical data.

Source: BITRE (2015d).

Table T 7.8b Summary of the Australian trading fleet—deadweight (tonnes)

Financial year	Vessel capacity		Total Australian trading fleet	Flag	
	Major trading fleet (greater than 2000 dwt)	Other (minor) trading ships (greater than 150 gross registered tonnage and less than or equal to 2000 dwt)		Total Australian registered	Total Overseas registered
2001–02	3 473 723	12 811	3 486 534	1 734 477	1 752 057
2002–03	3 457 486	14 622	3 472 108	1 580 392	1 891 716
2003–04	3 731 527	15 212	3 746 739	1 607 609	2 139 130
2004–05	3 302 358	12 917	3 315 275	1 464 396	1 850 879
2005–06	3 026 081	14 576	3 040 657	1 370 386	1 670 271
2006–07	3 308 506	15 646	3 324 152	1 373 446	1 950 706
2007–08	3 560 906	15 515	3 576 421	1 235 915	2 340 506
2008–09	3 343 806	13 246	3 357 052	1 164 046	2 193 006
2009–10	3 808 689	15 915	3 824 604	1 240 115	2 584 489
2010–11	3 693 007	17 731	3 710 738	1 050 892	2 659 846
2011–12	3 625 307	22 191	3 647 498	900 452	2 747 046
2012–13	4 413 467	24 419	4 437 886	578 991	3 858 895
2013–14	4 396 105	27 478	4 423 583	546 967	3 876 616

Source: BITRE (2015d).

Table T 7.8c Summary of the Australian trading fleet—gross tonnage (tonnes)

Financial year	Vessel capacity		Total Australian trading fleet	Flag	
	Major trading fleet (greater than 2000 dwt)	Other (minor) trading ships (greater than 150 gross registered tonnage and less than or equal to 2000 dwt)		Total Australian registered	Total Overseas registered
2001–02	2 515 439	19 186	2 534 625	1 421 136	1 113 489
2002–03	2 438 734	28 565	2 467 299	1 275 626	1 191 673
2003–04	2 703 809	36 736	2 740 545	1 379 775	1 360 770
2004–05	2 446 408	25 250	2 471 658	1 307 557	1 164 101
2005–06	2 346 281	22 776	2 369 057	1 253 895	1 115 162
2006–07	2 543 670	25 329	2 568 999	1 232 529	1 336 470
2007–08	2 739 770	24 529	2 764 299	1 146 529	1 617 770
2008–09	2 673 070	29 329	2 702 399	1 100 229	1 602 170
2009–10	2 985 952	26 807	3 012 759	1 127 207	1 885 552
2010–11	2 923 075	21 063	2 944 138	1 022 881	1 921 257
2011–12	2 840 875	31 911	2 872 786	925 029	1 947 757
2012–13	3 208 423	33 818	3 242 241	746 045	2 496 196
2013–14	3 301 344	37 187	3 338 531	737 640	2 600 891

Source: BITRE (2015d).

Table T 7.8d Summary of the Australian trading fleet—age distribution
(percentage of total deadweight (tonnes))

Financial year	0–4 years	5–9 years	10–14 years	15–19 years	20+ years	Average age (years)
2001–02	7.8	24.2	26.9	31.9	9.2	16.0
2002–03	7.6	22.6	26.5	27.1	16.1	15.5
2003–04	9.3	21.8	24.7	25.8	18.4	14.8
2004–05	3.1	31.6	22.7	15.3	27.2	16.0
2005–06	3.4	16.9	37.3	15.5	26.9	17.2
2006–07	3.3	10.2	25.4	35.3	26.0	18.0
2007–08	15.7	7.9	21.8	35.5	19.0	16.7
2008–09	20.9	10.1	22.4	23.1	23.6	16.7
2009–10	23.9	6.9	22.7	21.7	24.8	16.7
2010–11	27.3	5.1	16.1	29.0	22.5	16.8
2011–12	22.6	8.1	12.9	23.2	33.3	16.4
2012–13	22.4	23.8	13.4	14.4	26.0	14.7
2013–14	15.4	32.8	13.4	15.6	22.8	14.8

Source: BITRE (2015d).

Table T 7.9a Ships in the major trading fleet—overseas trades, 2013–14—tankers

Name	Products	Ports called at	
		Australian	Overseas
Astrid	LPG	Brisbane	WSM, ZAF
Dapeng Moon	LNG	Dampier	CHN, SGP
Dapeng Star	LNG	Dampier	CHN
Dapeng Sun	LNG	Dampier	CHN
Gemmata	LNG	Dampier	CHN, KOR
Maea	LPG	Brisbane, Port Kembla, Sydney	FJI, NZL, PYF, TON
Northwest Sanderling	LNG	Dampier	JPN, SGP
Northwest Sandpiper	LNG	Dampier; Port Hedland	JPN, KOR, PHL
Northwest Seaeagle	LNG	Dampier	JPN, SGP
Northwest Shearwater	LNG	Dampier	JPN, SGP
Northwest Snipe	LNG	Dampier	JPN, KOR, SGP
Northwest Stormpetrel	LNG	Dampier	JPN, SGP
Victoire	LPG	Brisbane, Hastings, Port Kembla, Sydney	FJI, NCL, NZL, TON, WSM

Source: BITRE (2015d).

Table T 7.9b Ships in the major trading fleet—overseas trades, 2013–14—
bulk carriers

Name	Products	Ports called at	
		Australian	Overseas
Artemis	Coal, dry bulk	Gladstone, Gove, Hay Point, Newcastle, Weipa	CHN, JPN
Cape Mary	Coal, dry bulk	Abbot Point, Hay Point, Port Kembla	BRA, CHN
FMG Cloudbreak	Iron ore	Port Hedland	CHN, RUS, SGP
FMG Grace	Iron ore	Port Hedland	CHN
FMG Matilda	Iron ore	Port Hedland	CHN, SGP
Frontier	Coal	Gladstone, Newcastle	KOR, ZAF
Goodwill	Coal	Gladstone, Newcastle, Port Kembla	CHN, KOR
Goonyella Trader	Coal	Hay Point	CNI, JPN
Lowlands Brilliance	Iron ore, coal	Hay Point, Port Hedland, Port Kembla, Whyalla	CHN, PHL
Mariloula	Iron ore	Abbot Point, Hay Point, Port Hedland, Port Kembla, Whyalla	CHN
Pacific Dolphin	Dry bulk	Milner Bay	CHN, SGP
Pioneer	Sugar	Mackay, Sydney	SGP
Star Yandi	Iron ore, coal	Dampier, Newcastle, Port Walcott	CHN

Source: BITRE (2015d).

Table T 7.9c Ships in the major trading fleet—overseas trades, 2013–14—
container carriers

Name	Products	Ports called at	
		Australian	Overseas
ANL Wyong	General cargo	Brisbane, Melbourne, Sydney	JPN, TWN
ANL Wangaratta	General cargo	Brisbane, Melbourne, Sydney	CHN, JPN, TWN
OOCL Brisbane	General cargo	Adelaide, Brisbane, Fremantle, Melbourne	MYS, SGPTWN
OOCL New Zealand	General cargo	Brisbane	NZL, SGP
ANL Barega; Winter D.	General cargo	Brisbane, Melbourne, Sydney	MYS, NZL
ANL Barwon; Pescara	General cargo	Melbourne, Sydney	NZL

Source: BITRE (2015d).

Table T 7.9d Ships in the major trading fleet—overseas trades, 2013–14—
livestock carriers

Name	Products	Ports called at	
		Australian	Overseas
Devon Express	Livestock	Darwin, Fremantle, Portland, Sydney, Townsville	CHN, IDN, MYS, PAK, PHL, SGP
Maysora	Livestock	Adelaide, Fremantle	ARE, IDN, KWT, QAT
Nine Eagle	Livestock	Broome, Cairns, Darwin, Geraldton, Karumba, Mourilyan	BRN, IDN, MYS, SGPVNM
Torrens	Livestock	Darwin, Fremantle, Portland, Townsville	CHN, IDN, MYS, NZL, PHL, SGP, VNM

Source: BITRE (2015d).

Table T 7.9e Ships in the major trading fleet—overseas trades, 2013–14—general cargo ships

Name	Products	Ports called at	
		Australian	Overseas
Danny Rose	General cargo	Brisbane, Townsville	FJI, NCL, SLB
Opal Harmony; Southern Moana	General cargo	Brisbane, Bunbury, Dampier; Fremantle, Geraldton, Port Hedland	CHN, NZL, THA, TWN, VNM
Red Resource	General cargo	Dampier, Darwin, Fremantle, Geraldton	CXR, MYS, SGP
Norfolk Guardian	General cargo	Brisbane, Burnie, Yamba	NZL

Source: BITRE (2015d).

Table T 7.10a Ships in the major trading fleet—coastal trades, 2013–14—tankers

Name	Products	Ports called at	
		Australian	Overseas
Alexander Spirit	Petroleum products	Brisbane, Devonport, Gladstone, Hobart, Mackay, Melbourne, Port Kembla, Sydney	
British Fidelity	Petroleum products	Adelaide, Fremantle	SGP
British Loyalty	Petroleum products	Brisbane, Gladstone, Hobart, Mackay, Melbourne, Newcastle, Sydney	
Destine	Petroleum products	Sydney	CHN
Hugli Spirit	Petroleum products	Brisbane, Cairns, Gladstone, Mackay, Townsville	
Larcom	Petroleum products	Gladstone	
Tandara Spirit	Petroleum products	Adelaide, Geelong, Geraldton, Melbourne, Port Lincoln, Sydney	
Zemira	Petroleum products	Geelong, Melbourne	SGP

Source: BITRE (2015d).

Table T 7.10b Ships in the major trading fleet—coastal trades, 2013–14—bulk carriers

Name	Products	Ports called at	
		Australian	Overseas
Aburri	Metal concentrates	Bing Bong, Cairns	SGP
CSL Atlantic	Cement, coal, gypsum	Bunbury, Fremantle, Geraldton, Melbourne, Portland, Sydney, Thevenard	CHN
CSL Brisbane	Alumina, cement, gypsum	Adelaide, Ardrossan, Brisbane, Devonport, Gladstone, Mackay, Melbourne, Port Kembla, Sydney, Thevenard, Townsville, Whyalla	CHN
CSL Melbourne	Dry bulk	Ardrossan, Geelong, Gladstone, Newcastle, Port Kembla, Port Latta, Thevenard, Whyalla	
CSL Pacific	Dry bulk	Adelaide, Brisbane, Fremantle, Geelong, Geraldton, Gladstone, Melbourne, Portland, Sydney, Thevenard, Townsville	
CSL Thevenard	Cement	Adelaide, Ardrossan, Brisbane, Geelong, Geraldton, Gladstone, Hobart, Melbourne, Port Kembla, Sydney, Thevenard	CHN
CSL Whyalla	Iron ore	Whyalla	
Goliath	Cement	Adelaide, Devonport, Gladstone, Melbourne, Newcastle, Sydney	
Iron Chieftain	Iron ore, coal	Ardrossan, Fremantle, Newcastle, Port Kembla, Port Latta, Whyalla	CHN
Melia	Coal, dry bulk	Darwin, Gladstone, Gove, Hay Point, Newcastle, Weipa	CHN, JPN, TWN
Pacific Triangle	Coal	Gladstone, Newcastle, Port Hedland, Port Kembla	JPN
Portland	Alumina	Bunbury, Fremantle, Geelong, Portland	
RTM Gladstone	Bauxite	Gladstone, Weipa	CHN
RTM Piiramu	Bauxite	Gladstone, Weipa	
RTM Twarra	Bauxite	Gladstone, Weipa	CHN
RTM Wakmatha	Bauxite	Gladstone, Weipa	
RTM Weipa	Bauxite	Gladstone, Weipa	CHN
Stadacona	Dry bulk	Adelaide, Brisbane, Fremantle, Geelong, Geraldton, Gladstone, Melbourne, Sydney, Thevenard, Townsville	
Wunma	Metal concentrates	Bing Bong, Karumba	SGP

Source: BITRE (2015d).

Table T 7.10c Ships in the major trading fleet—coastal trades, 2013–14—
general cargo

Name	Products	Ports called at	
		Australian	Overseas
Accolade II	General cargo	Adelaide, Fremantle, Klein Point	
Aurora Australis	General cargo	Hobart	
Hakula	General cargo	Adelaide, Brisbane, Burnie, Gladstone, Hobart, Newcastle, Port Giles, Port Kembla, Port Lincoln, Port Pirie	NZL
ICS Silver Lining	General cargo	Bell Bay, Burnie, Hobart, Mackay, Newcastle, Port Kembla, Port Pirie, Whyalla	NZL
Longstone	General cargo	Burnie, Melbourne	CNI
Newcastle Bay	General cargo	Cairns, Weipa	DEU
Searoad Mersey	General cargo	Adelaide, Devonport, Melbourne	
Searoad Tamar	General cargo	Devonport, Melbourne	
Spirit of Tasmania I	General cargo	Devonport, Melbourne	
Spirit of Tasmania II	General cargo	Devonport, Melbourne, Sydney	
Tasmanian Achiever	General cargo	Burnie, Melbourne	SGP
Trinity Bay	General cargo	Cairns	
Victorian Reliance	General cargo	Burnie, Melbourne	
Trinity Bay	General cargo, passengers	Cairns	
Victorian Reliance	General cargo	Burnie, Melbourne	

Source: BITRE (2015d).

CHAPTER 8

Safety

Table T 8.1a Number of fatal accidents, by transport mode

Calendar year	Road	Rail	Marine	Aviation
1972				23
1973				15
1974				17
1975				22
1976				27
1977				31
1978				34
1979				31
1980				32
1981				27
1982				35
1983				30
1984				32
1985				29
1986				29
1987				25
1988				35
1989	2 407			46
1990	2 050			44
1991	1 874			28
1992	1 736			38
1993	1 737			30
1994	1 702			35
1995	1 822			33
1996	1 768			29
1997	1 601			25
1998	1 573			31
1999	1 553			25
2000	1 628			24
2001	1 584		32	27
2002	1 525		40	19
2003	1 445		39	21
2004	1 444		44	21
2005	1 472		37	24
2006	1 452		40	24
2007	1 453		41	30
2008	1 315		37	27
2009	1 347		43	23
2010	1 233		2	19
2011	1 151		6	24
2012	1 190		6	27
2013	1 101		6	33
2014	1 050		3	20
2015	1 101		2	27

Note: Data are not readily available for missing years.

Road fatal accidents are defined as fatal crashes.

^k Marine accidents data from 2010 onwards were compiled using a different methodology and should not be compared with earlier results.

Source: ATSB (2016a), ATSB (2016b), BITRE (2016j) and NMSC (2010).

Table T 8.1b Number of fatalities, by transport mode

Calendar year	Road	Rail	Marine	Aviation
1972	3 422			52
1973	3 679			26
1974	3 572			39
1975	3 694			49
1976	3 583			58
1977	3 578			55
1978	3 705			65
1979	3 508	49		45
1980	3 272	56		64
1981	3 321	72		58
1982	3 252	72		60
1983	2 755	66		54
1984	2 822	76		48
1985	2 941	66		54
1986	2 888	66		54
1987	2 772	54		39
1988	2 887	64		67
1989	2 407	67		82
1990	2 050	76		80
1991	1 874	42		52
1992	1 736	61		63
1993	1 737	52		56
1994	1 702	43		62
1995	1 822	46		51
1996	1 768	30		51
1997	1 601	43		38
1998	1 573	43		56
1999	1 553	43		46
2000	1 628	38		44
2001	1 584	53	47	46
2002	1 525	40	50	34
2003	1 445	33	43	44
2004	1 444	33	50	34
2005	1 472	35	41	45
2006	1 452	39	49	40
2007	1 453	42	53	44
2008	1 315	31	41	43
2009	1 347	28	53	25
2010	1 233	29	2	24
2011	1 151	33	6	38
2012	1 190	20	6	39
2013	1 101	7	6	46
2014	1 050		4	28
2015	1 101		2	31

Note: Data are not readily available for missing years.

ⁱ Rail fatality and serious injury data from 2012 onwards excludes suspected suicide and trespass occurrences. They were compiled using new methodology and should not be compared with earlier results.

^k Marine fatalities data from 2010 onwards were compiled using a different methodology and should not be compared with earlier results.

Source: ATSB (2016a), ATSB (2016b), BITRE (2016j) and ONRSR (2016).

Table T 8.2a Fatality rate, by transport mode (per 100,000 population)

Calendar year	Road	Rail	Marine	Aviation
	deaths per 100 000 population			
1972	25.72			0.39
1973	27.24			0.19
1974	26.03			0.28
1975	26.59			0.35
1976	25.53			0.41
1977	25.21			0.39
1978	25.80			0.45
1979	24.17	0.34		0.31
1980	22.27	0.38		0.44
1981	22.25	0.48		0.39
1982	21.42	0.47		0.40
1983	17.90	0.43		0.35
1984	18.11	0.49		0.31
1985	18.63	0.42		0.34
1986	18.03	0.41		0.34
1987	17.04	0.33		0.24
1988	17.46	0.39		0.41
1989	16.65	0.40		0.49
1990	13.66	0.45		0.47
1991	12.23	0.24		0.30
1992	11.29	0.35		0.36
1993	11.07	0.29		0.32
1994	10.83	0.24		0.35
1995	11.20	0.25		0.28
1996	10.81	0.16		0.28
1997	9.59	0.23		0.21
1998	9.43	0.23		0.30
1999	9.38	0.23		0.24
2000	9.55	0.20		0.23
2001	9.01	0.27	0.24	0.24
2002	8.80	0.20	0.25	0.17
2003	8.22	0.17	0.22	0.22
2004	7.94	0.17	0.25	0.17
2005	8.06	0.17	0.20	0.22
2006	7.81	0.19	0.24	0.20
2007	7.70	0.20	0.25	0.21
2008	6.76	0.15	0.19	0.20
2009	6.87	0.13	0.24	0.12
2010	6.14	0.13	k 0.01	0.11
2011	5.72	0.15	0.03	0.17
2012	5.72	i 0.09	0.03	0.17
2013	5.13	0.03	0.03	0.20
2014	4.91		0.02	0.12
2015	5.07		0.02	0.12

Note: Data are not readily available for missing years.

i Rail fatality and serious injury data from 2012 onwards excludes suspected suicide and trespass occurrences. They were compiled using new methodology and should not be compared with earlier results.

k Marine fatalities data from 2010 onwards were compiled using a different methodology and should not be compared with earlier results.

Source: ABS (2016f), ATSB (2016a), ATSB (2016b), BITRE (2016j), NMSC (2010) and ONRSR (2016).

Table T 8.2b Injury rate, by transport mode (per 100,000 population)

Calendar year	Road	Rail	Marine	Aviation
	serious injuries per 100 000 population			
1972				0.15
1973				0.17
1974				0.17
1975				0.19
1976				0.35
1977				0.36
1978				0.34
1979				0.34
1980				0.28
1981				0.33
1982				0.28
1983				0.29
1984				0.24
1985				0.23
1986				0.22
1987				0.36
1988				0.27
1989	169.26			0.45
1990	146.27			0.36
1991	130.34			0.23
1992	123.08			0.22
1993	122.24			0.33
1994	124.30			0.17
1995	124.23			0.27
1996	120.59			0.18
1997	116.80			0.16
1998				0.12
1999				0.11
2000	141.70			0.22
2001	142.58	0.43	0.45	0.16
2002	143.41	0.50	0.59	0.13
2003	144.24	0.26	0.40	0.13
2004	144.92	0.35	0.62	0.12
2005	151.64	0.35	0.67	0.03
2006	157.88	0.65	0.78	0.07
2007	156.29	0.87	0.61	0.08
2008	157.77	0.53	0.72	0.20
2009	155.32	0.41	0.45	0.09
2010	148.76	0.18	ⁱ 0.11	0.15
2011	152.56	0.30	0.11	0.17
2012	149.99	ⁱ 0.33	0.13	0.17
2013	151.66	0.21	0.10	0.08
2014			0.16	0.15
2015			0.15	0.13

Note: Data are not readily available for missing years.

Data for Hospitalised Injuries on roads have been revised. Minor injuries are excluded.

A hospitalised injury is defined as a person admitted to hospital.

ⁱ Rail fatality and serious injury data from 2012 onwards excludes suspected suicide and trespass occurrences. They were compiled using new methodology and should not be compared with earlier results.

^k Marine fatalities data from 2010 onwards were compiled using a different methodology and should not be compared with earlier results.

^{27,28} See end notes.

Source: ABS (2016f), AIHW (2016a), ATSB (2016a), ATSB (2016b), Infrastructure (2012), NMSC (2010) and ONRSR (2016).

Table T 8.3a Fatality rate, by transport mode (per billion passenger km travelled)

Calendar year	Road	Rail	Aviation
	deaths per billion passenger km travelled		
1972	26.68		8.63
1973	27.58		4.03
1974	25.09		5.08
1975	28.93		5.91
1976	26.93		7.12
1977	25.88		6.51
1978	26.01		7.11
1979	24.25	5.66	4.56
1980	22.40	6.25	6.08
1981	22.03	7.91	5.31
1982	21.04	7.99	5.60
1983	17.40	7.42	5.17
1984	17.11	8.60	4.37
1985	17.25	7.32	4.56
1986	16.51	7.06	4.24
1987	15.30	5.56	2.82
1988	15.20	6.37	4.54
1989	12.20	6.66	6.23
1990	10.24	7.62	5.87
1991	9.25	4.23	2.83
1992	8.36	6.24	3.02
1993	8.14	5.32	2.47
1994	7.75	4.28	2.41
1995	8.12	4.42	1.82
1996	7.79	2.80	1.73
1997	7.00	3.97	1.26
1998	6.76	3.94	1.82
1999	6.54	3.83	1.44
2000	6.83	3.25	1.28
2001	6.60	4.45	1.34
2002	6.19	3.38	0.99
2003	5.66	2.78	1.14
2004	5.52	2.78	0.78
2005	5.67	2.89	0.95
2006	5.61	3.08	0.79
2007	5.56	3.11	0.80
2008	5.03	2.15	0.74
2009	5.15	1.90	0.42
2010	4.67	1.95	0.38
2011	4.32	2.18	0.58
2012	4.43	1.31	0.57
2013	4.07	0.46	0.65
2014	3.84		0.40
2015	3.97		0.44

Note: Data are not readily available for missing years.

ⁱ Rail fatality and serious injury data from 2012 onwards excludes suspected suicide and trespass occurrences. They were compiled using new methodology and should not be compared with earlier results.

Source: ATSB (2012a), ATSB (2016a), BITRE (2016j) and BTRE (2015b).

Table T 8.3b Injury rate, by transport mode (per billion passenger km travelled)

Calendar year	Road Hospitalised injury Rate ²⁷ <i>serious injuries per billion passenger km travelled</i>	Rail	Aviation
1972			3.32
1973			3.57
1974			2.78
1975			3.26
1976			6.02
1977			6.04
1978			5.36
1979			5.06
1980			3.89
1981			4.48
1982			4.02
1983			4.31
1984			3.37
1985			3.04
1986			2.75
1987			4.20
1988			2.98
1989	121.33		5.70
1990	103.57		4.48
1991	93.90		2.13
1992	88.30		1.82
1993	86.13		2.55
1994	86.43		1.21
1995	84.77		1.72
1996	81.99		1.12
1997	79.83		0.96
1998			0.72
1999			0.63
2000	94.98		1.23
2001	97.54	6.93	0.90
2002	96.79	8.28	0.76
2003	96.02	4.31	0.68
2004	93.44	5.96	0.53
2005	98.66	6.07	0.15
2006	105.37	10.92	0.29
2007	104.61	14.11	0.31
2008	106.45	8.13	0.72
2009	106.81	6.16	0.34
2010	102.55	2.58	0.51
2011	105.29	4.41	0.58
2012	104.13	4.85	0.57
2013	106.02	3.16	0.27
2014		1.24	0.50
2015			0.42

^{27, 28, 29} See end notes.

Note: Data for Hospitalised Injuries on roads have been revised. Minor injuries are excluded.

A hospitalised injury is a person admitted to hospital.

Data are not readily available for missing years.

i Rail fatality and serious injury data from 2012 onwards excludes suspected suicide and trespass occurrences. They were compiled using new methodology and should not be compared with earlier results.

Source: AIHW (2016a), ATSB (2012a), ATSB (2016a), BITRE (2016j), BITRE (2015b) and Infrastructure (2012).

Table T 8.4a Number of road accidents, by accident severity

Calendar year	Fatal	Hospitalised injury crash ²⁹
1989	2 407	22 158
1990	2 050	20 014
1991	1 874	17 844
1992	1 736	17 108
1993	1 737	17 164
1994	1 702	17 560
1995	1 822	17 803
1996	1 768	17 505
1997	1 601	17 150
1998	1 573	
1999	1 553	
2000	1 628	
2001	1 584	
2002	1 525	
2003	1 445	
2004	1 444	
2005	1 472	
2006	1 452	
2007	1 453	
2008	1 315	
2009	1 347	
2010	1 233	
2011	1 151	
2012	1 190	
2013	1 101	
2014	1 050	
2015	1 101	

²⁹ See end notes.

Note: Data are not readily available for missing years.

Hospitalised Injury crash data excludes all fatal crashes.

Source: BITRE (2016) and Infrastructure (2012).

Table T 8.4b Number of road casualties, by severity

Calendar year	Fatal	Hospitalised injury ²⁹
1972	3 422	
1973	3 679	
1974	3 572	
1975	3 694	
1976	3 583	
1977	3 578	
1978	3 705	
1979	3 508	
1980	3 272	
1981	3 321	
1982	3 252	
1983	2 755	
1984	2 822	
1985	2 941	
1986	2 888	
1987	2 772	
1988	2 887	
1989	2 800	28 483
1990	2 331	24 961
1991	2 113	22 528
1992	1 974	21 512
1993	1 953	21 557
1994	1 928	22 133
1995	2 017	22 368
1996	1 970	21 989
1997	1 767	21 519
1998	1 755	
1999	1 764	
2000	1 817	26 963
2001	1 737	27 482
2002	1 715	27 958
2003	1 621	28 446
2004	1 583	28 886
2005	1 627	30 597
2006	1 598	32 288
2007	1 603	32 552
2008	1 437	33 524
2009	1 491	33 692
2010	1 353	32 775
2011	1 277	34 082
2012	1 300	34 091
2013	1 187	35 059
2014	1 150	
2015	1 205	

^{29,30} See end notes.

Note: Data are not readily available for missing years.

Data for Hospitalised Injuries have been revised. Minor injuries are excluded.

A hospitalised injury is a person admitted to hospital.

In 2012 there is a break in the series for Hospitalised Injury as a result of a change in the criteria for patient admission in one jurisdiction.

Source: AIHW (2016a), BITRE (2016j) and Infrastructure (2012).

Table T 8.5a Road accident rate, by accident severity (per 100,000 population)

Calendar year	Fatal Crash	Hospitalised injury crash ²⁹
1989	14.32	131.78
1990	12.01	117.28
1991	10.84	103.24
1992	9.93	97.88
1993	9.85	97.33
1994	9.56	98.62
1995	10.12	98.88
1996	9.70	96.05
1997	8.69	93.09
1998	8.45	
1999	8.26	
2000	8.56	
2001	8.22	
2002	7.82	
2003	7.33	
2004	7.24	
2005	7.30	
2006	7.10	
2007	6.98	
2008	6.19	
2009	6.21	
2010	5.60	
2011	5.15	
2012	5.24	
2013	4.76	
2014	4.48	
2015	4.63	

²⁹ See end notes.

Note: Hospitalised Injury crash data excludes all fatal crashes.

Data are not readily available for missing years.

Source: ABS (2016f), BITRE (2016) and Infrastructure (2012).

Table T 8.5b Road casualty rate, by severity (per 100,000 population)

Calendar year	Fatalities	Hospitalised injury ²⁹
1972	25.72	
1973	27.24	
1974	26.03	
1975	26.59	
1976	25.53	
1977	25.21	
1978	25.80	
1979	24.17	
1980	22.27	
1981	22.25	
1982	21.42	
1983	17.90	
1984	18.11	
1985	18.63	
1986	18.03	
1987	17.04	
1988	17.46	
1989	16.65	169.26
1990	13.66	146.27
1991	12.23	130.34
1992	11.29	123.08
1993	11.07	122.24
1994	10.83	124.30
1995	11.20	124.23
1996	10.81	120.59
1997	9.59	116.80
1998	9.43	
1999	9.38	
2000	9.55	141.70
2001	9.01	142.58
2002	8.80	143.41
2003	8.22	144.24
2004	7.94	144.92
2005	8.06	151.64
2006	7.81	157.88
2007	7.70	156.29
2008	6.76	157.77
2009	6.87	155.32
2010	6.14	148.76
2011	5.72	152.56
2012	5.72	149.99
2013	5.13	151.66
2014	4.90	
2015	5.07	

^{29,30} See end notes.

Note: Data for Hospitalised Injuries have been revised. Minor injuries are excluded.

A hospitalised injury is defined as a person admitted to hospital.

Data are not readily available for missing years.

Source: ABS (2016f), AIHW (2016a), BITRE (2016j) and Infrastructure (2012).

Table T 8.6a Number of fatal road accidents, by state/territory

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
1989	784	681	376	201	214	68	57	26	2 407
1990	702	492	347	187	181	63	54	24	2 050
1991	585	435	359	166	187	66	60	16	1 874
1992	576	365	363	142	171	59	42	18	1 736
1993	518	381	357	191	191	47	41	11	1 737
1994	552	345	364	143	195	52	36	15	1 702
1995	563	371	408	163	194	53	56	14	1 822
1996	538	382	338	162	220	53	58	17	1 768
1997	525	346	321	123	184	29	56	17	1 601
1998	491	348	257	152	199	47	59	20	1 573
1999	506	345	273	132	189	47	44	17	1 553
2000	543	373	275	151	184	38	48	16	1 628
2001	486	404	296	137	151	52	43	15	1 584
2002	501	361	283	138	159	35	40	8	1 525
2003	483	294	284	136	155	39	44	10	1 445
2004	458	312	289	128	162	52	34	9	1 444
2005	459	314	296	127	151	49	51	25	1 472
2006	449	309	313	104	181	43	41	12	1 452
2007	405	289	338	107	214	39	47	14	1 453
2008	353	278	294	87	185	37	67	14	1 315
2009	409	268	296	104	176	52	31	11	1 347
2010	365	260	236	105	176	29	46	16	1 233
2011	336	259	227	95	167	23	38	6	1 151
2012	336	261	255	86	171	29	40	12	1 190
2013	316	225	246	90	149	35	33	7	1 101
2014	285	223	199	95	173	31	34	10	1 050
2015	326	231	219	96	141	32	42	14	1 101

Source: BITRE (2016j).

Table T 8.6b Number of fatalities, by state/territory

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
1972	1 092	915	572	312	340	106	53	32	3 422
1973	1 230	935	638	329	358	105	55	29	3 679
1974	1 275	806	589	382	334	111	44	31	3 572
1975	1 288	910	635	339	304	122	64	32	3 694
1976	1 264	938	569	307	308	108	51	38	3 583
1977	1 268	954	572	306	290	112	47	29	3 578
1978	1 384	869	612	291	345	106	68	30	3 705
1979	1 288	846	616	309	279	93	53	24	3 508
1980	1 303	657	557	269	293	100	63	30	3 272
1981	1 291	766	594	222	238	111	70	29	3 321
1982	1 253	709	602	270	236	96	60	26	3 252
1983	966	664	510	266	203	70	48	28	2 755
1984	1 037	657	505	232	221	83	50	37	2 822
1985	1 067	683	502	268	243	78	67	33	2 941
1986	1 029	668	481	288	228	91	71	32	2 888
1987	959	705	442	256	213	77	84	36	2 772
1988	1 037	701	539	223	230	75	51	31	2 887
1989	959	776	428	222	242	80	61	32	2 800
1990	797	548	399	226	196	71	68	26	2 331
1991	663	503	395	184	207	77	67	17	2 113
1992	649	396	416	165	200	74	54	20	1 974
1993	581	435	396	218	209	58	44	12	1 953
1994	646	377	418	159	211	59	41	17	1 928
1995	620	418	456	181	209	57	61	15	2 017
1996	581	417	385	181	247	64	72	23	1 970
1997	576	377	360	148	197	32	60	17	1 767
1998	556	390	279	168	223	48	69	22	1 755
1999	577	383	314	151	218	53	49	19	1 764
2000	603	407	317	166	212	43	51	18	1 817
2001	524	444	324	153	165	61	50	16	1 737
2002	561	397	322	154	179	37	55	10	1 715
2003	539	330	310	157	180	41	53	11	1 621
2004	510	343	311	139	178	58	35	9	1 583
2005	508	346	330	148	163	51	55	26	1 627
2006	496	337	335	117	200	55	45	13	1 598
2007	435	332	360	124	235	45	58	14	1 603
2008	374	303	328	99	205	39	75	14	1 437
2009	454	290	331	119	191	63	31	12	1 491
2010	405	288	249	118	193	31	50	19	1 353
2011	364	287	269	103	179	24	45	6	1 277
2012	369	282	280	94	183	31	49	12	1 300
2013	333	243	271	98	162	36	37	7	1 187
2014	307	248	223	107	183	33	39	10	1 150
2015	350	252	243	102	160	34	49	15	1 205

Source: BITRE (2016).

Table T 8.6c Number of fatalities, by road user type

Calendar year	Driver	Passenger	Pedestrian	Motorcyclist	Pedal cyclist	Total
2005	775	347	226	233	41	1 627
2006	757	336	228	238	39	1 598
2007	785	336	204	237	41	1 603
2008	670	303	189	245	28	1 437
2009	707	333	196	224	31	1 491
2010	636	284	170	224	38	1 353
2011	568	286	186	202	34	1 277
2012	610	260	170	223	33	1 300
2013	557	204	158	213	50	1 187
2014	532	228	151	191	45	1 150
2015	555	249	164	203	31	1 205

Note: The total includes deaths to persons with road user type not recorded.

Source: BITRE (2016).

Table T 8.6d Number of fatalities, by age-group (years)

Calendar year	0 to 16	17 to 25	26 to 39	40 to 64	65 to 74	≥ 75
2005	110	426	414	408	112	154
2006	118	435	393	424	98	129
2007	101	392	412	451	101	145
2008	87	377	345	395	86	147
2009	106	362	355	445	94	129
2010	74	336	305	418	97	122
2011	93	280	275	398	83	148
2012	70	284	300	400	96	149
2013	66	230	243	374	118	156
2014	65	234	252	359	108	129
2015	65	226	272	373	118	151

Source: BITRE (2016).

Table T 8.6e Number of fatalities, by gender

Calendar year	Females	Males	Total
2005	443	1 182	1 627
2006	405	1 191	1 598
2007	431	1 172	1 603
2008	376	1 060	1 437
2009	407	1 081	1 491
2010	370	982	1 353
2011	355	920	1 277
2012	369	931	1 300
2013	334	852	1 187
2014	331	818	1 150
2015	338	867	1 205

Note: The total includes deaths to persons with gender not recorded.

Source: BITRE (2016).

Table T 8.7a Fatal road accident rate, by state/territory (per 100,000 population)

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
1989	13.6	15.8	13.3	14.2	13.6	14.9	35.4	9.4	14.3
1990	12.0	11.2	12.0	13.1	11.2	13.6	33.0	8.5	12.0
1991	9.9	9.8	12.1	11.5	11.4	14.1	36.3	5.5	10.8
1992	9.7	8.2	12.0	9.8	10.3	12.6	24.9	6.1	9.9
1993	8.6	8.5	11.5	13.1	11.4	10.0	23.9	3.7	9.8
1994	9.1	7.7	11.5	9.8	11.4	11.0	20.6	5.0	9.6
1995	9.2	8.2	12.6	11.1	11.2	11.2	31.2	4.6	10.1
1996	8.7	8.4	10.2	11.0	12.4	11.1	31.4	5.5	9.7
1997	8.4	7.6	9.6	8.3	10.2	6.1	29.5	5.5	8.7
1998	7.8	7.6	7.5	10.2	10.9	9.9	30.6	6.4	8.5
1999	7.9	7.4	7.9	8.9	10.2	9.9	22.4	5.4	8.3
2000	8.4	7.9	7.8	10.1	9.8	8.0	24.1	5.0	8.6
2001	7.4	8.5	8.3	9.1	7.9	11.0	21.3	4.7	8.2
2002	7.6	7.5	7.7	9.1	8.2	7.4	19.8	2.5	7.8
2003	7.3	6.0	7.6	8.9	7.9	8.1	21.8	3.1	7.3
2004	6.9	6.3	7.5	8.4	8.2	10.8	16.8	2.7	7.2
2005	6.9	6.3	7.6	8.3	7.5	10.1	24.8	7.5	7.3
2006	6.7	6.1	7.8	6.7	8.8	8.8	19.6	3.6	7.1
2007	5.9	5.6	8.2	6.8	10.2	7.9	22.0	4.1	7.0
2008	5.1	5.3	7.0	5.5	8.5	7.4	30.5	4.0	6.2
2009	5.8	5.0	6.8	6.5	7.9	10.3	13.7	3.1	6.2
2010	5.1	4.8	5.4	6.5	7.7	5.7	20.0	4.4	5.6
2011	4.7	4.7	5.1	5.8	7.1	4.5	16.4	1.6	5.2
2012	4.6	4.6	5.6	5.2	7.0	5.7	17.0	3.2	5.2
2013	4.3	3.9	5.3	5.4	5.9	6.8	13.6	1.8	4.8
2014	3.8	3.8	4.2	5.6	6.8	6.4	13.9	2.6	4.5
2015	4.3	3.9	4.6	5.7	5.4	6.2	17.2	3.6	4.6

Source: ABS (2016f) and BITRE (2016j).

Table T 8.7b Fatality rate, by state/territory (per 100,000 population)

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
1972	22.8	25.0	30.1	25.7	31.4	26.5	57.6	20.0	25.7
1973	25.4	25.2	32.7	26.8	32.5	26.0	56.6	16.7	27.2
1974	26.1	21.5	29.3	30.8	29.6	27.3	42.7	16.6	26.0
1975	26.1	24.0	31.0	26.8	26.3	29.7	68.9	16.1	26.6
1976	25.5	24.6	27.2	24.1	26.1	26.2	51.9	18.3	25.5
1977	25.4	24.9	26.9	23.8	24.1	27.0	45.2	13.6	25.2
1978	27.4	22.5	28.2	22.5	28.1	25.4	61.8	13.8	25.8
1979	25.2	21.8	27.8	23.7	22.4	22.1	46.4	10.9	24.2
1980	25.2	16.8	24.6	20.6	23.1	23.6	53.3	13.4	22.3
1981	24.7	19.4	25.3	16.8	18.3	26.0	57.1	12.7	22.3
1982	23.6	17.8	24.8	20.3	17.6	22.3	46.0	11.2	21.4
1983	18.0	16.5	20.5	19.8	14.8	16.2	35.3	11.7	17.9
1984	19.2	16.1	20.0	17.1	15.9	19.0	35.2	15.1	18.1
1985	19.5	16.6	19.5	19.5	17.1	17.6	45.1	13.1	18.6
1986	18.6	16.1	18.3	20.8	15.6	20.4	46.0	12.4	18.0
1987	17.1	16.7	16.5	18.4	14.2	17.1	53.1	13.6	17.0
1988	18.2	16.4	19.7	15.9	15.0	16.6	32.1	11.4	17.5
1989	16.6	18.0	15.1	15.6	15.3	17.6	37.8	11.6	16.7
1990	13.7	12.5	13.8	15.8	12.2	15.4	41.5	9.2	13.7
1991	11.2	11.4	13.3	12.7	12.7	16.5	40.5	5.9	12.2
1992	10.9	8.9	13.8	11.3	12.1	15.7	32.0	6.8	11.3
1993	9.7	9.7	12.8	14.9	12.4	12.3	25.6	4.0	11.1
1994	10.7	8.4	13.2	10.9	12.4	12.5	23.4	5.6	10.8
1995	10.2	9.3	14.1	12.4	12.0	12.0	34.0	4.9	11.2
1996	9.4	9.2	11.7	12.3	14.0	13.5	39.0	7.4	10.8
1997	9.2	8.3	10.7	10.0	11.0	6.7	31.6	5.5	9.6
1998	8.8	8.5	8.2	11.3	12.2	10.1	35.8	7.1	9.4
1999	9.1	8.2	9.1	10.1	11.8	11.2	25.0	6.0	9.4
2000	9.4	8.7	9.0	11.1	11.3	9.1	25.6	5.7	9.5
2001	8.0	9.3	9.1	10.2	8.7	12.9	24.8	5.0	9.0
2002	8.5	8.2	8.8	10.2	9.3	7.8	27.2	3.1	8.8
2003	8.1	6.8	8.3	10.3	9.2	8.6	26.3	3.4	8.2
2004	7.7	7.0	8.1	9.1	9.0	12.0	17.3	2.7	7.9
2005	7.6	6.9	8.4	9.6	8.1	10.5	26.7	7.8	8.1
2006	7.4	6.7	8.4	7.5	9.8	11.2	21.5	3.9	7.8
2007	6.4	6.4	8.8	7.9	11.2	9.1	27.1	4.1	7.7
2008	5.4	5.8	7.8	6.2	9.4	7.8	34.1	4.0	6.8
2009	6.4	5.4	7.6	7.4	8.5	12.5	13.7	3.4	6.9
2010	5.7	5.3	5.7	7.3	8.4	6.1	21.8	5.3	6.1
2011	5.0	5.2	6.0	6.3	7.6	4.7	19.5	1.6	5.7
2012	5.0	5.0	6.1	5.7	7.5	6.1	20.8	3.2	5.7
2013	4.5	4.2	5.8	5.9	6.4	7.0	15.3	1.8	5.1
2014	4.1	4.2	4.7	6.3	7.2	6.4	16.0	2.6	4.9
2015	4.6	4.2	5.1	6.0	6.2	6.6	20.1	3.8	5.1

Source: ABS (2016f) and BITRE (2016j).

Table T 8.8 Number of persons with hospitalised injuries due to road accidents, by state/territory^{i,27}

Year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Australia
1989	8 233	9 356	3 955	2 491	2 996	705	503	221	28 460
1990	7 466	7 117	3 970	2 397	2 643	607	544	217	24 961
1991	6 702	6 198	3 825	2 058	2 565	538	430	212	22 528
1992	6 398	5 929	3 961	1 599	2 554	490	403	178	21 512
1993	6 337	5 953	4 027	1 549	2 583	522	430	156	21 557
1994	6 244	6 045	4 576	1 514	2 660	523	386	185	22 133
1995	6 127	6 124	4 605	1 521	2 890	528	401	172	22 368
1996	5 975	6 077	4 469	1 701	2 592	439	480	245	21 978
1997	6 141	5 781	4 145	1 509	2 899	420	402	222	21 519
1998									
1999									
2000									26 963
2000–01 ²⁸	8 598	7 562	4 626	2 256	2 008	616	435	231	26 694
2001–02	9 026	8 247	5 177	2 216	2 062	562	455	293	28 440
2002–03	8 488	8 052	5 070	2 298	2 001	571	444	243	27 526
2003–04	9 243	7 834	5 376	2 293	2 271	602	431	328	28 782
2004–05	9 393	8 196	5 874	2 221	2 348	640	392	361	29 850
2005–06	10 108	8 235	5 986	2 347	2 454	736	406	492	31 204
2006–07	10 296	8 551	6 542	2 411	2 723	739	498	539	32 777
2007–08	9 466	8 849	6 717	2 475	2 840	714	511	568	32 543
2008–09	10 050	8 818	7 170	2 445	3 152	775	513	613	34 116
2010									32 775
2011									34 082
2012									34 091
2012–13									34 011
2013									35 059

ⁱ Includes non-fatal serious injuries that were sustained in an accident that involved a fatality.
^{27,28} See end notes.

Note: Data for Hospitalised Injuries have been revised. Minor injuries are excluded.

A hospitalised injury is a person admitted to hospital.

Source: AIHW (2012), AIHW (2016a) and Infrastructure (2012).

**Table T 8.9 Hospitalised road injury rate, by state/territory
(per 100,000 population)²⁷**

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Australia
1989	142.5	216.6	139.9	175.5	189.8	154.9	312.1	79.9	169.3
1990	128.0	162.5	136.9	167.4	163.9	131.3	332.3	76.9	146.3
1991	113.6	140.2	129.2	142.3	156.8	115.3	259.8	73.3	130.3
1992	107.4	133.2	131.0	109.9	154.0	104.3	239.1	60.4	123.1
1993	105.7	133.4	130.1	106.2	153.9	110.6	250.4	52.0	122.2
1994	103.3	135.1	144.5	103.5	156.0	110.5	220.7	61.2	124.3
1995	100.4	136.2	142.2	103.8	166.5	111.3	223.3	56.2	124.2
1996	96.7	134.0	135.3	115.8	146.6	92.3	260.1	79.1	120.6
1997	98.3	126.5	123.5	102.3	161.2	88.4	211.9	71.5	116.8
1998									
1999									
2000									141.7
2000–01 ²⁸	132.6	159.8	130.8	150.4	106.1	130.2	217.5	72.4	139.5
2001–02	137.6	172.2	143.4	147.0	107.5	118.6	225.5	90.7	146.7
2002–03	128.6	166.2	137.0	151.6	103.2	120.0	220.3	74.6	140.4
2003–04	139.3	159.9	141.9	150.4	115.5	125.0	213.7	100.1	145.2
2004–05	140.8	165.3	151.7	144.9	117.7	132.0	192.3	109.6	148.9
2005–06	150.5	163.9	151.0	151.9	120.9	150.8	195.8	147.5	153.6
2006–07	151.7	167.5	161.3	154.4	131.1	150.4	236.0	159.3	158.9
2007–08	137.5	170.2	161.5	156.8	133.0	144.0	235.9	165.0	154.8
2008–09	143.5	166.0	167.7	153.0	142.7	154.5	230.5	174.6	158.9
2010									148.8
2011									152.6
2012									150.0
2012–13									148.4
2013									151.7

^{27,28} See end notes.

Note: For the calendar year rates, the June population was used and for financial year rates, December population was used.

Data for Hospitalised Injuries have been revised. Minor injuries are excluded.

A hospitalised injury is a person admitted to hospital.

Data are not readily available for missing years.

Source: ABS (2016f) AIHW (2016a), AIHW (2012) and Infrastructure (2012).

Table T 8.10 Number of rail casualties, by severity

Calendar year	Fatal	Serious injuries
1979	49	
1980	56	
1981	72	
1982	72	
1983	66	
1984	76	
1985	66	
1986	66	
1987	54	
1988	64	
1989	67	
1990	76	
1991	42	
1992	61	
1993	52	
1994	43	
1995	46	
1996	30	
1997	43	
1998	43	
1999	43	
2000	38	
2001	53	83
2002	40	98
2003	33	51
2004	33	71
2005	35	72
2006	39	135
2007	42	183
2008	31	114
2009	28	91
2010	29	38
2011	33	66
<i>Change in methodology</i>		
2012	^m 20	
2013	^m 7	

^m Fatality and serious injury data from 2012 onwards excludes suspected suicide and trespass occurrences. They were compiled using new methodology and should not be compared with earlier results.

²⁹ See end notes.

Note: Data are not readily available for missing years.

Source: ATSB (2004), ATSB (2010), ATSB (2012), ONRSR (2016).

Table T 8.11 Number of rail fatalities, by state/territory

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT ³⁰	Total
2001	34	10	5	2	2	0	0		53
2002	16	14	3	4	2	0	1		40
2003	18	10	3	0	2	0	0		33
2004	15	12	2	2	1	0	1		33
2005	11	14	6	4	0	0	0		35
2006	9	14	9	2	4	1	0		39
2007	8	23	3	5	3	0	0		42
2008	7	17	6	1	0	0	0		31
2009	5	15	3	2	2	0	1		28
2010	10	9	4	2	3	1	0		29
2011	13	8	5	3	3	1	1		34
<i>Change in methodology</i>									
2012	^m 3	^m 10	^m 7	^m 1	^m 2	^m 0	^m 0		^m 20
2013	^m 1	^m 5	^m 0	^m 1	^m 1	^m 0	^m 0		^m 7
2014	^m 1	^m 2		^m 0		^m 1	^m 0	^m 0	
2015	^m 3	^m 0		^m 1	^m 0	^m 0	^m 0	^m 0	

^m Fatality and serious injury data from 2012 onwards excludes suspected suicide and trespass occurrences. They were compiled using new methodology and should not be compared with earlier results.

³⁰ See end notes.

Source: ATSB (2004), ATSB (2010), ATSB (2012), ONRSR (2016).

Table T 8.12 Rail fatality rate per 100 000 population, by state/territory

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT ³⁰	Total
2001	0.52	0.21	0.14	0.13	0.11	0.00	0.00		0.27
2002	0.24	0.29	0.08	0.26	0.10	0.00	0.50		0.20
2003	0.27	0.20	0.08	0.00	0.10	0.00	0.00		0.17
2004	0.22	0.24	0.05	0.13	0.05	0.00	0.49		0.16
2005	0.16	0.28	0.15	0.26	0.00	0.00	0.00		0.17
2006	0.13	0.27	0.22	0.13	0.19	0.20	0.00		0.19
2007	0.12	0.44	0.07	0.32	0.14	0.00	0.00		0.20
2008	0.10	0.32	0.14	0.06	0.00	0.00	0.00		0.14
2009	0.07	0.28	0.07	0.12	0.09	0.00	0.44		0.13
2010	0.14	0.16	0.09	0.12	0.13	0.20	0.00		0.13
2011	0.18	0.14	0.11	0.18	0.13	0.00	0.43		0.15
<i>Change in methodology</i>									
2012	^m 0.04	^m 0.18	^m 0.15	^m 0.06	^m 0.08	^m 0.00	^m 0.00		^m 0.09
2013	^m 0.01	^m 0.09	^m 0.00	^m 0.06	^m 0.04	^m 0.00	^m 0.00		^m 0.03
2014	^m 0.01	^m 0.03		^m 0.00		^m 0.19	^m 0.00	^m 0.00	
2015	^m 0.04	^m 0.00		^m 0.06	^m 0.00	^m 0.00	^m 0.00	^m 0.00	

^m Fatality and serious injury data from 2012 onwards excludes suspected suicide and trespass occurrences. They were compiled using new methodology and should not be compared with earlier results.

³⁰ See end notes.

Source: ABS (2016f), ATSB (2004), ATSB (2010), ATSB (2012), ONRSR (2016).

Table T 8.13a Number of aviation accidents, by accident severity

Calendar year	Fatal accidents	Non-fatal accidents
1971	14	225
1972	23	177
1973	15	227
1974	17	241
1975	22	206
1976	27	285
1977	31	259
1978	34	274
1979	31	284
1980	32	269
1981	27	254
1982	35	223
1983	30	275
1984	32	234
1985	29	212
1986	29	218
1987	25	264
1988	35	289
1989	46	300
1990	44	299
1991	28	291
1992	38	267
1993	30	283
1994	35	228
1995	33	235
1996	29	214
1997	25	231
1998	31	197
1999	25	167
2000	24	193
2001	27	169
2002	19	145
2003	21	133
2004	21	142
2005	24	109
2006	24	81
2007	30	132
2008	27	163
2009	23	144
2010	19	181
2011	24	168
2012	27	176
2013	33	148
2014	20	255
2015	27	190

Note: Includes civilian aviation accidents (VH and non-VH registered aircraft) in Australia only.

Source: ATSB (2016b).

Table T 8.13b Number of aviation casualties, by severity

Calendar year	Fatalities	Serious injuries
1971	35	24
1972	52	20
1973	26	23
1974	39	23
1975	49	27
1976	58	49
1977	55	51
1978	65	49
1979	45	50
1980	64	41
1981	58	49
1982	60	43
1983	54	45
1984	48	37
1985	54	36
1986	54	35
1987	39	58
1988	67	44
1989	82	75
1990	80	61
1991	52	39
1992	63	38
1993	56	58
1994	62	31
1995	51	48
1996	51	33
1997	38	29
1998	56	22
1999	46	20
2000	44	42
2001	46	31
2002	34	26
2003	44	26
2004	34	23
2005	45	7
2006	40	15
2007	44	17
2008	43	42
2009	25	20
2010	24	32
2011	38	38
2012	39	39
2013	46	19
2014	28	35
2015	31	30

Note: Includes civilian aviation casualties (VH and non-VH registered aircraft) in Australia only.

Source: ATSB (2016b).

Table T 8.14a Aviation accident rate, by accident severity (per 100,000 population)

Calendar year	Fatal	Non-fatal
1971	0.11	1.72
1972	0.17	1.33
1973	0.11	1.68
1974	0.12	1.76
1975	0.16	1.48
1976	0.19	2.03
1977	0.22	1.82
1978	0.24	1.91
1979	0.21	1.96
1980	0.22	1.83
1981	0.18	1.70
1982	0.23	1.47
1983	0.19	1.79
1984	0.21	1.50
1985	0.18	1.34
1986	0.18	1.36
1987	0.15	1.62
1988	0.21	1.75
1989	0.27	1.78
1990	0.26	1.75
1991	0.16	1.68
1992	0.22	1.53
1993	0.17	1.60
1994	0.20	1.28
1995	0.18	1.30
1996	0.16	1.17
1997	0.14	1.25
1998	0.17	1.05
1999	0.13	0.88
2000	0.13	1.01
2001	0.14	0.87
2002	0.10	0.74
2003	0.11	0.67
2004	0.11	0.71
2005	0.12	0.54
2006	0.12	0.40
2007	0.14	0.63
2008	0.13	0.77
2009	0.11	0.66
2010	0.09	0.82
2011	0.11	0.75
2012	0.12	0.77
2013	0.14	0.64
2014	0.09	1.09

Note: Includes civilian aviation accidents (VH and non-VH registered aircraft) inside Australia only.

Source: ABS (2016f), ATSB (2016b).

Table T 8.14b Aviation casualty rate, by severity (per 100,000 population)

Calendar year	Fatalities	Non-fatal injuries
1971	0.27	0.18
1972	0.39	0.15
1973	0.19	0.17
1974	0.28	0.17
1975	0.35	0.19
1976	0.41	0.35
1977	0.39	0.36
1978	0.45	0.34
1979	0.31	0.34
1980	0.44	0.28
1981	0.39	0.33
1982	0.40	0.28
1983	0.35	0.29
1984	0.31	0.24
1985	0.34	0.23
1986	0.34	0.22
1987	0.24	0.36
1988	0.41	0.27
1989	0.49	0.45
1990	0.47	0.36
1991	0.30	0.23
1992	0.36	0.22
1993	0.32	0.33
1994	0.35	0.17
1995	0.28	0.27
1996	0.28	0.18
1997	0.21	0.16
1998	0.30	0.12
1999	0.24	0.11
2000	0.23	0.22
2001	0.24	0.16
2002	0.17	0.13
2003	0.22	0.13
2004	0.17	0.12
2005	0.22	0.03
2006	0.20	0.07
2007	0.21	0.08
2008	0.20	0.20
2009	0.12	0.09
2010	0.11	0.15
2011	0.17	0.17
2012	0.17	0.17
2013	0.20	0.08
2014	0.12	0.15

Note: Includes civilian aviation accidents (VH and non-VH registered aircraft) inside Australia only.

Source: ABS (2016f), ATSB (2016b).

Table T 8.15a Number of aviation accidents, by state/territory

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other ^o	Total
1971	79	27	39	24	47	6	15	2	0	239
1972	45	46	39	20	25	9	15	1	0	200
1973	76	54	37	22	27	10	13	3	0	242
1974	58	52	46	33	40	10	16	1	2	258
1975	68	48	45	24	27	5	9	2	0	228
1976	95	70	47	42	38	8	12	0	0	312
1977	78	67	45	33	41	7	16	3	0	290
1978	78	57	69	29	51	2	20	2	0	308
1979	102	52	62	31	42	4	20	2	0	315
1980	88	43	68	27	48	5	19	2	1	301
1981	68	33	83	35	44	4	14	0	0	281
1982	74	37	73	21	37	3	10	2	1	258
1983	97	36	92	22	33	10	11	4	0	305
1984	83	38	68	20	36	8	13	0	0	266
1985	82	27	64	14	35	8	10	1	0	241
1986	76	47	52	20	29	5	17	1	0	247
1987	91	43	81	23	22	7	22	0	0	289
1988	89	36	103	27	36	6	23	4	0	324
1989	98	45	117	22	28	6	25	5	0	346
1990	122	39	90	16	47	6	23	0	0	343
1991	88	43	90	16	50	6	23	2	1	319
1992	93	47	66	24	47	9	18	1	0	305
1993	92	40	88	23	40	10	19	1	0	313
1994	79	35	71	20	32	3	23	0	0	263
1995	67	31	96	16	41	4	11	2	0	268
1996	66	25	77	15	42	9	9	0	0	243
1997	71	30	74	18	32	5	24	2	0	256
1998	64	25	68	13	33	8	14	3	0	228
1999	47	32	50	18	26	4	11	3	1	192
2000	59	31	63	10	34	2	17	1	0	217
2001	41	24	57	15	35	4	18	2	0	196
2002	51	21	42	9	25	6	10	0	0	164
2003	45	22	37	8	21	5	12	4	0	154
2004	38	26	55	11	17	5	11	0	0	163
2005	45	17	37	10	17	0	7	0	0	133
2006	30	14	27	3	15	5	10	1	0	105
2007	42	28	40	10	22	5	14	0	1	162
2008	55	27	47	12	32	4	13	0	0	190
2009	48	26	45	6	24	6	10	1	0	166
2010	42	32	57	18	31	4	16	0	0	200
2011	51	26	53	11	29	7	15	0	0	192
2012	53	43	56	13	22	4	11	1	0	203
2013	44	37	51	12	21	6	9	1	0	181
2014	65	48	73	18	50	4	16	1	0	275
2015	57	40	61	15	31	0	11	2	0	217

^o Other includes accidents that occurred on Norfolk Island and in the Australian Antarctic Territory.
Source: ATSB (2016b).

Table T 8.15b Number of aviation fatalities, by state/territory

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other ^o	Total
1971	11	5	0	2	17	0	0	0	0	35
1972	10	3	9	14	1	2	13	0	0	52
1973	14	0	1	5	5	1	0	0	0	26
1974	10	6	9	7	3	2	2	0	0	39
1975	11	6	13	5	7	0	6	1	0	49
1976	33	4	9	11	0	1	0	0	0	58
1977	20	6	9	8	4	2	6	0	0	55
1978	12	23	17	4	7	0	2	0	0	65
1979	13	15	6	4	5	0	2	0	0	45
1980	30	16	6	4	8	0	0	0	0	64
1981	14	14	18	2	5	0	5	0	0	58
1982	21	12	23	0	4	0	0	0	0	60
1983	10	8	25	2	6	3	0	0	0	54
1984	15	7	11	4	8	3	0	0	0	48
1985	17	7	12	7	7	0	4	0	0	54
1986	15	12	13	8	5	0	1	0	0	54
1987	13	5	18	1	1	1	0	0	0	39
1988	24	7	21	2	12	0	1	0	0	67
1989	26	6	23	5	2	0	20	0	0	82
1990	29	7	33	3	5	0	3	0	0	80
1991	15	6	15	3	3	4	2	4	0	52
1992	26	10	9	3	8	5	1	1	0	63
1993	21	5	18	2	1	6	1	2	0	56
1994	29	5	20	6	2	0	0	0	0	62
1995	19	8	17	0	0	3	4	0	0	51
1996	15	3	19	1	10	3	0	0	0	51
1997	16	2	10	2	1	1	6	0	0	38
1998	24	4	13	1	8	5	1	0	0	56
1999	11	8	17	6	2	0	1	1	0	46
2000	2	6	21	9	4	0	2	0	0	44
2001	6	5	18	2	8	2	1	4	0	46
2002	11	7	11	0	0	0	5	0	0	34
2003	16	0	13	2	9	4	0	0	0	44
2004	7	13	10	0	2	1	1	0	0	34
2005	12	6	23	2	1	0	1	0	0	45
2006	16	5	14	0	2	0	3	0	0	40
2007	8	12	9	0	8	3	4	0	0	44
2008	16	3	11	1	8	0	4	0	0	43
2009	6	7	5	1	6	0	0	0	0	25
2010	7	2	7	1	4	0	3	0	0	24
2011	14	4	12	3	3	1	1	0	0	38
2012	13	8	15	1	2	0	0	0	0	39
2013	11	11	12	2	3	1	6	0	0	46
2014	12	2	8	3	1	2	0	0	0	28
2015	11	6	10	0	3	0	1	0	0	31

^o Other includes accidents that occurred on Norfolk Island and in the Australian Antarctic Territory.
Source: ATSB (2016b).

CHAPTER 9

Energy and the environment

Table T 9.1 Total transport petroleum sales, by fuel type

Financial year	Automotive gasoline	Automotive LPG	Automotive diesel	Industrial & marine diesel	Aviation gasoline	Aviation turbine fuel
1977–78	14 411.3					
1978–79	14 843.9					
1979–80	14 735.7					
1980–81	14 801.9					
1981–82	15 224.8		7 841.4			
1982–83	14 983.4		7 456.5			
1983–84	15 336.5		7 933.8			
1984–85	15 577.6		8 152.4			
1985–86	15 870.0		8 297.2			
1986–87	16 006.0		8 695.8			
1987–88	16 567.0		9 093.8		2 788.2	
1988–89	17 079.0		9 756.1		2 981.1	
1989–90	17 348.0		10 087.0		2 843.0	
1990–91	16 874.0		9 795.0		3 229.0	
1991–92	16 963.0		9 984.4		3 459.1	
1992–93	17 293.0		10 321.4		3 684.6	
1993–94	17 506.7		10 721.3		76.5	3 823.1
1994–95	17 751.5		11 174.7		104.5	4 301.8
1995–96	17 885.8		11 923.2		101.6	4 664.9
1996–97	17 889.0		12 315.8		102.3	4 847.8
1997–98	17 912.7		12 557.4		104.1	4 863.0
1998–99	18 202.1		12 823.2		105.9	4 793.8
1999–00	18 476.6	1 902.9	13 245.1	17.7	103.3	5 022.8
2000–01	18 167.6	2 221.4	12 952.4	22.1	101.4	5 318.5
2001–02	18 668.8	2 422.2	13 441.2	45.8	96.5	4 602.6
2002–03	18 872.5	2 416.3	13 888.0	18.1	90.2	4 249.7
2003–04	19 962.0	2 546.8	14 461.5	17.0	89.9	4 328.8
2004–05	19 875.7	2 338.8	15 185.0	14.7	90.7	4 729.9
2005–06	19 047.9	2 563.7	15 803.6	19.4	86.4	5 359.4
2006–07	19 250.7	2 335.3	17 027.6	15.2	89.5	5 837.0
2007–08	19 234.2	2 240.5	18 244.9	11.5	87.8	6 211.8
2008–09	18 734.2	2 253.1	18 587.0	16.2	96.1	6 316.7
2009–10	18 643.6	2 083.1	19 043.9	25.8	79.7	6 675.2
2010–11	18 725.2	2 021.8	20 061.1	na	78.7	7 067.6
2011–12	18 761.6	1 986.2	21 643.1	na	84.1	7 336.3
2012–13	18 658.7	1 980.2	22 630.8	na	81.0	7 773.1
2013–14	18 119.6	2 007.1	23 081.0	na	72.7	8 167.6
2014–15	18 070.3	1 945.7	23 618.7	na	68.2	8 142.8
2015–16	18 178.4	1 573.1	23 865.9	na	68.2	8 510.9

Note: Data are not readily available for missing years.

From 2010–11 onwards, industrial & marine diesel figures are included in the automotive diesel data.

na: not available.

Source: Industry (2016a).

Table T 9.2a Selected refined petroleum products—Australian production

Financial year	Automotive gasoline	LPG	Automotive diesel	Industrial & marine diesel megalitres	Aviation gasoline	Aviation turbine fuel
1999–00	18 652.4	1 674.4	12 736.8	59.6	158.1	5 538.7
2000–01	17 886.9	1 794.7	13 212.1	98.1	137.5	5 836.3
2001–02	17 999.6	1 718.2	13 064.1	105.4	146.8	5 389.7
2002–03	17 984.1	1 657.2	13 334.8	116.7	134.1	5 148.9
2003–04	17 375.3	1 061.8	12 544.1	84.1	113.8	4 964.3
2004–05	17 668.4	974.4	12 661.1	22.0	139.7	5 275.0
2005–06	16 527.6	1 124.7	10 153.7	30.8	119.5	5 215.5
2006–07	17 732.1	1 386.7	11 055.3	20.7	119.3	5 332.1
2007–08	17 049.0	1 514.9	12 176.6	3.4	119.0	5 181.8
2008–09	17 159.5	1 476.9	12 230.9	13.0	104.6	5 494.3
2009–10	16 771.1	1 203.6	11 719.6	3.0	103.6	5 340.7
2010–11	16 642.8	1 477.5	12 858.7	na	91.4	5 447.7
2011–12	15 573.0	1 213.5	12 658.3	na	89.8	5 453.3
2012–13	15 606.3	1 215.0	12 875.6	na	92.2	5 534.5
2013–14	14 477.9	1 094.4	12 423.4	na	89.2	5 008.7
2014–15	12 753.2	976.1	11 426.4	na	86.8	4 255.2
2015–16	11 641.3	747.5	8 996.7	na	63.8	3 412.7

Note: LPG figures include all production and trade, including petrochemical transfers to industry.

From 2010–11 onwards, industrial & marine diesel figures are included in the automotive diesel data.

Source: Industry (2016a).

Table T 9.2b Selected refined petroleum products—imports to Australia

Financial year	Automotive gasoline	LPG	Automotive diesel	Industrial & marine diesel megalitres	Aviation gasoline	Aviation turbine fuel
1999–00	1 065.1	518.9	1 399.7		0.0	170.6
2000–01	1 188.7	633.4	1 129.0		0.0	387.4
2001–02	1 436.2	588.0	1 280.3		0.0	224.7
2002–03	1 686.1	299.0	1 645.6		55.8	440.8
2003–04	3 213.2	789.4	3 383.0		203.8	725.9
2004–05	3 166.0	540.0	3 965.1		47.0	986.9
2005–06	3 696.0	631.5	6 127.1		10.5	827.5
2006–07	2 815.5	749.3	5 931.5		0.8	1 089.4
2007–08	3 533.1	964.8	7 476.2		0.1	1 845.5
2008–09	4 087.5	1 003.8	8 245.9		0.0	2 026.5
2009–10	3 887.4	1 066.8	8 680.5		0.0	2 168.4
2010–11	2 652.8	888.2	8 843.4		0.0	2 085.9
2011–12	3 671.7	1 022.7	11 244.3		5.8	2 251.9
2012–13	3 653.1	918.0	12 512.1		0.0	3 201.2
2013–14	3 598.3	729.9	13 602.6		0.0	3 481.8
2014–15	5 534.2	958.0	15 178.2		0.1	4 299.4
2015–16	6 637.5	899.0	17 633.6		0.0	5 568.3

Note: LPG figures include all production and trade.

Data are not separately available for missing years.

All diesel imports are included in automotive diesel.

Source: Industry (2016a).

Table T 9.2c Selected refined petroleum products—exports from Australia

Financial year	Automotive gasoline	LPG	Automotive diesel	Industrial & marine diesel megalitres	Aviation gasoline	Aviation turbine fuel
1999–00	1 372.6	2 858.9	1 018.1	51.3	78.9	578.3
2000–01	1 286.0	2 784.6	1 150.1	119.5	28.5	755.5
2001–02	1 184.8	3 211.2	886.2	60.0	73.8	549.0
2002–03	1 052.6	3 195.2	1 044.1	0.0	52.5	651.7
2003–04	755.5	2 936.9	840.7	0.0	29.6	518.7
2004–05	770.6	2 846.6	293.9	0.0	35.7	227.0
2005–06	629.5	2 799.9	418.8	0.0	174.4	126.5
2006–07	763.5	2 850.9	283.6	0.0	97.0	121.7
2007–08	628.3	2 589.0	461.7	0.0	96.4	149.5
2008–09	243.8	2 499.7	357.2	0.0	56.2	112.7
2009–10	221.9	2 776.3	187.0	0.0	32.5	71.9
2010–11	174.5	2 470.8	117.2	na	19.8	11.8
2011–12	175.2	2 114.7	129.6	na	25.5	2.4
2012–13	99.7	2 385.6	91.1	na	22.1	13.0
2013–14	131.2	2 458.9	61.0	na	20.3	2.3
2014–15	118.1	2 110.5	76.3	na	10.2	19.9
2015–16	72.4	1 986.8	51.9	na	3.9	1.7

Note: LPG figures include all production and trade.

From 2010–11 onwards, industrial & marine diesel figures are included in the automotive diesel data.

Source: Industry (2016a).

Table T 9.3 Average retail petrol prices in Australia (nominal), by state/territory

Average over financial year	NSW/ACT	VIC	QLD	SA cents per litre	WA	TAS	NT	National
2002–03	91.8	90.3	83.7	91.6	94.0	95.1	99.8	90.3
2003–04	93.6	91.7	85.2	93.8	94.5	98.3	101.3	91.9
2004–05	105.2	102.4	95.9	104.5	103.8	109.1	112.5	102.8
2005–06	124.6	123.3	116.9	125.1	124.3	129.0	131.2	123.0
2006–07	124.9	124.1	118.0	124.2	124.5	127.0	133.9	123.4
2007–08	137.9	137.0	130.6	137.1	137.5	141.4	147.8	136.3
2008–09	129.7	130.2	123.3	129.8	128.7	134.3	140.2	128.8
2009–10	124.8	125.3	125.9	124.2	124.7	129.8	133.6	125.3
2010–11	132.0	131.5	133.2	130.9	133.5	138.5	141.2	132.4
2011–12	144.0	141.9	145.7	143.4	144.9	150.3	156.2	144.1
2012–13	143.5	141.3	145.4	141.7	144.0	152.1	161.6	143.6
2013–14	152.6	149.7	154.4	150.9	152.8	162.0	171.8	152.5
2014–15	137.0	133.2	138.8	133.5	137.1	146.0	151.6	136.5
2015–16	123.5	120.8	125.4	120.8	123.9	130.4	127.0	123.2

Source: AIP (2016).

Table T 9.4 Transport direct greenhouse gas (carbon dioxide equivalent) emissions, by transport mode, from energy end-use

Financial year	Road Vehicles	Rail (excl electric)	Domestic Maritime	Domestic Aviation	Total (including off-road vehicles)
gigagrams of CO ₂ equivalent					
1974–75	33 088	1 916	3 447	2 822	41 273
1975–76	34 617	1 907	3 292	2 603	42 421
1976–77	36 646	1 952	3 594	2 584	44 775
1977–78	38 191	1 976	3 948	2 845	46 960
1978–79	39 984	2 024	3 581	2 698	48 287
1979–80	40 716	2 023	3 758	2 806	49 303
1980–81	41 589	1 993	3 799	2 790	50 171
1981–82	43 570	1 963	3 272	3 124	51 929
1982–83	43 097	1 802	2 988	3 010	50 897
1983–84	45 146	1 956	3 050	2 936	53 089
1984–85	46 909	2 040	2 907	3 017	54 873
1985–86	48 062	1 985	2 986	3 244	56 277
1986–87	48 961	2 016	2 963	3 331	57 272
1987–88	51 488	1 985	2 932	3 600	60 005
1988–89	53 511	1 820	2 702	3 536	61 569
1989–90	54 803	1 753	2 414	2 833	61 803
1990–91	53 777	1 745	2 109	3 517	61 147
1991–92	54 478	1 696	2 166	3 817	62 157
1992–93	56 197	1 699	1 977	4 005	63 878
1993–94	57 735	1 800	1 846	4 239	65 619
1994–95	59 998	1 755	2 351	4 997	69 100
1995–96	61 438	1 707	2 473	5 485	71 103
1996–97	62 458	1 739	2 466	5 857	72 521
1997–98	63 504	1 779	2 176	5 312	72 770
1998–99	64 671	1 829	2 018	5 115	73 633
1999–00	65 914	1 884	2 115	5 348	75 262
2000–01	65 452	1 854	2 023	5 960	75 288
2001–02	67 289	1 939	2 089	5 344	76 661
2002–03	69 062	1 991	2 164	5 098	78 315
2003–04	71 919	2 127	2 310	5 333	81 690
2004–05	72 326	2 305	2 435	5 820	82 885
2005–06	71 959	2 319	2 281	6 158	82 717
2006–07	73 308	2 499	2 344	6 663	84 814
2007–08	74 348	2 580	2 332	7 160	86 420
2008–09	74 087	2 584	2 288	7 340	86 298
2009–10	75 046	2 683	2 391	7 457	87 577
2010–11	76 227	2 763	2 441	7 981	89 412
2011–12	77 415	2 907	2 333	8 308	90 963
2012–13	78 099	3 026	2 141	8 848	92 114
2013–14	78 328	3 184	2 212	8 953	92 678
2014–15	78 891	3 337	2 245	8 949	93 422
2015–16	80 630	3 325	2 290	9 098	95 342

Note: 2015–16 estimates are preliminary and subject to change

Source: BITRE (2009) and BITRE estimates.

Table T 9.5 Road transport direct greenhouse gas (carbon dioxide equivalent) emissions, by vehicle type, from energy end-use

Financial year	Cars	Light commercial vehicles	Articulated trucks	Rigid and other trucks	Buses	Motor cycles	Total road
gigagrams of CO ₂ equivalent							
1989–90	34 878	7 619	5 629	5 099	1 267	251	54 743
1990–91	34 795	7 365	5 544	4 560	1 225	226	53 717
1991–92	35 433	7 590	5 592	4 393	1 183	226	54 417
1992–93	36 576	7 817	6 008	4 332	1 174	226	56 133
1993–94	37 521	8 049	6 187	4 483	1 206	223	57 669
1994–95	38 580	8 518	6 658	4 723	1 229	221	59 929
1995–96	39 069	8 816	7 003	4 999	1 266	214	61 368
1996–97	39 301	8 910	7 312	5 381	1 269	213	62 387
1997–98	39 532	9 310	7 626	5 461	1 298	205	63 431
1998–99	40 228	9 540	7 891	5 428	1 310	197	64 595
1999–00	40 895	9 731	8 148	5 517	1 346	200	65 836
2000–01	40 474	9 853	8 079	5 393	1 368	206	65 373
2001–02	41 408	10 271	8 358	5 587	1 367	218	67 209
2002–03	42 310	10 561	8 668	5 810	1 416	214	68 979
2003–04	44 333	10 909	8 993	5 937	1 435	226	71 833
2004–05	44 145	10 968	9 285	6 157	1 440	243	72 239
2005–06	42 961	11 262	9 513	6 407	1 468	265	71 875
2006–07	43 259	11 659	9 931	6 611	1 469	294	73 222
2007–08	43 289	12 172	10 205	6 792	1 480	322	74 259
2008–09	42 810	12 526	10 102	6 699	1 517	344	73 997
2009–10	42 848	13 023	10 273	6 882	1 559	370	74 955
2010–11	43 033	13 369	10 663	7 070	1 615	383	76 134
2011–12	43 216	13 720	11 071	7 258	1 666	391	77 321
2012–13	43 174	14 075	11 317	7 386	1 651	403	78 006
2013–14	42 940	14 366	11 513	7 427	1 581	412	78 239
2014–15	43 114	14 665	11 711	7 359	1 531	419	78 801
2015–16	43 238	14 983	12 369	7 850	1 668	428	80 537

Note: 2015–16 data is preliminary and subject to change

Source: BITRE (2009) and BITRE estimates.

Table T 9.6 Transport direct emissions, by transport mode, from energy end-use—carbon dioxide

Financial year	Road Vehicles	Rail (excluding electric)	Domestic Maritime (including small craft)	Domestic Aviation	Total (including off-road vehicles)
gigagrams of CO ₂					
1989–90	53 596	1 714	2 345	2 803	60 517
1990–91	52 503	1 706	2 042	3 481	59 791
1991–92	53 112	1 659	2 095	3 779	60 705
1992–93	54 720	1 661	1 905	3 965	62 314
1993–94	56 152	1 760	1 772	4 197	63 946
1994–95	58 290	1 716	2 269	4 947	67 289
1995–96	59 632	1 669	2 387	5 431	69 189
1996–97	60 584	1 700	2 378	5 800	70 532
1997–98	61 554	1 740	2 088	5 259	70 713
1998–99	62 638	1 789	1 928	5 064	71 494
1999–00	63 807	1 843	2 021	5 296	73 044
2000–01	63 325	1 813	1 928	5 902	73 046
2001–02	65 101	1 897	1 990	5 292	74 359
2002–03	66 857	1 948	2 061	5 049	75 996
2003–04	69 675	2 081	2 202	5 281	79 325
2004–05	70 155	2 255	2 323	5 765	80 583
2005–06	69 908	2 268	2 176	6 097	80 533
2006–07	71 300	2 445	2 238	6 597	82 664
2007–08	72 394	2 524	2 225	7 092	84 323
2008–09	72 214	2 527	2 181	7 269	84 280
2009–10	73 224	2 624	2 280	7 385	85 603
2010–11	74 456	2 702	2 328	7 907	87 485
2011–12	75 704	2 843	2 218	8 232	89 089
2012–13	76 448	2 960	2 024	8 771	90 294
2013–14	76 742	3 114	2 098	8 875	90 916
2014–15	77 369	3 265	2 128	8 869	91 719
2015–16	79 135	3 253	2 170	9 017	93 668

Note: 2015–16 data is preliminary and subject to change

Source: BITRE (2009) and BITRE estimates.

Table T 9.7 Transport direct emissions, by transport mode, from energy end-use—methane

Financial year	Road Vehicles	Rail (excluding electric)	Domestic Maritime (including small craft)	Domestic Aviation	Total (including off-road vehicles)
gigagrams of methane					
1989–90	23.27	1.24	2.34	0.29	27.16
1990–91	22.91	1.23	2.38	0.25	26.79
1991–92	23.28	1.20	2.50	0.24	27.26
1992–93	23.88	1.20	2.65	0.26	28.02
1993–94	24.23	1.27	2.79	0.26	28.58
1994–95	24.77	1.24	2.97	0.27	29.29
1995–96	24.79	1.21	3.12	0.27	29.42
1996–97	24.64	1.23	3.24	0.28	29.42
1997–98	24.45	1.26	3.34	0.28	29.36
1998–99	24.12	1.29	3.50	0.28	29.23
1999–00	23.67	1.33	3.67	0.28	28.98
2000–01	22.65	1.31	3.73	0.28	28.01
2001–02	22.30	1.37	3.87	0.26	27.84
2002–03	21.84	1.41	4.04	0.25	27.58
2003–04	21.72	1.50	4.25	0.25	27.77
2004–05	20.58	1.63	4.36	0.26	26.87
2005–06	18.90	1.64	4.10	0.26	24.94
2006–07	17.99	1.77	4.15	0.27	24.21
2007–08	16.91	1.82	4.19	0.28	23.25
2008–09	15.63	1.83	4.23	0.29	22.02
2009–10	14.65	1.90	4.35	0.29	21.23
2010–11	13.52	1.95	4.45	0.30	20.26
2011–12	12.44	2.05	4.56	0.30	19.40
2012–13	11.50	2.14	4.71	0.31	18.70
2013–14	10.62	2.25	4.57	0.31	17.79
2014–15	9.93	2.36	4.66	0.31	17.31
2015–16	9.46	2.35	4.77	0.31	16.93

Note: 2015–16 data is preliminary and subject to change.

Source: BITRE (2009) and BITRE estimates.

Table T 9.8 Transport direct emissions, from energy end-use, by transport mode, from energy end-use—nitrous oxide

Financial year	Road Vehicles	Rail (excluding electric)	Domestic Maritime (including small craft)	Domestic Aviation	Total (including off-road vehicles)
gigagrams of nitrous oxide					
1989–90	2.12	0.04	0.06	0.08	2.31
1990–91	2.36	0.04	0.06	0.10	2.56
1991–92	2.63	0.04	0.06	0.11	2.84
1992–93	2.94	0.04	0.05	0.11	3.15
1993–94	3.25	0.04	0.05	0.12	3.46
1994–95	3.61	0.04	0.06	0.14	3.86
1995–96	3.92	0.04	0.07	0.15	4.18
1996–97	4.15	0.04	0.07	0.17	4.42
1997–98	4.40	0.04	0.06	0.15	4.65
1998–99	4.68	0.04	0.05	0.14	4.92
1999–00	4.94	0.04	0.06	0.15	5.19
2000–01	5.07	0.04	0.05	0.17	5.34
2001–02	5.29	0.04	0.06	0.15	5.54
2002–03	5.37	0.05	0.06	0.14	5.61
2003–04	5.49	0.05	0.06	0.15	5.75
2004–05	5.33	0.05	0.06	0.16	5.61
2005–06	5.06	0.05	0.06	0.18	5.36
2006–07	4.98	0.06	0.06	0.19	5.30
2007–08	4.87	0.06	0.06	0.20	5.19
2008–09	4.69	0.06	0.06	0.21	5.02
2009–10	4.59	0.06	0.06	0.21	4.93
2010–11	4.50	0.06	0.07	0.22	4.84
2011–12	4.38	0.07	0.06	0.22	4.73
2012–13	4.25	0.07	0.06	0.23	4.60
2013–14	4.11	0.07	0.06	0.23	4.48
2014–15	3.95	0.07	0.06	0.24	4.32
2015–16	3.88	0.07	0.06	0.24	4.25

Note: 2015–16 data is preliminary and subject to change

Source: BITRE (2009) and BITRE estimates.

Table T 9.9 Transport full fuel cycle greenhouse gas (carbon dioxide equivalent) emissions, by transport mode

Financial year	Road Vehicles	Rail (all)	Domestic Maritime	Domestic Aviation	Total (direct)
gigagrams of CO ₂ equivalent					
1974–75	37 353	3 054	3 923	3 237	47 567
1975–76	39 085	3 057	3 747	2 985	48 874
1976–77	41 383	3 116	4 092	2 962	51 554
1977–78	43 133	3 146	4 496	3 262	54 037
1978–79	45 175	3 152	4 078	3 093	55 499
1979–80	46 021	3 195	4 279	3 218	56 713
1980–81	47 017	3 220	4 325	3 199	57 761
1981–82	49 265	3 205	3 722	3 583	59 776
1982–83	48 738	3 038	3 394	3 453	58 622
1983–84	51 073	3 242	3 438	3 367	61 120
1984–85	53 078	3 435	3 278	3 460	63 251
1985–86	54 384	3 421	3 367	3 721	64 893
1986–87	55 403	3 539	3 339	3 821	66 102
1987–88	58 266	3 552	3 304	4 130	69 251
1988–89	60 552	3 604	3 039	4 056	71 250
1989–90	62 014	3 598	2 713	3 247	71 572
1990–91	60 841	3 583	2 363	4 034	70 822
1991–92	61 630	3 565	2 426	4 379	72 000
1992–93	63 575	3 518	2 208	4 596	73 897
1993–94	65 317	3 619	2 060	4 864	75 861
1994–95	67 890	3 625	2 636	5 734	79 886
1995–96	69 530	3 586	2 775	6 295	82 185
1996–97	70 696	3 704	2 764	6 723	83 887
1997–98	71 892	3 738	2 433	6 096	84 159
1998–99	73 215	3 841	2 253	5 870	85 179
1999–00	74 631	4 014	2 360	6 138	87 144
2000–01	74 121	4 042	2 262	6 841	87 266
2001–02	76 221	4 138	2 337	6 133	88 830
2002–03	78 241	4 186	2 422	5 852	90 700
2003–04	81 439	4 339	2 584	6 122	94 484
2004–05	81 915	4 583	2 712	6 680	95 891
2005–06	81 575	4 592	2 545	7 068	95 781
2006–07	83 202	4 869	2 614	7 648	98 334
2007–08	84 477	5 023	2 607	8 220	100 327
2008–09	84 263	5 097	2 553	8 426	100 339
2009–10	85 422	5 163	2 675	8 561	101 822
2010–11	86 837	5 230	2 742	9 164	103 973
2011–12	88 200	5 364	2 622	9 539	105 725
2012–13	89 018	5 417	2 423	10 160	107 019
2013–14	89 408	5 569	2 505	10 281	107 763
2014–15	90 224	5 774	2 542	10 277	108 817
2015–16	91 952	5 792	2 593	10 448	110 785

Note: 2015–16 estimates are preliminary and subject to change

Source: BITRE (2009) and BITRE estimates.

Table T 9.10 Transport energy use, by transport mode

Financial year	Road Vehicles	Rail (excluding electric)	Rail (electric)	Domestic Maritime (including small craft)	Domestic Aviation	Total civil domestic transport
petajoules (end-use, higher heating value)						
1974–75	483.7	27.0	2.5	47.1	40.7	600.9
1975–76	506.0	26.9	2.5	45.0	37.5	617.9
1976–77	535.6	27.5	2.5	49.3	37.2	652.1
1977–78	558.2	27.8	2.5	54.2	41.0	683.7
1978–79	584.2	28.5	2.4	49.2	38.9	703.3
1979–80	594.7	28.5	2.6	51.6	40.4	717.9
1980–81	607.3	28.1	2.8	52.0	40.2	730.5
1981–82	636.0	27.7	2.8	44.7	45.0	756.3
1982–83	628.9	25.4	3.0	40.7	43.4	741.4
1983–84	658.5	27.6	3.1	40.8	42.3	772.3
1984–85	684.0	28.8	3.4	38.9	43.5	798.7
1985–86	700.8	28.0	3.8	40.0	46.7	819.3
1986–87	713.7	28.5	4.0	39.7	48.0	833.9
1987–88	750.3	28.0	4.3	39.2	51.9	873.7
1988–89	779.7	25.7	5.1	36.0	50.9	897.4
1989–90	798.3	24.8	5.5	32.1	40.8	901.5
1990–91	782.8	24.7	5.4	27.9	50.7	891.4
1991–92	792.3	24.0	5.5	28.6	55.0	905.4
1992–93	816.8	24.0	5.4	26.0	57.7	929.9
1993–94	838.7	25.4	5.4	24.3	61.0	954.8
1994–95	871.4	24.8	5.6	31.2	71.9	1 004.9
1995–96	891.7	24.1	5.5	32.9	78.9	1 033.2
1996–97	906.1	24.6	5.8	32.8	84.3	1 053.6
1997–98	920.8	25.1	5.8	28.8	76.5	1 056.9
1998–99	937.0	25.9	5.9	26.6	73.6	1 069.0
1999–00	954.5	26.6	6.4	27.9	77.0	1 092.4
2000–01	947.6	26.2	6.6	26.8	85.8	1 092.9
2001–02	974.5	27.4	6.5	27.7	76.9	1 113.0
2002–03	1 000.0	28.2	6.5	28.8	73.4	1 136.8
2003–04	1 040.6	30.1	6.6	30.6	76.8	1 184.7
2004–05	1 046.8	32.6	6.6	32.0	83.8	1 201.7
2005–06	1 044.2	32.8	6.7	30.1	88.6	1 202.3
2006–07	1 066.3	35.3	6.9	30.9	95.8	1 235.3
2007–08	1 084.0	36.5	7.1	30.9	103.0	1 261.5
2008–09	1 082.6	36.5	7.5	30.2	105.6	1 262.4
2009–10	1 098.0	37.9	7.4	31.8	107.3	1 282.3
2010–11	1 116.3	39.1	7.4	32.8	114.9	1 310.3
2011–12	1 133.9	41.1	7.4	31.4	119.6	1 333.3
2012–13	1 145.3	42.8	7.4	29.3	127.4	1 352.2
2013–14	1 153.0	45.0	7.3	30.3	128.9	1 364.5
2014–15	1 167.8	47.2	7.5	30.8	128.8	1 382.0
2015–16	1 181.8	47.0	7.7	31.4	130.9	1 398.8

Note: 2015–16 estimates are preliminary and subject to change.

Source: BITRE (2009) and BITRE estimates.

Table T 9.11 Road transport energy use, by vehicle type

Financial year	Cars	Light commercial vehicles	Articulated trucks	Rigid and other trucks	Buses	Motor cycles	Total road
petajoules (end-use, higher heating value)							
1974–75	326.6	62.3	35.9	48.4	8.0	2.5	483.7
1975–76	341.1	63.8	39.2	50.9	8.0	3.0	506.0
1976–77	358.0	72.2	43.3	50.7	8.2	3.1	535.6
1977–78	372.5	78.6	44.8	50.6	8.4	3.3	558.2
1978–79	385.7	81.5	53.2	51.9	8.6	3.4	584.2
1979–80	385.6	81.0	57.6	57.7	9.1	3.7	594.7
1980–81	389.9	82.1	59.3	62.5	9.7	4.0	607.3
1981–82	406.0	83.9	63.0	68.7	10.1	4.4	636.0
1982–83	403.7	83.1	62.7	63.9	11.2	4.4	628.9
1983–84	419.0	88.7	70.4	63.7	12.2	4.5	658.5
1984–85	431.7	94.2	74.3	66.0	13.3	4.6	684.0
1985–86	444.0	97.4	76.0	64.9	14.2	4.2	700.8
1986–87	452.5	99.7	76.7	65.7	15.1	4.0	713.7
1987–88	473.1	104.9	82.6	69.7	16.1	3.9	750.3
1988–89	495.6	110.1	82.6	70.2	17.1	4.0	779.7
1989–90	510.8	111.6	80.8	73.2	18.2	3.6	798.3
1990–91	508.9	107.9	79.6	65.5	17.6	3.3	782.8
1991–92	517.6	111.1	80.3	63.1	17.0	3.3	792.3
1992–93	533.7	114.4	86.3	62.2	16.9	3.3	816.8
1993–94	547.0	117.9	88.8	64.4	17.3	3.2	838.7
1994–95	562.1	125.0	95.6	67.8	17.7	3.2	871.4
1995–96	568.6	129.4	100.6	71.8	18.2	3.1	891.7
1996–97	571.7	130.8	105.0	77.3	18.3	3.1	906.1
1997–98	574.7	136.5	109.5	78.4	18.7	3.0	920.8
1998–99	584.2	139.7	113.4	77.9	18.9	2.8	937.0
1999–00	593.5	142.3	117.1	79.2	19.5	2.9	954.5
2000–01	587.0	144.0	116.2	77.5	19.9	3.0	947.6
2001–02	600.6	149.9	120.3	80.4	20.1	3.2	974.5
2002–03	614.3	154.2	124.5	83.3	20.6	3.1	1 000.0
2003–04	643.3	159.0	129.2	85.0	20.8	3.3	1 040.6
2004–05	641.0	159.7	133.5	88.2	21.0	3.5	1 046.8
2005–06	625.9	164.1	136.9	91.9	21.5	3.8	1 044.2
2006–07	631.8	170.1	143.2	95.1	21.9	4.3	1 066.3
2007–08	634.2	177.6	147.3	97.9	22.2	4.7	1 084.0
2008–09	628.9	182.8	146.1	96.7	23.0	5.0	1 082.6
2009–10	630.7	189.9	148.7	99.5	23.8	5.4	1 098.0
2010–11	635.0	195.0	154.3	102.0	24.5	5.6	1 116.3
2011–12	638.0	200.1	160.2	104.6	25.3	5.7	1 133.9
2012–13	637.8	205.0	164.2	106.8	25.6	5.9	1 145.3
2013–14	634.4	209.1	168.5	109.0	26.0	6.0	1 153.0
2014–15	637.4	213.3	173.6	111.4	26.0	6.1	1 167.8
2015–16	638.2	217.5	179.4	114.1	26.2	6.2	1 181.8

Note: 2015–16 estimates are preliminary and subject to change.

Source: BITRE (2009) and BITRE estimates.

Table T 9.12 Energy use of major land transport fuels

Financial year	Petrol (automotive gasoline, all grades)	Diesel (automotive and industrial diesel oil)	LPG	Natural Gas (both compressed and liquefied)	Bio-fuels (ethanol & biodiesel, straight and mixtures)	Total
petajoules (higher heating value)						
1974–75	428.01	94.10	2.59	0.00	0.00	524.70
1975–76	444.12	100.17	2.97	0.00	0.00	547.26
1976–77	464.92	113.20	3.41	0.00	0.00	581.53
1977–78	481.45	121.72	3.86	0.00	0.00	607.02
1978–79	493.25	134.78	4.61	0.00	0.00	632.65
1979–80	489.44	148.29	5.85	0.00	0.00	643.58
1980–81	492.65	153.78	7.17	0.00	0.00	653.60
1981–82	509.25	161.63	8.15	0.00	0.00	679.03
1982–83	497.30	161.85	9.14	0.00	0.00	668.28
1983–84	508.03	179.08	10.47	0.00	0.00	697.58
1984–85	519.95	193.02	11.83	0.00	0.00	724.81
1985–86	528.42	197.15	13.81	0.00	0.00	739.38
1986–87	532.59	206.38	15.78	0.12	0.00	754.88
1987–88	553.38	217.70	18.14	0.03	0.00	789.25
1988–89	573.14	221.97	20.71	0.06	0.00	815.89
1989–90	582.24	227.53	23.00	0.17	0.00	832.94
1990–91	569.04	218.89	27.94	0.30	0.00	816.17
1991–92	571.86	221.34	32.46	0.43	0.01	826.11
1992–93	582.58	229.17	38.12	0.53	0.02	850.42
1993–94	589.91	239.32	44.78	0.62	0.05	874.68
1994–95	598.29	255.00	55.09	0.72	0.12	909.23
1995–96	602.62	267.17	59.36	0.82	0.24	930.21
1996–97	602.86	278.03	63.43	0.88	0.37	945.56
1997–98	602.54	288.89	67.31	0.95	0.50	960.19
1998–99	611.21	297.63	67.04	1.04	0.70	977.62
1999–00	619.16	306.96	67.65	1.07	1.04	995.87
2000–01	613.72	306.99	65.06	1.12	1.59	988.48
2001–02	624.95	322.57	67.10	1.32	2.09	1 018.03
2002–03	636.41	338.82	66.95	1.41	1.81	1 045.41
2003–04	665.92	353.81	66.75	1.45	0.70	1 088.62
2004–05	665.52	368.08	61.62	1.51	0.67	1 097.40
2005–06	637.68	384.62	69.26	1.64	1.51	1 094.73
2006–07	645.66	405.93	62.72	1.79	4.14	1 120.24
2007–08	643.81	426.89	60.53	1.93	6.29	1 139.45
2008–09	631.84	436.29	58.90	2.09	8.16	1 137.27
2009–10	629.84	458.93	54.79	2.25	9.56	1 155.36
2010–11	623.33	486.38	53.19	2.50	10.45	1 175.85
2011–12	622.77	507.53	52.25	2.85	10.09	1 195.49
2012–13	618.75	525.49	52.00	3.50	10.80	1 210.54
2013–14	601.90	547.10	52.57	3.85	14.60	1 220.02
2014–15	597.90	563.64	51.10	4.13	20.62	1 237.39
2015–16	602.02	593.32	41.69	4.48	10.19	1 251.70

Note: 2015–16 estimates are preliminary and subject to change.

Source: BITRE (2009) and BITRE estimates.

Table T 9.13 Other transport energy use

Financial year	Aviation gasoline	Aviation turbine fuel	Fuel oil	Coal	Electricity	Total
petajoules (end-use)						
1974–75	3.31	37.35	32.70	0.33	2.47	76.16
1975–76	3.37	34.14	30.31	0.32	2.51	70.66
1976–77	3.63	33.61	30.51	0.32	2.50	70.57
1977–78	3.77	37.23	32.84	0.31	2.51	76.66
1978–79	4.16	34.73	29.11	0.22	2.44	70.67
1979–80	3.77	36.67	31.08	0.16	2.59	74.27
1980–81	3.77	36.43	33.77	0.12	2.84	76.93
1981–82	3.74	41.28	29.32	0.09	2.84	77.26
1982–83	3.44	39.92	26.15	0.66	2.96	73.14
1983–84	3.57	38.73	25.55	3.75	3.10	74.71
1984–85	3.64	39.83	23.50	3.43	3.45	73.85
1985–86	3.57	43.16	26.08	3.33	3.77	79.91
1986–87	3.67	44.31	23.17	3.84	4.03	79.02
1987–88	3.91	47.96	24.77	3.55	4.27	84.46
1988–89	3.94	47.00	21.59	3.95	5.06	81.54
1989–90	4.30	36.54	18.79	3.51	5.46	68.59
1990–91	3.50	47.15	15.37	3.76	5.41	75.19
1991–92	3.30	51.66	14.82	4.00	5.51	79.29
1992–93	3.40	54.27	12.20	4.13	5.43	79.43
1993–94	3.30	57.73	9.76	3.93	5.41	80.13
1994–95	3.36	68.57	14.12	4.03	5.60	95.68
1995–96	3.26	75.68	14.50	3.99	5.54	102.97
1996–97	3.30	81.00	13.58	4.30	5.83	108.00
1997–98	3.35	73.11	10.28	4.24	5.77	96.75
1998–99	3.42	70.21	7.66	4.16	5.90	91.34
1999–00	3.41	73.57	8.71	4.44	6.36	96.50
2000–01	3.31	82.47	8.59	3.51	6.57	104.45
2001–02	3.15	73.76	8.06	3.51	6.50	94.99
2002–03	3.03	70.35	7.97	3.51	6.55	91.41
2003–04	2.91	73.84	8.68	4.01	6.61	96.06
2004–05	2.96	80.81	8.34	5.60	6.62	104.32
2005–06	2.80	85.79	7.53	4.80	6.69	107.61
2006–07	2.90	92.95	7.12	5.20	6.91	115.07
2007–08	2.85	100.19	7.51	4.40	7.14	122.08
2008–09	3.14	102.48	7.20	4.84	7.46	125.12
2009–10	2.62	104.66	8.20	4.13	7.35	126.95
2010–11	2.60	112.25	9.30	2.94	7.38	134.47
2011–12	2.78	116.80	8.30	2.52	7.45	137.85
2012–13	2.68	124.71	6.90	0.00	7.40	141.69
2013–14	2.40	126.48	8.25	0.00	7.35	144.49
2014–15	2.26	126.55	8.30	0.00	7.51	144.62
2015–16	2.26	128.69	8.47	0.00	7.72	147.14

Note: 2015–16 estimates are preliminary and subject to change.

Source: BITRE (2009) and BITRE estimates.

PART E: Energy

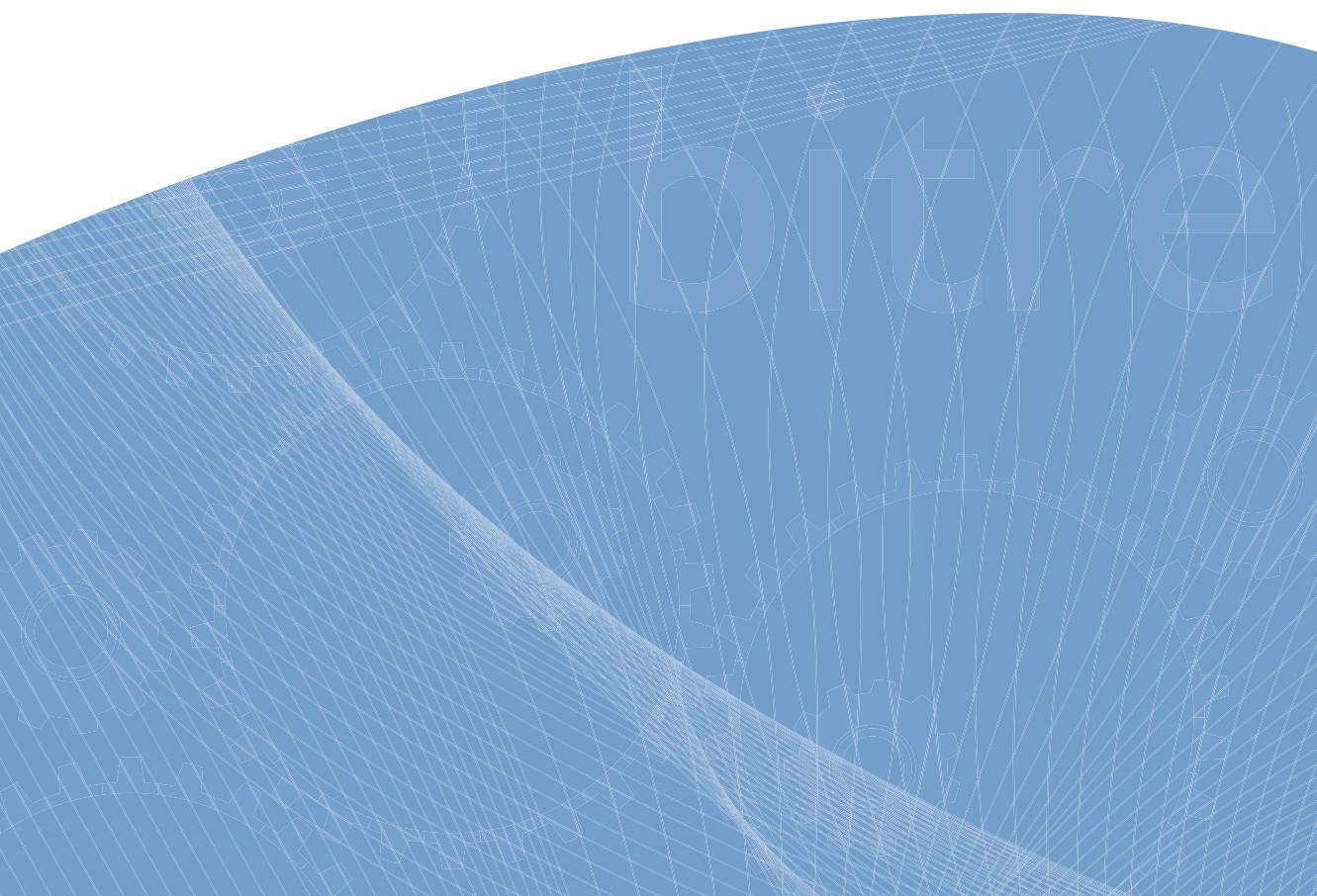
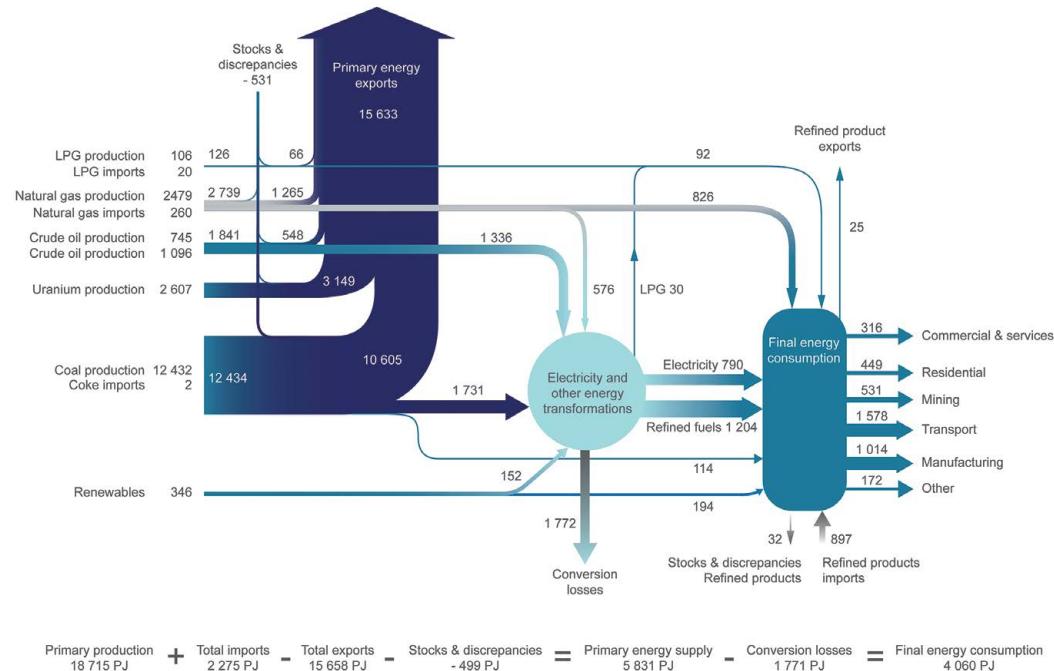


Figure E I Australian energy flows in petajoules, 2013–14



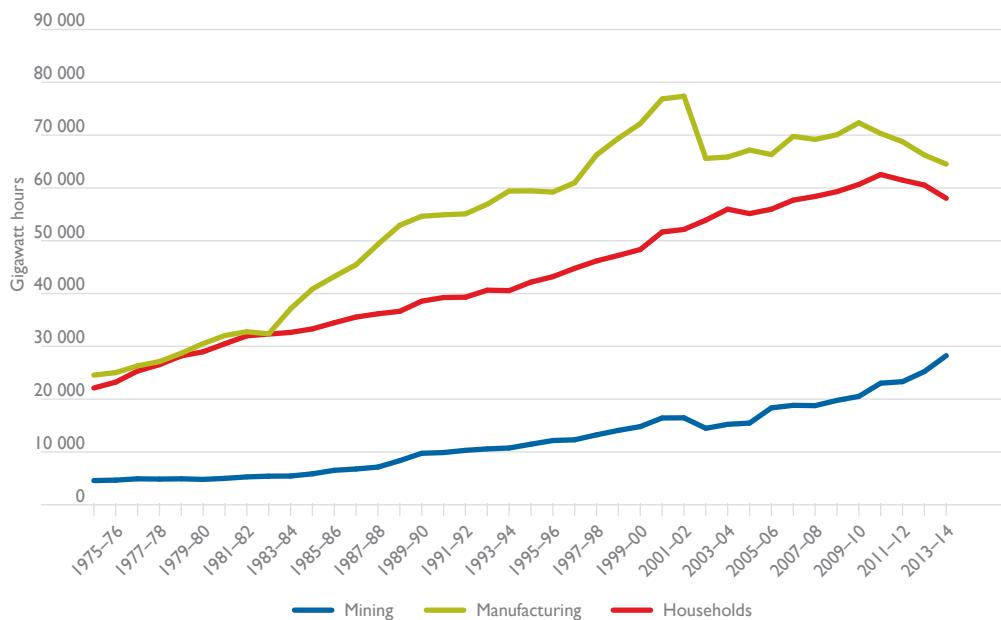
Source: Reproduced with permission from the Department of Industry and Science (2015).

PART E

Energy

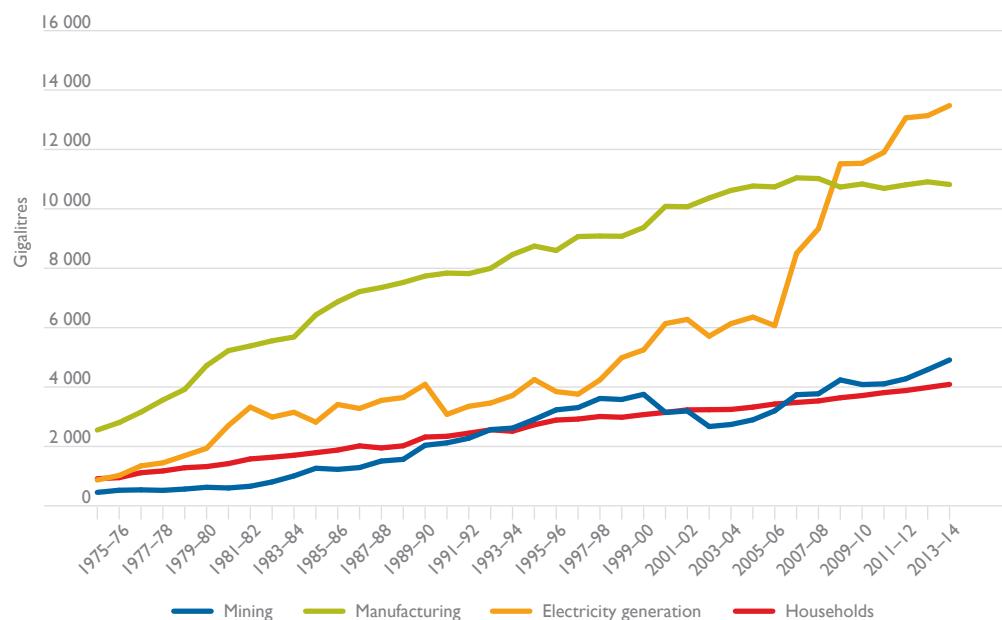
Statistics are provided for the production of energy, the conversion of primary forms of energy into electricity and the distribution of energy through electricity and gas networks.

Figure E 2 Australian electricity consumption, by broad industry



Source: Industry (2015b).

The three largest groups of electricity consumers are the manufacturing industry, households and the mining industry. The acceleration of electricity consumption by the manufacturing industry up to 2001–02 was influenced by a rapid increase in consumption by businesses manufacturing basic non-ferrous metals. Consumption by the mining industry increased significantly from 2010–11 to 2013–14. Household consumption peaked in 2009–10 and has declined since then.

Figure E 3 Australian gas consumption, by broad industry

Source: Industry (2015b).

The consumption of gas by the electricity generation industry increased sharply from 2006–07 to 2013–14. The growth reflected a sharp increase in gas consumption by the electricity generation industry in Western Australia and New South Wales (in the latter case, usage increased sharply in 2009–10 to 2013–14).

CHAPTER I

Energy infrastructure

Table E 1.1a Flow of new infrastructure—value of energy infrastructure engineering construction work done by the private sector for the private sector, adjusted by chain volume index

Financial year	Electricity generation, transmission and distribution	Pipelines	Energy infrastructure engineering construction work done	Energy percentage of total major infrastructure engineering construction work done
1986–87	199.9	227.4	427.3	19.63
1987–88	255.2	159.9	415.2	17.26
1988–89	207.0	179.6	386.6	14.73
1989–90	140.0	158.0	298.0	10.44
1990–91	173.3	125.0	298.3	11.10
1991–92	177.0	175.7	352.7	13.87
1992–93	139.9	331.8	471.7	17.56
1993–94	268.0	247.0	515.0	15.43
1994–95	282.9	296.0	578.9	17.43
1995–96	753.2	460.9	1 214.0	28.18
1996–97	694.2	401.3	1 095.6	24.28
1997–98	1 003.2	494.4	1 497.7	26.02
1998–99	1 224.5	656.2	1 880.7	28.29
1999–00	2 126.3	648.5	2 774.8	39.39
2000–01	2 217.2	359.8	2 577.0	40.65
2001–02	2 027.3	748.9	2 776.3	41.48
2002–03	1 920.1	1 322.7	3 242.8	35.80
2003–04	2 077.0	1 958.6	4 035.6	31.97
2004–05	2 840.7	922.8	3 763.5	26.06
2005–06	2 518.3	1 140.1	3 658.4	24.42
2006–07	3 499.0	1 050.6	4 549.7	25.08
2007–08	3 994.3	676.2	4 670.6	23.88
2008–09	5 345.2	909.0	6 254.2	29.94
2009–10	4 481.0	1 061.4	5 542.4	27.90
2010–11	4 399.2	1 825.7	6 224.9	25.38
2011–12	4 740.8	2 588.0	7 328.7	24.41
2012–13	6 998.8	4 171.3	11 170.1	32.08
2013–14	6 406.5	5 343.0	11 749.4	36.55
2014–15	3 821.8	6 179.8	10 001.5	37.86
2015–16	3 545.3	3 645.0	7 190.3	36.37

Source: ABS (2016a), adjusted by chain volume index.

Table E I.Ib Flow of new infrastructure—value of energy infrastructure engineering construction work done by the private sector for the public sector, adjusted by chain volume index

Financial year	Electricity generation, transmission and distribution	Pipelines	Energy infrastructure engineering construction work done	Energy percentage of total major infrastructure engineering construction work done
		\$ million		per cent
1986–87	1 402.9	49.0	1 451.9	28.26
1987–88	907.4	34.7	942.0	24.85
1988–89	847.4	79.9	927.3	27.23
1989–90	698.5	165.0	863.5	23.64
1990–91	1 177.0	80.7	1 257.7	28.09
1991–92	1 311.6	15.6	1 327.2	29.11
1992–93	1 095.0	42.9	1 137.9	23.06
1993–94	1 014.2	25.6	1 039.8	18.00
1994–95	775.9	74.7	850.6	16.84
1995–96	521.7	404.3	926.0	18.79
1996–97	895.4	139.3	1 034.7	18.94
1997–98	680.9	55.3	736.2	12.20
1998–99	426.3	21.4	447.7	6.94
1999–00	455.5	35.8	491.3	7.12
2000–01	399.5	43.3	442.8	6.92
2001–02	555.3	25.7	581.0	10.31
2002–03	658.8	12.8	671.6	11.62
2003–04	403.4	12.9	416.2	7.27
2004–05	692.0	13.8	705.8	9.18
2005–06	948.5	5.7	954.2	11.56
2006–07	611.8	4.1	615.9	7.10
2007–08	493.1	10.8	503.9	4.08
2008–09	722.2	3.7	726.0	4.80
2009–10	1 013.4	9.8	1 023.1	6.52
2010–11	1 039.7	32.3	1 072.0	6.50
2011–12	1 168.2	36.0	1 204.2	7.12
2012–13	1 435.8	38.6	1 474.5	8.90
2013–14	1 238.6	13.9	1 252.6	8.46
2014–15	696.2	9.6	705.8	5.42
2015–16	503.4	13.2	516.6	3.27

Source: ABS (2016a), adjusted by chain volume index.

Table E 1.1c Flow of new infrastructure—value of energy infrastructure engineering construction work done by the public sector, adjusted by chain volume index

Financial year	Electricity generation, transmission and distribution	Pipelines	Energy infrastructure engineering construction work done	Energy percentage of total major infrastructure engineering construction work done
1986–87	1 439.5	29.2	1 468.7	14.39
1987–88	1 340.3	119.1	1 459.4	15.51
1988–89	1 327.2	121.0	1 448.2	15.19
1989–90	1 892.8	107.7	2 000.5	18.34
1990–91	1 554.1	114.8	1 668.9	15.45
1991–92	1 421.7	79.7	1 501.4	16.27
1992–93	1 510.9	56.7	1 567.7	15.79
1993–94	1 409.0	189.6	1 598.6	16.80
1994–95	1 492.0	153.6	1 645.6	15.35
1995–96	1 070.4	159.3	1 229.8	11.21
1996–97	973.8	35.1	1 008.9	9.82
1997–98	1 031.1	59.2	1 090.3	10.65
1998–99	1 298.7	157.4	1 456.1	13.22
1999–00	1 737.9	46.9	1 784.9	14.63
2000–01	2 054.4	38.7	2 093.1	18.86
2001–02	2 203.0	48.7	2 251.7	20.41
2002–03	2 350.3	35.0	2 385.3	21.74
2003–04	2 695.3	30.7	2 726.0	25.43
2004–05	2 821.2	7.5	2 828.7	25.30
2005–06	3 840.8	145.7	3 986.5	29.21
2006–07	4 657.0	239.0	4 896.0	39.02
2007–08	5 136.8	35.0	5 171.8	42.54
2008–09	6 152.0	8.0	6 160.0	43.82
2009–10	6 554.2	6.8	6 561.0	41.29
2010–11	5 986.9	3.4	5 990.3	38.36
2011–12	6 226.2	1.3	6 227.5	40.98
2012–13	5 600.4	5.5	5 605.9	39.81
2013–14	4 689.2	0.2	4 689.4	41.87
2014–15	4 476.8	0.4	4 477.2	44.24
2015–16	3 562.4	0.5	3 562.9	35.98

Source: ABS (2016a), adjusted by chain volume index.

Table E 1.1d Flow of new infrastructure—total value of energy infrastructure engineering construction work done, adjusted by chain volume index

Financial year	Electricity generation, transmission and distribution	Pipelines	Energy infrastructure engineering construction work done	Energy percentage of total major infrastructure engineering construction work done
		\$ million		per cent
1986–87	3 042.3	305.6	3 347.8	19.11
1987–88	2 502.8	313.7	2 816.6	18.05
1988–89	2 381.6	380.5	2 762.1	17.75
1989–90	2 731.2	430.7	3 162.0	18.16
1990–91	2 904.4	320.5	3 224.9	17.95
1991–92	2 910.3	271.1	3 181.4	19.48
1992–93	2 745.8	431.4	3 177.2	18.10
1993–94	2 691.2	462.3	3 153.4	16.92
1994–95	2 550.7	524.4	3 075.1	16.10
1995–96	2 345.3	1 024.5	3 369.8	16.68
1996–97	2 563.5	575.7	3 139.2	15.50
1997–98	2 715.3	608.9	3 324.2	15.09
1998–99	2 949.5	835.0	3 784.5	15.70
1999–00	4 319.8	731.2	5 051.0	19.32
2000–01	4 671.1	441.8	5 113.0	21.45
2001–02	4 785.6	823.3	5 609.0	24.01
2002–03	4 929.2	1 370.5	6 299.7	24.41
2003–04	5 175.8	2 002.1	7 177.9	24.69
2004–05	6 353.9	944.1	7 298.0	21.91
2005–06	7 307.6	1 291.5	8 599.1	23.31
2006–07	8 767.8	1 293.7	10 061.5	25.56
2007–08	9 624.3	722.0	10 346.3	23.48
2008–09	12 219.4	920.8	13 140.2	26.25
2009–10	12 048.6	1 078.0	13 126.5	25.52
2010–11	11 425.7	1 861.4	13 287.2	23.46
2011–12	12 135.2	2 625.2	14 760.4	23.75
2012–13	14 035.1	4 215.4	18 250.5	27.88
2013–14	12 334.2	5 357.1	17 691.4	30.42
2014–15	8 994.8	6 189.7	15 184.5	30.64
2015–16	7 611.1	3 658.7	11 269.8	24.79

Source: ABS (2016a), adjusted by chain volume index.

Table E 1.2a Length of electricity transmission and distribution systems—overhead lines

End of financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Snowy Mountains Hydro Electric Authority
<i>circuit kilometres</i>									
1978–79	198 652	115 947	105 033	64 606	52 029	20 925	1 574	2 276	518
1979–80	203 846	117 103	110 057	65 573	57 787	21 276	1 663	2 316	518
1980–81	202 814	119 125	109 362	66 235	60 120	21 863	1 716	2 349	518
1981–82	211 235	120 305	113 637	66 882	62 379	22 175	2 092	2 452	518
1982–83	210 619	120 493	121 374	67 568	64 773	22 175	2 135	2 491	518
1983–84	213 987	121 805	126 237	68 245	66 501	23 016	2 484	2 540	518
1984–85	214 657	122 784	131 949	69 271	68 528	22 761	2 992	2 405	510
1985–86	235 346	124 089	137 527	69 646	70 706	23 277	2 992	2 543	510
1986–87	237 065	127 455	143 012	69 829	71 199	23 764	3 301	2 548	510
1987–88	239 878	128 709	149 643	70 094	71 642	24 153	3 349	2 605	510
1988–89	243 437	130 728	155 246	70 815	71 801	24 619	2 341	2 639	529
1989–90	241 851	147 892	160 962	71 416	88 615	25 400	3 408	2 627	529
1990–91	243 561	129 609	159 807	71 786	89 965	25 577	3 715	2 703	522
1991–92	246 283	121 509	162 503	71 873	91 849	25 464	3 925	2 708	522
1992–93	247 086	123 543	163 945	72 357	92 172	25 736	4 157	2 710	527
1993–94	254 487	124 224	166 113	81 557	74 896	25 947	4 861	2 717	425
1994–95									
1995–96									
1996–97									
1997–98	256 859	135 001	176 468	^a 69 560	80 075	26 239	5 435		
1998–99	257 032	135 348	174 997	71 334	81 898	27 787	5 714		
1999–00	268 816	138 050	182 002	71 294	^b 99 302	27 095	5 255		
2000–01	268 821	139 125	182 780	72 382	79 743	27 027	5 331		
2001–02	268 117	138 268	182 818	73 962	80 866	27 014	5 614		
2002–03	261 285	126 929	184 358	74 104	81 269	28 519	5 413		
2003–04	261 184	142 417	192 318	74 482	81 454	26 054	5 236		
2004–05	261 031	129 257	186 838	75 092	80 823	26 139	5 427		
2005–06	268 187	129 445	187 126	75 548	78 349	26 966	5 422		
2006–07	270 727	129 022	189 776	76 720	83 552	26 065	5 521		
2007–08	268 147	129 582	190 688	76 558	83 485	25 834	5 622		
2008–09	268 186	130 033	192 018	76 725	82 183	25 596	5 994		
2009–10	268 378	130 158	198 612	76 918	81 821	25 734	5 676		
2010–11	270 428	130 502	194 927	76 695	81 581	25 666	5 555		
2011–12	263 343	130 827	189 615	76 787	80 994	29 082	5 672		
2012–13	262 930	130 854	199 338	76 724	81 609	29 076	5 271		
2013–14	251 085	131 212	196 611	76 774	81 559	23 533	5 140		

^a Measures of circuit kilometres for South Australia were recalculated in 1997–98 due to a field audit. Measures from 1997–98 onwards should not be compared with earlier estimates.

^b Prior to 1999–2000, Western Australian estimates for circuit kilometres were compiled using a different methodology and should not be compared with later results.

Note: Decrease in overhead lines circuit kilometres between 2012–13 and 2013–14 is due to changes in reporting by businesses which took part in the survey.

Note: Data are not readily available for missing years.

Source: esaa (2005) and esaa (2015).

Table E 1.2b Length of electricity transmission and distribution systems—underground cables

End of financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Snowy Mountains Hydro Electric Authority
<i>circuit kilometres</i>									
1978–79	8 934	4 907	3 071	2 580	481	979	194	660	0
1979–80	9 729	4 918	3 318	2 858	579	1 039	245	744	0
1980–81	10 182	5 109	3 393	2 984	685	1 072	270	805	0
1981–82	12 850	5 271	3 702	3 199	843	1 111	333	908	0
1982–83	11 720	5 418	3 986	3 336	966	1 199	568	984	0
1983–84	12 299	5 613	4 244	3 640	1 081	1 058	702	1 029	0
1984–85	12 889	5 729	4 531	4 167	1 252	1 188	1 205	1 146	0
1985–86	15 977	6 162	4 837	4 822	1 478	1 246	1 205	1 232	0
1986–87	16 896	6 507	5 116	5 372	1 684	1 304	983	1 336	0
1987–88	17 504	7 010	5 305	5 795	1 872	1 360	993	1 382	0
1988–89	18 867	7 904	5 552	6 360	1 872	1 419	427	1 443	0
1989–90	19 572	8 749	5 877	6 824	2 552	1 470	1 059	1 528	0
1990–91	20 497	6 399	6 175	7 339	2 702	1 508	692	1 595	0
1991–92	21 324	5 792	6 436	7 700	2 772	1 534	724	1 721	3
1992–93	21 257	5 669	6 829	7 963	2 830	1 596	776	1 829	3
1993–94	23 210	5 764	7 238	7 954	4 541	1 627	825	1 920	4
1994–95									
1995–96									
1996–97									
1997–98	23 989	8 282	10 874	^a 6 443	6 798	1 655	1 079		
1998–99	25 587	14 387	8 572	6 858	7 264	1 741	2 000		
1999–2000	26 649	15 622	9 615	7 382	^b 11 855	1 548	2 251		
2000–01	28 770	16 659	12 390	8 243	9 596	1 578	2 315		
2001–02	29 486	16 625	14 668	9 206	10 865	1 583	2 315		
2002–03	29 068	15 388	16 763	10 178	10 923	1 622	2 332		
2003–04	29 545	18 712	16 370	10 891	11 952	1 636	2 284		
2004–05	29 101	15 758	15 282	11 193	12 724	1 651	2 295		
2005–06	30 567	16 824	16 211	12 217	14 233	1 819	2 290		
2006–07	32 194	16 960	18 475	14 311	16 420	1 980	2 385		
2007–08	35 546	16 883	19 666	14 850	17 425	2 043	2 405		
2008–09	36 439	17 471	21 395	15 500	18 174	2 129	2 597		
2009–10	37 208	18 655	23 080	15 895	19 947	2 192	2 534		
2010–11	38 149	19 505	23 994	16 142	21 304	2 313	2 577		
2011–12	39 622	21 779	23 554	16 528	22 555	2 422	2 826		
2012–13	41 122	22 214	24 903	16 759	22 961	2 458	1 458		
2013–14	39 423	22 785	25 591	16 952	24 019	2 457	1 468		

^a Measures of circuit kilometres for South Australia were recalculated in 1997–98 due to a field audit. Measures from 1997–98 onwards should not be compared with earlier estimates.

^b Prior to 1999–2000, Western Australian estimates for circuit kilometres were compiled using a different methodology and should not be compared with later results.

Note: Decrease in underground cables between 2012–13 and 2013–14 is due to changes in reporting by businesses which took part in the survey.

Note: Data are not readily available for missing years.

Source: esaa (2005) and esaa (2015).

Table E 1.3a Infrastructure capacity—generation capacity, by type of plant—New South Wales

End of financial year	Hydro	Pump storage	Steam	Internal combustion	Gas turbine	Combined cycle	Wind	Photovoltaic	Total
megawatts									
1975–76	140		6 074	45	24	0	0		6 283
1976–77	290		6 089	50	24	0	0		6 453
1977–78	370		6 899	49	24	0	0		7 343
1978–79	370		7 359	52	24	0	0		7 805
1979–80	370		7 345	48	24	0	0		7 788
1980–81	370		7 846	50	24	0	0		8 290
1981–82	370		8 506	50	319	0	0		9 245
1982–83	370		9 150	44	319	0	0		9 883
1983–84	370		10 470	44	319	0	0		11 204
1984–85	370		10 905	44	319	0	0		11 639
1985–86	370		10 826	43	319	0	0		11 558
1986–87	370		11 459	41	269	0	0		12 138
1987–88	345		11 496	37	295	0	0		12 172
1988–89	345		11 336	38	295	0	0		12 014
1989–90	345		10 775	28	295	0	0		11 443
1990–91	345		10 175	1	295	0	0		10 816
1991–92	345		10 215	1	295	0	0		10 856
1992–93	345		10 875	1	295	0	0		11 516
1993–94	345		11 535	1	295	0	0		12 176
1994–95									12 177
1995–96									12 177
1996–97									12 201
1997–98	120	240	11 520	0	295	0	0		12 175
1998–99 ^c	25	240	11 520	0	250	162			12 197
1999–00	25	240	11 520	0	146	162			12 093
2000–01	25	240	11 670	0	100	162			12 197
2001–02	25	240	11 670	0	50	162			12 147
2002–03	29	240	11 750	0	50	162	0		12 231
2003–04 ^d	109	240	11 670	0	50	160	0		12 229
2004–05	109	240	11 670	0	50	160	0		12 229
2005–06	109	240	11 670	0	50	160	0		12 229
2006–07	109	240	11 730	0	50	160	0	0	12 289
2007–08	109	240	11 730	0	50	160	0	0	12 289
2008–09 ^e	2 285	240	11 730	0	690	595	0	0	15 540
2009–10	2 285	240	11 797	0	1 438	595	0	0	16 355
2010–11	2 285	240	11 937	0	1 382	595	0	0	16 439
2011–12	2 285	240	11 937	0	1 382	595	95	0	16 534
2012–13	2 285	240	11 284	0	1 434	591	95	0	15 929
2013–14	2 285	240	11 504	0	1 378	591	260	0	16 258

^c From 1998–99, non-schedule small hydro plants are excluded from estimates.

^d From 2003–04, generation capacity of Blowering is included in NSW hydro figures, where previously they were shown in Snowy Mountains Hydro Electric Authority.

^e The Snowy region was abolished on 1 July 2008. Generation plant previously included within the Snowy region have been reallocated to New South Wales and Victoria.

Note: Data are not readily available for missing years.

Figures represent commissioned scheduled and semi-scheduled generators only and exclude embedded, non-grid private generators and non-scheduled intermittent generators.

Source: esaa (2005) and esaa (2015).

Table E 1.3b Infrastructure capacity—generation capacity, by type of plant—Victoria

End of financial year	Hydro	Pump storage	Steam	Internal combustion	Gas turbine	Combined cycle	Wind	Photovoltaic	Total
megawatts									
1975–76	319		3 342	0	0	0	0		3 661
1976–77	319		3 342	0	0	0	0		3 661
1977–78	319		3 342	0	0	0	0		3 661
1978–79	319		3 317	0	225	0	0		3 861
1979–80	319		3 317	0	465	0	0		4 101
1980–81	469		3 749	0	465	0	0		4 683
1981–82	469		4 301	0	465	0	0		5 235
1982–83	469		4 301	0	465	0	0		5 235
1983–84	469		4 801	0	465	0	0		5 735
1984–85	469		4 560	0	465	0	0		5 494
1985–86	469		4 960	0	465	0	0		5 894
1986–87	469		5 460	0	465	0	0		6 394
1987–88	469		5 460	0	465	0	0		6 394
1988–89	469		5 720	0	465	0	0		6 654
1989–90	469		5 720	0	465	0	0		6 654
1990–91	469		5 720	0	465	0	0		6 654
1991–92	469		5 720	0	465	0	0		6 654
1992–93	469		5 720	0	465	0	0		6 654
1993–94	469		6 050	0	466	0	0		6 985
1994–95									7 155
1995–96									7 155
1996–97									7 673
1997–98	479	0	6 881	0	295	0	0		7 826
1998–99 ^c	453	0	6 891	0	466	0			7 810
1999–00	453	0	6 905	0	466	0			7 824
2000–01	453	0	6 905	0	506	0			7 864
2001–02	453	0	6 905	0	979	0			8 337
2002–03	490	0	6 950	0	1 001	0	0		8 441
2003–04	^d 511	0	7 015	0	1 001	0	0		8 527
2004–05	511	0	7 065	0	1 001	0	0		8 577
2005–06	526	0	7 065	0	1 001	0	0		8 592
2006–07	526	0	7 065	0	1 321	0	0	0	8 912
2007–08	526	0	7 065	0	1 321	0	0	0	8 912
2008–09 ^e	2 026	0	7 065	0	1 321	0	0	0	10 412
2009–10	2 176	0	7 065	0	1 321	0	0	0	10 562
2010–11	2 206	0	7 140	0	1 321	0	0	0	10 667
2011–12	2 206	0	7 140	0	1 871	0	67	0	11 284
2012–13	2 206	0	7 318	0	1 889	0	487	0	11 900
2013–14	2 206	0	7 335	0	1 889	0	618	0	12 048

^c From 1998–99, non-schedule small hydro plants are excluded from estimates.

^d From 2003–04, generation capacity of Blowering is included in NSW hydro figures, where previously they were shown in Snowy Mountains Hydro Electric Authority.

^e The Snowy region was abolished on 1 July 2008. Generation plant previously included within the Snowy region have been reallocated to New South Wales and Victoria.

Note: Data are not readily available for missing years.

Figures represent commissioned scheduled and semi-scheduled generators only and exclude embedded, non-grid private generators and non-scheduled intermittent generators.

Source: esaa (2005) and esaa (2015).

Table E 1.3c Infrastructure capacity—generation capacity, by type of plant—Queensland^f

End of financial year	Hydro	Pump storage	Steam	Internal combustion	Gas turbine	Combined cycle	Wind	Photovoltaic	Total
megawatts									
1975–76	132	1 789	38	132	0	0	0	0	2 091
1976–77	132	1 999	52	163	0	0	0	0	2 345
1977–78	132	2 511	48	163	0	0	0	0	2 854
1978–79	132	2 734	48	163	0	0	0	0	3 076
1979–80	132	2 696	49	163	0	0	0	0	3 040
1980–81	132	2 971	48	163	0	0	0	0	3 314
1981–82	132	3 246	50	163	0	0	0	0	3 591
1982–83	132	3 246	58	178	0	0	0	0	3 614
1983–84	382	3 596	60	178	0	0	0	0	4 216
1984–85	632	3 946	60	178	0	0	0	0	4 816
1985–86	632	3 906	60	178	0	0	0	0	4 776
1986–87	632	3 752	59	178	0	0	0	0	4 621
1987–88	632	4 042	46	178	0	0	0	0	4 898
1988–89	632	4 242	41	178	0	0	0	0	5 093
1989–90	632	4 242	46	178	0	0	0	0	5 098
1990–91	632	4 242	41	178	0	0	0	0	5 093
1991–92	632	4 428	47	178	0	0	0	0	5 285
1992–93	632	4 910	29	178	0	0	0	0	5 749
1993–94	632	5 435	28	188	0	0	0	0	6 283
1994–95									6 896
1995–96									7 040
1996–97									7 041
1997–98	132	500	6 353	29	250	0	0	0	7 264
1998–99 ^c	132	500	6 517	0	736	216			8 101
1999–00	139	500	6 517	0	1 025	214			8 395
2000–01	139	500	6 937	0	1 026	214			8 816
2001–02	132	500	8 105	0	1 478	476			10 691
2002–03	132	500	8 394	0	1 201	419	0	0	10 646
2003–04	132	500	8 464	0	1 223	158	0	0	10 477
2004–05	144	500	8 187	0	741	840	0	0	10 412
2005–06	144	500	8 187	0	741	840	0	0	10 412
2006–07	144	500	8 187	0	1 245	840	0	0	10 916
2007–08	144	500	8 937	0	1 245	840	0	0	11 666
2008–09	144	500	8 937	0	1 695	840	0	0	12 116
2009–10	144	500	8 937	0	1 883	1 610	0	0	13 074
2010–11	144	500	8 937	0	2 043	1 610	0	0	13 234
2011–12	144	500	8 937	0	2 043	1 610	0	0	13 234
2012–13	152	500	8 416	0	2 028	1 626	0	0	12 722
2013–14	152	500	8 244	0	2 083	1 840	0	0	12 819

^c From 1998–99, non-schedule small hydro plants are excluded from estimates.

^f Prior to 2003–04, Queensland generation capacity did not include generating capacity at Mt Isa.

Note: Data are not readily available for missing years.

Figures represent commissioned scheduled and semi-scheduled generators only and exclude embedded, non-grid private generators and non-scheduled intermittent generators.

Source: esaa (2005) and esaa (2015).

Table E 1.3d Infrastructure capacity—generation capacity, by type of plant—South Australia

End of financial year	Hydro	Pump storage	Steam	Internal combustion	Gas turbine	Combined cycle	Wind	Photovoltaic	Total
megawatts									
1975–76	0	1 077	15	156	0	0	0	0	1 248
1976–77	0	1 455	16	156	0	0	0	0	1 627
1977–78	0	1 455	13	156	0	0	0	0	1 624
1978–79	0	1 455	12	231	0	0	0	0	1 698
1979–80	0	1 655	13	231	0	0	0	0	1 899
1980–81	0	1 855	14	231	0	0	0	0	2 100
1981–82	0	1 855	16	231	0	0	0	0	2 102
1982–83	0	1 855	17	231	0	0	0	0	2 103
1983–84	0	1 855	17	321	0	0	0	0	2 193
1984–85	0	2 105	17	321	0	0	0	0	2 443
1985–86	0	2 355	17	321	0	0	0	0	2 693
1986–87	0	2 355	18	321	0	0	0	0	2 694
1987–88	0	2 355	19	321	0	0	0	0	2 695
1988–89	0	2 265	19	321	0	0	0	0	2 605
1989–90	0	2 025	22	321	0	0	0	0	2 368
1990–91	0	2 025	21	321	0	0	0	0	2 367
1991–92	0	2 025	21	321	0	0	0	0	2 367
1992–93	0	2 025	15	321	0	0	0	0	2 361
1993–94	0	1 905	21	321	0	0	0	0	2 247
1994–95									2 248
1995–96									2 248
1996–97									2 322
1997–98	0	0	2 080	0	246	0	0	0	2 326
1998–99	0	0	2 040	0	359	180			2 579
1999–00	0	0	2 010	0	429	180			2 619
2000–01	0	0	2 040	0	439	658			3 137
2001–02	0	0	2 040	0	759	680			3 479
2002–03	0	0	2 040	0	759	660	0		3 459
2003–04	0	0	2 040	0	718	663	0		3 421
2004–05	0	0	2 050	40	718	663	0		3 471
2005–06	0	0	2 050	40	718	663	0		3 471
2006–07	0	0	2 060	50	718	663	0	0	3 491
2007–08	0	0	2 060	50	718	663	95	0	3 586
2008–09	0	0	2 060	50	846	663	353	0	3 972
2009–10	0	0	2 060	50	846	663	481	0	4 100
2010–11	0	0	2 060	50	890	663	764	0	4 426
2011–12	0	0	2 060	50	890	663	816	0	4 479
2012–13	0	0	2 066	50	920	663	815	0	4 514
2013–14	0	0	2 064	50	920	663	1 085	0	4 782

Note: Data are not readily available for missing years.

Figures represent commissioned scheduled and semi-scheduled generators only and exclude embedded, non-grid private generators and non-scheduled intermittent generators.

Source: esaa (2005) and esaa (2015).

Table E 1.3e Infrastructure capacity—generation capacity, by type of plant—Western Australia

End of financial year	Hydro	Pump storage	Steam	Internal combustion	Gas turbine	Combined cycle	Wind	Photovoltaic	Total
megawatts									
1975–76	2	1 195	85	40	0	0	0	0	1 322
1976–77	2	1 195	111	40	0	0	0	0	1 348
1977–78	2	1 195	126	40	0	0	0	0	1 363
1978–79	2	1 395	113	40	0	0	0	0	1 550
1979–80	2	1 395	128	40	0	0	0	0	1 565
1980–81	2	1 595	156	40	0	0	0	0	1 793
1981–82	2	1 795	162	40	0	0	0	0	1 999
1982–83	2	1 740	169	40	0	0	0	0	1 951
1983–84	2	1 740	172	40	0	0	0	0	1 954
1984–85	2	1 915	155	60	0	0	0	0	2 132
1985–86	2	2 040	162	60	0	0	0	0	2 264
1986–87	2	2 040	170	60	0	0	0	0	2 272
1987–88	0	2 040	172	60	0	0	0	0	2 272
1988–89	0	2 040	180	60	0	0	0	0	2 280
1989–90	0	2 040	184	240	0	0	0	0	2 464
1990–91	0	2 040	192	312	0	0	0	0	2 544
1991–92	2	2 040	181	596	0	0	0	0	2 819
1992–93	2	2 040	175	596	0	0	0	0	2 813
1993–94	2	2 042	198	712	0	0	2	0	2 956
1994–95									2 958
1995–96									2 958
1996–97									3 086
1997–98	2	0	2 040	116	932	0	2	0	3 092
1998–99 ^c	2	0	2 370	131	806	0	0	0	3 308
1999–00	2	0	2 310	130	838	0	0	0	3 280
2000–01	2	0	2 406	105	802	0	0	0	3 315
2001–02	2	0	2 406	106	802	0	0	0	3 316
2002–03	2	0	2 250	98	802	0	25	0	3 273
2003–04	2	0	2 348	0	958	240	22	0	3 570
2004–05	2	0	2 250	0	958	240	23	0	3 473
2005–06	2	0	2 250	0	960	240	23	0	3 475
2006–07 ^d	0	0	2 477	0	2 110	360	191	0	4 887
2007–08	0	0	2 477	0	2 110	360	191	0	5 138
2008–09	0	0	2 445	0	2 110	680	191	0	5 426
2009–10	0	0	2 653	0	2 440	680	191	0	5 964
2010–11	0	0	2 653	0	2 440	800	191	0	6 084
2011–12	0	0	2 653	0	2 440	800	410	0	6 303
2012–13	0	0	2 653	0	2 531	800	464	0	6 448
2013–14	0	0	2 670	0	2 536	800	465	0	6 470

^c From 1998–99, non-schedule small hydro plants are excluded from estimates.

^d The Wholesale Electricity Market commenced in WA in September 2006. From 2006–07, generation capacity includes all market generators in the SWIS with a capacity greater than 10 MW.

Note: Data are not readily available for missing years.

Figures represent commissioned scheduled and semi-scheduled generators only and exclude embedded, non-grid private generators and non-scheduled intermittent generators.

Source: esaa (2005) and esaa (2015).

**Table E 1.3f Infrastructure capacity—generation capacity, by type of plant—
Tasmania**

End of financial year	Hydro	Pump storage	Steam	Internal combustion	Gas turbine	Combined cycle	Wind	Photovoltaic	Total
megawatts									
1975–76	1 202		240	6	20	0	0		1 469
1976–77	1 202		240	4	0	0	0		1 447
1977–78	1 396		240	1	0	0	0		1 638
1978–79	1 540		240	2	0	0	0		1 782
1979–80	1 540		240	2	0	0	0		1 782
1980–81	1 540		240	2	0	0	0		1 782
1981–82	1 620		240	2	0	0	0		1 862
1982–83	1 620		240	2	0	0	0		1 863
1983–84	1 700		240	2	0	0	0		1 943
1984–85	1 700		240	3	0	0	0		1 943
1985–86	1 816		240	5	0	0	0		2 061
1986–87	1 931		240	5	0	0	0		2 176
1987–88	2 075		240	5	0	0	0		2 320
1988–89	2 075		240	5	0	0	0		2 320
1989–90	2 075		240	5	0	0	0		2 320
1990–91	2 076		240	5	0	0	0		2 321
1991–92	2 219		240	5	0	0	0		2 464
1992–93	2 195		240	6	0	0	0		2 441
1993–94	2 254		240	6	0	0	0		2 500
1994–95									2 509
1995–96									2 509
1996–97									2 502
1997–98	2 262	0	240	6	0	0	1		2 509
1998–99 ^c	2 262	0	240	6	0	0			2 508
1999–00	2 262	0	240	6	0	0			2 508
2000–01	2 262	0	240	6	0	0			2 508
2001–02	2 276	0	240	26	0	0			2 542
2002–03	2 276	0	240	26	0	0	0		2 542
2003–04	2 266	0	240	0	0	0	65		2 571
2004–05	2 265	0	240	0	0	0	65		2 570
2005–06	2 278	0	240	0	0	0	65		2 583
2006–07	2 274	0	240	0	105	0	140		2 759
2007–08	2 274	0	240	0	105	0	140	0	2 759
2008–09	2 274	0	0	0	165	210	140	0	2 789
2009–10	2 283	0	0	0	283	208	140	0	2 914
2010–11	2 283	0	0	0	283	208	140	0	2 914
2011–12	2 283	0	0	0	283	208	140	0	2 914
2012–13	2 277	0	0	0	298	208	308	0	3 090
2013–14	2 277	0	0	0	298	208	308	0	3 090

^c From 1998–99, non-schedule small hydro plants are excluded from estimates.

Note: Data are not readily available for missing years.

Figures represent commissioned scheduled and semi-scheduled generators only and exclude embedded, non-grid private generators and non-scheduled intermittent generators.

Source: esaa (2005) and esaa (2015).

Table E 1.3g Infrastructure capacity—generation capacity, by type of plant—Northern Territory^h

End of financial year	Hydro	Pump storage	Steam	Internal combustion	Gas turbine	Combined cycle	Wind	Photovoltaic	Total
megawatts									
1975–76	0		94	40	10	0	0		144
1976–77	0		94	40	10	0	0		144
1977–78	0		118	40	10	0	0		168
1978–79	0		141	47	10	0	0		198
1979–80	0		141	47	40	0	0		228
1980–81	0		141	56	40	0	0		237
1981–82	0		141	62	40	0	0		243
1982–83	0		141	66	40	0	0		247
1983–84	0		141	66	40	0	0		247
1984–85	0		141	72	30	0	0		243
1985–86	0		141	72	30	0	0		243
1986–87	0		141	81	190	0	0		412
1987–88	0		0	72	162	95	0		330
1988–89	0		0	69	175	95	0		340
1989–90	0		0	92	175	95	0		362
1990–91	0		0	94	180	95	0		369
1991–92	0		0	99	184	95	0		378
1992–93	0		0	99	186	95	0		381
1993–94	0		0	85	188	95	0		368
1994–95									417
1995–96									427
1996–97									436
1997–98	0	0	0	101	209	124	0		434
1998–99	0	0	0	103	229	124			455
1999–00	0	0	0	149	229	123			500
2000–01	0	0	0	136	236	123			495
2001–02	0	0	0	136	245	123			504
2002–03	0	0	0	136	245	123	0		504
2003–04	0	0	0	36	316	96	0		449
2004–05	0	0	0	74	277	131	0		482
2005–06	0	0	0	72	272	131	0		475
2006–07	0	0	0	74	266	131	0	0.2	472
2007–08	0	0	0	76	309	131	0	0.2	516
2008–09	0	0	0	76	352	131	0	0.2	560
2009–10	0	0	0	77	352	131	0	0.2	561
2010–11	0	0	0	77	352	131	0	0.2	561
2011–12	0	0	0	99	420	131	0	0.2	649
2012–13	0	0	0	97	416	122	0	0.2	636
2013–14	0	0	0	100	512	122	0	0.2	735

^h The basis for reporting generating plant in Northern Territory changed in 2003–04 and should not be compared to previous years.

Note: Data are not readily available for missing years.

Figures represent commissioned scheduled and semi-scheduled generators only and exclude embedded, non-grid private generators and non-scheduled intermittent generators.

Source: esaa (2005) and esaa (2015).

**Table E 1.3h Infrastructure capacity—generation capacity, by type of plant—
Snowy Mountains Hydro Electric Authority**

End of financial year	Hydro	Pump storage	Steam	Internal combustion	Gas turbine	Combined cycle	Wind	Photovoltaic	Total
megawatts									
1975–76	3 740	0	0	0	0	0	0	0	3 740
1976–77	3 740	0	0	0	0	0	0	0	3 740
1977–78	3 740	0	0	0	0	0	0	0	3 740
1978–79	3 740	0	0	0	0	0	0	0	3 740
1979–80	3 740	0	0	0	0	0	0	0	3 740
1980–81	3 740	0	0	0	0	0	0	0	3 740
1981–82	3 740	0	0	0	0	0	0	0	3 740
1982–83	3 740	0	0	0	0	0	0	0	3 740
1983–84	3 740	0	0	0	0	0	0	0	3 740
1984–85	3 740	0	0	0	0	0	0	0	3 740
1985–86	3 740	0	0	0	0	0	0	0	3 740
1986–87	3 740	0	0	0	0	0	0	0	3 740
1987–88	3 740	0	0	0	0	0	0	0	3 740
1988–89	3 740	0	0	0	0	0	0	0	3 740
1989–90	3 740	0	0	0	0	0	0	0	3 740
1990–91	3 740	0	0	0	0	0	0	0	3 740
1991–92	3 740	0	0	0	0	0	0	0	3 740
1992–93	3 740	0	0	0	0	0	0	0	3 740
1993–94	3 740	0	0	0	0	0	0	0	3 740
1994–95									3 756
1995–96									3 756
1996–97									3 756
1997–98	3 006	750	0	0	0	0	0	0	3 756
1998–99 ^c	3 006	750	0	0	0	0	0	0	3 756
1999–00	3 006	750	0	0	0	0	0	0	3 756
2000–01	3 006	750	0	0	0	0	0	0	3 756
2001–02	3 006	750	0	0	0	0	0	0	3 756
2002–03	3 006	750	0	0	0	0	0	0	3 756
2003–04	^d 3 000	676	0	0	0	0	0	0	3 676
2004–05	3 676	0	0	0	0	0	0	0	3 676
2005–06	3 676	0	0	0	0	0	0	0	3 676
2006–07	3 676	0	0	0	0	0	0	0	3 676
2007–08 ^e	3 676	0	0	0	0	0	0	0	3 676

^c From 1998–99, non-schedule small hydro plants are excluded from estimates.

^d From 2003–04, generation capacity of Blowering is included in NSW hydro figures, where previously they were shown in Snowy Mountains Hydro Electric Authority.

^e The Snowy region was abolished on 1 July 2008. Generation plant previously included within the Snowy region have been reallocated to New South Wales and Victoria.

Note: Data are not readily available for missing years.

Figures represent commissioned scheduled and semi-scheduled generators only and exclude embedded, non-grid private generators and non-scheduled intermittent generators.

Source: esaa (2005) and esaa updates.

Table E 1.4a Infrastructure quality—electricity distribution supply reliability measures, National Electricity Market, by state—System Average Interruption Duration Index (SAIDI)

Financial year	New South Wales	Victoria	Queensland	South Australia	Tasmania	Australian Capital Territory	National Electricity Market weighted average	Western Australia
minutes								
1999–00		156						
2000–01		152	314	164	198		198	
2001–02	324	151	275	147	198		245	
2002–03	193	161	265	184	214		199	
2003–04	279	132	434	164	324		260	
2004–05	218	165	283	169	314		214	
change in methodology								
2005–06	168	138	631	208	200	50	263	
2006–07	318	168	181	203	253	45	228	325
2007–08	157	201	219	137	283	26	183	317
2008–09	177	231	305	182	331	33	223	
2009–10	124	131	315	207	471	29	183	
2010–11	158	126	1083	318	210	48	365	
2011–12	156	128	164	171	179	33	149	
2012–13	163	140	549	233	389	48	251	
2013–14	129	162	176	290	312	28	166	

Note: Data from 2005–06 onwards excludes planned outages (this note does not refer to Western Australia data)

Data are not readily available for missing years.

Source: AER (2015) BITRE (2015c).

Table E 1.4b Infrastructure quality—electricity distribution supply reliability measures, National Electricity Market, by state—System Average Interruption Frequency Index (SAIFI)

Financial year	New South Wales	Victoria	Queensland	South Australia	Tasmania	Australian Capital Territory	National Electricity Market weighted average	Western Australia
average number of times a customer's supply is interrupted per year								
1999–00		2.1			2.3			
2000–01		2.0	3.0	1.7	2.8		2.4	
2001–02	2.6	2.0	2.8	1.6	2.3		2.4	
2002–03	1.4	2.2	2.7	1.8	2.4		2.0	
2003–04	1.6	1.9	3.4	1.7	3.1		2.2	
2004–05	1.6	1.8	2.7	1.7	3.1		2.0	
change in methodology								
2005–06	1.7	1.8	3.1	2.0	2.6	0.8	2.1	
2006–07	1.8	2.0	2.0	1.9	2.4	0.8	1.9	3.3
2007–08	1.6	1.6	2.3	1.4	2.4	0.6	1.7	3.3
2008–09	1.7	2.4	2.6	1.8	2.3	0.6	2.1	
2009–10	1.4	1.5	2.3	1.8	2.4	0.7	1.7	
2010–11	1.3	1.4	2.2	2.2	1.8	0.8	1.6	
2011–12	1.4	1.4	1.6	1.5	2.1	0.6	1.4	
2012–13	1.2	1.7	1.9	1.8	1.9	0.7	1.6	
2013–14	1.2	1.6	1.6	2.0	2.2	0.5	1.5	

Note: Data from 2005–06 onwards excludes planned outages (this note does not refer to Western Australia data)

Data are not readily available for missing years.

Source: AER (2015) BITRE (2015c).

CHAPTER 2

Inputs to energy supply

Table E 2.1 Energy inputs—Australia's economic demonstrated mineral energy reserves

End of calendar year	Black coal ⁱ	Brown coal (lignite) ^j	Uranium ^j	Crude oil	Condensate	LPG	Natural gas
	gigatonnes	gigatonnes	kilotonnes	gigalitres	gigalitres	gigalitres	billion cubic metres
1982				260	83	123	641
1983				235	74	87	629
1984				240	81	86	689
1985				217	86	88	709
1986				242	116	99	902
1987				246	119	97	1 069
1988				255	122	130	1 033
1989				260	119	114	955
1990				270	118	114	927
1991				258	124	131	950
1992				244	133	135	1 006
1993				249	136	133	992
1994				297	156	154	1 292
1995				277	183	144	1 264
1996				240	193	174	1 360
1997				266	192	184	1 494
1998	51.1	41.1	607	243	273	243	1 989
1999	44.4	37.7	571	215	277	262	1 989
2000	42.6	37.7	654	194	300	292	2 203
2001	40.8	37.7	648	206	289	293	2 667
2002	39.7	37.6	689	176	277	274	2 528
2003	38.3	37.5	675	186	247	210	2 462
2004	40.4	37.5	701	157	301	214	2 587
2005	39.2	37.4	716	169	257	214	2 428
2006	39.6	37.3	714	160	236	203	2 421
2007	38.9	37.3	983	162	228	191	2 362
2008	39.2	37.2	1 163	188	340	174	3 145
2009	43.8	37.1	1 223	170	340	166	2 984
2010	49.2	44.2	1 158	154	335	153	2 918
2011	57.5	44.2	1 196	148	305	148	2 817
2012	61.1	44.2	1 174	148	305	148	2 803
2013	62.1	44.2	1 167				
2014	62.6	44.2	1 151				

Note: Data are not readily available for missing years.

ⁱ Estimates are for recoverable Economic Demonstrated Resources of coal after allowances for losses due to mining.

^j Estimates are for recoverable Economic Demonstrated Resources of uranium after allowances for losses due to mining and processing.

Source: GA (2012), GA (2013), GA(2014), GA(2015), BITRE (2015c).

Table E 2.2a Energy inputs—Australian electricity generation, input fuel—energy units

Financial year	Black coal	Brown coal (including briquettes)	Petroleum products	Natural gas	Electricity
<i>petajoules</i>					
1974–75	375.1	243.6	49.5	34.3	37.3
1975–76	373.4	263.6	51.4	40.3	38.9
1976–77	438.7	282.2	53.0	53.0	43.5
1977–78	471.4	276.2	58.7	57.0	45.1
1978–79	481.8	291.6	59.8	66.6	49.9
1979–80	544.8	300.6	51.2	76.3	52.6
1980–81	570.6	293.3	49.9	106.5	55.9
1981–82	578.4	338.7	54.0	130.9	57.2
1982–83	619.1	313.4	47.6	117.7	55.7
1983–84	659.1	302.3	46.5	124.1	58.7
1984–85	695.1	352.2	41.5	111.0	66.6
1985–86	708.9	332.1	36.1	134.4	67.0
1986–87	730.9	389.2	27.7	129.1	69.4
1987–88	753.3	407.6	22.2	139.8	67.9
1988–89	799.0	460.8	29.5	143.6	73.7
1989–90	836.0	437.6	40.0	161.2	74.5
1990–91	848.7	470.0	40.8	121.3	71.6
1991–92	872.4	481.4	28.8	132.0	75.9
1992–93	905.6	456.9	29.0	136.4	75.2
1993–94	917.4	462.5	29.1	146.3	75.6
1994–95	946.6	480.5	32.8	167.4	79.4
1995–96	1 001.4	503.8	34.2	151.5	80.9
1996–97	1 018.5	546.5	27.2	148.1	81.3
1997–98	1 061.4	627.3	25.1	166.9	91.3
1998–99	1 081.2	662.7	23.7	196.5	97.8
1999–00	1 100.2	665.4	22.2	206.8	99.8
2000–01	1 176.1	665.8	19.2	241.7	102.7
2001–02	1 213.7	670.0	19.2	247.2	104.2
2002–03	1 176.2	698.4	28.0	224.9	102.6
2003–04	1 245.1	715.6	34.6	241.7	114.1
2004–05	1 279.5	712.5	36.1	250.3	108.5
2005–06	1 304.0	729.0	38.6	239.0	109.7
2006–07	1 325.4	726.2	37.1	334.9	112.2
2007–08	1 297.4	728.2	52.5	367.6	109.3
2008–09	1 361.2	752.1	38.9	453.6	115.3
2009–10	1 223.2	746.1	34.2	454.2	113.9
2010–11	1 146.2	732.4	33.6	468.9	108.5
2011–12	1 123.3	742.4	36.7	514.6	107.1
2012–13	1 094.3	640.7	37.5	517.5	99.0
2013–14	1 018.4	622.6	49.4	530.8	96.5

Source: Industry (2015a).

Table E 2.2b Australian electricity generation, input fuel—physical units

Financial year	Black coal <i>million tonnes</i>	Brown coal (including briquettes) <i>million tonnes</i>	Petroleum products <i>megalitres</i>	Natural gas <i>megalitres</i>	Electricity <i>gigawatt hours</i>
1974–75	15.0	25.1	1 447	870 874	10 361
1975–76	15.0	27.4	1 503	1 023 214	10 806
1976–77	17.8	29.0	1 550	1 345 666	12 083
1977–78	19.3	28.3	1 716	1 447 225	12 528
1978–79	19.7	29.7	1 749	1 690 968	13 861
1979–80	22.4	30.3	1 497	1 937 251	14 611
1980–81	23.5	29.9	1 459	2 704 026	15 528
1981–82	23.5	35.4	1 579	3 323 540	15 889
1982–83	25.3	33.3	1 392	2 988 393	15 472
1983–84	27.4	31.7	1 360	3 150 889	16 306
1984–85	28.8	36.9	1 213	2 818 281	18 500
1985–86	29.4	35.1	1 056	3 412 405	18 611
1986–87	30.7	41.0	810	3 277 838	19 278
1987–88	31.5	42.9	649	3 549 510	18 861
1988–89	33.6	48.2	863	3 645 992	20 472
1989–90	35.3	46.3	1 170	4 092 855	20 694
1990–91	36.0	49.4	1 193	3 079 797	19 889
1991–92	37.0	50.8	842	3 351 469	21 083
1992–93	38.4	48.4	848	3 463 185	20 889
1993–94	39.1	49.3	851	3 714 545	21 000
1994–95	40.2	51.3	959	4 250 272	22 056
1995–96	43.0	54.2	1 000	3 846 572	22 472
1996–97	43.6	58.6	795	3 760 247	22 583
1997–98	45.8	67.1	734	4 237 577	25 361
1998–99	46.8	70.9	693	4 989 119	27 167
1999–00	46.0	71.4	649	5 250 635	27 722
2000–01	50.2	69.9	561	6 136 743	28 528
2001–02	51.6	70.4	561	6 276 387	28 944
2002–03	53.4	65.3	818	5 710 952	28 488
2003–04	56.6	67.2	1 011	6 136 583	31 694
2004–05	58.3	66.9	1 054	6 355 429	30 150
2005–06	59.3	68.6	1 129	6 067 778	30 475
2006–07	60.3	68.2	1 083	8 503 859	31 174
2007–08	58.7	68.6	1 534	9 333 290	30 363
2008–09	61.6	71.1	1 138	11 516 940	32 025
2009–10	55.5	70.5	999	11 530 913	31 630
2010–11	52.1	69.2	983	11 906 110	30 146
2011–12	50.9	70.4	1 075	13 065 303	29 738
2012–13	49.7	61.5	1 096	13 138 821	27 510
2013–14	46.2	59.8	1 445	13 477 643	26 796

Source: BITRE estimates based on Industry (2015a).

Table E 2.3a Energy inputs—Australian gas production and distribution, input fuel—energy units

Financial year	Black coal	LPG and other petroleum products	Natural gas	Town gas	Electricity
<i>petajoules</i>					
1974–75	1.8	18.4	8.1	1.9	0.1
1975–76	1.5	17.1	8.1	1.9	0.1
1976–77	1.6	10.8	16.6	2.1	0.1
1977–78	1.1	4.3	19.3	2.1	0.1
1978–79	0.8	4.2	18.9	1.9	0.1
1979–80	0.6	4.2	20.3	1.9	0.1
1980–81	0.7	4.1	19.3	2.0	0.1
1981–82	0.3	4.0	21.0	1.9	0.1
1982–83	0.2	3.3	22.0	1.7	0.1
1983–84	0.1	3.2	22.3	1.5	0.1
1984–85	0.0	2.0	23.0	1.3	0.1
1985–86	0.0	1.8	21.8	1.0	0.1
1986–87	0.0	1.6	21.8	0.8	0.1
1987–88	0.0	1.4	19.4	0.7	0.1
1988–89	0.0	1.4	18.4	0.4	0.1
1989–90	0.0	1.5	17.9	0.4	0.1
1990–91	0.0	1.3	15.8	0.2	0.1
1991–92	0.0	1.3	15.7	0.2	0.0
1992–93	0.0	1.3	14.7	0.2	0.0
1993–94	0.0	0.9	14.0	0.2	0.0
1994–95	0.0	1.0	13.7	0.2	0.0
1995–96	0.0	1.0	12.9	0.2	0.0
1996–97	0.0	1.0	13.0	0.1	0.0
1997–98	0.0	1.0	13.6	0.0	0.0
1998–99	0.0	1.0	14.2	0.0	0.0
1999–00	0.0	1.1	14.7	0.0	0.1
2000–01	0.0	1.0	15.3	0.0	0.1
2001–02	0.0	1.0	16.8	0.0	0.1
2002–03	0.0	0.9	15.5	0.0	0.1
2003–04	0.0	1.1	17.6	0.0	0.1
2004–05	0.0	1.4	13.1	0.0	0.0
2005–06	0.0	1.4	13.2	0.0	0.0
2006–07	0.0	0.9	10.3	0.0	0.0
2007–08	0.0	0.7	10.4	0.0	0.0
2008–09	0.0	0.5	10.1	0.0	0.0
2009–10	0.0	0.4	10.2	0.0	0.0
2010–11	0.0	0.3	10.4	0.0	0.0
2011–12	0.0	0.2	10.4	0.0	0.0
2012–13	0.0	0.0	13.9	0.0	0.1
2013–14	0.0	0.0	12.4	0.0	0.2

Source: Industry (2015b).

Table E 2.3b Australian natural gas production and distribution, input fuel—physical units

Financial year	Black coal <i>million tonnes</i>	LPG and other petroleum products <i>megalitres</i>	Natural gas <i>megalitres</i>	Town gas <i>megalitres</i>	Electricity <i>gigawatt hours</i>
1974–75	0.1	543	205 658	48 241	28
1975–76	0.1	517	205 658	48 241	28
1976–77	0.1	333	421 473	53 319	28
1977–78	0.0	144	490 025	53 319	28
1978–79	0.0	141	479 869	48 241	28
1979–80	0.0	143	515 415	48 241	28
1980–81	0.0	138	490 025	50 780	28
1981–82	0.0	135	533 188	48 241	28
1982–83	0.0	111	558 578	43 163	28
1983–84	0.0	110	566 195	38 085	28
1984–85	0.0	75	583 968	33 007	28
1985–86	0.0	68	553 500	25 390	28
1986–87	0.0	60	553 500	20 312	28
1987–88	0.0	53	492 564	17 773	28
1988–89	0.0	53	467 174	10 156	28
1989–90	0.0	57	454 480	10 156	28
1990–91	0.0	49	401 161	5 078	28
1991–92	0.0	49	398 622	5 078	0
1992–93	0.0	49	373 232	5 078	0
1993–94	0.0	34	355 459	5 078	0
1994–95	0.0	38	347 842	5 078	0
1995–96	0.0	38	327 530	5 078	0
1996–97	0.0	38	330 069	2 539	0
1997–98	0.0	38	345 303	0	0
1998–99	0.0	38	360 537	0	0
1999–00	0.0	42	373 232	0	28
2000–01	0.0	38	388 466	0	28
2001–02	0.0	38	426 551	0	28
2002–03	0.0	34	392 589	1 041	22
2003–04	0.0	42	446 708	1 041	22
2004–05	0.0	51	331 765	1 041	3
2005–06	0.0	54	335 497	1 020	3
2006–07	0.0	36	261 376	790	6
2007–08	0.0	27	263 275	592	3
2008–09	0.0	20	256 290	444	3
2009–10	0.0	15	257 959	333	3
2010–11	0.0	11	263 782	250	3
2011–12	0.0	8	264 140	187	3
2012–13	0.0	1	352 126	0	32
2013–14	0.0	1	314 696	0	50

Source: BITRE estimates based on Industry (2015b).

CHAPTER 3

Energy production and usage

Table E 3.1a Energy production and trade—Australian energy production (primary fuels), by fuel type—New South Wales

Financial year	Black coal	Brown coal	Bagasse and wood ^m	Crude oil, NGL ^k and naturally occurring LPG	Natural gas ^k	Ethane	Hydro-electricity	Solar hotwater	Uranium ^l	Wind	Solar PV
	kilo-tonnes	kilo-tonnes	kilo-tonnes	mega-litres	giga-litres	giga-litres	gigawatt hours	petajoules	tonnes	gigawatt hours	gigawatt hours
1974–75	34 828		1 418		0		7 489	0.00		0	0
1975–76	33 312		1 371		0		7 986	0.00		0	0
1976–77	38 262		1 337		0		5 529	0.00		0	0
1977–78	40 592		1 285		0		6 231	0.00		0	0
1978–79	40 995		1 309		0		7 169	0.10		0	0
1979–80	39 970		1 341		0		4 786	0.10		0	0
1980–81	47 923		1 359		0		5 586	0.20		0	0
1981–82	50 077		1 376		0		5 455	0.20		0	0
1982–83	56 669		1 405		0		4 029	0.30		0	0
1983–84	55 014		1 507		0		4 161	0.40		0	0
1984–85	57 496		1 552		0		5 288	0.50		0	0
1985–86	63 159		1 590		0		5 310	0.60		0	0
1986–87	72 343		1 624		0		4 487	0.60		0	0
1987–88	62 403		1 657		0		4 463	0.60		0	0
1988–89	66 605		1 688		0		4 568	0.60		0	0
1989–90	76 479		1 754		0		4 741	0.60		0	0
1990–91	78 491		1 805		0		6 237	0.60		0	0
1991–92	82 339		1 888		0		5 298	0.60		0	0
1992–93	82 745		1 950		0		6 642	0.60		0	0
1993–94	82 779		1 970		0		5 770	0.60		0	0
1994–95	87 410		1 992		0		5 728	0.60		0	0
1995–96	90 856		1 975		0		5 058	0.60		0	0
1996–97	98 287		1 983		50		5 279	0.60		0	0
1997–98	107 708		2 006		112		4 056	0.60		0	0
1998–99	103 421		2 040		190		4 805	0.70		0	0
1999–00	105 193		2 027		216		5 030	0.70		0	0
2000–01	110 240		1 969		222		5 157	0.60		0	0
2001–02	114 329		1 574		230		4 274	0.70		0	0
2002–03	111 533		2 572		211		4 868	0.67		0	0
2003–04	114 239		2 513		213		4 811	0.64		0	0
2004–05	119 835		2 457		210		4 434	0.63		0	0
2005–06	124 611		2 436		260		5 621	0.59		0	0
2006–07	130 885		2 505		285		4 639	1.49		0	0
2007–08	134 978		2 460		140		2 642	1.67		0	0
2008–09	137 798		2 647		125		3 174	2.52		41	36
2009–10	147 299		2 698		169		3 821	3.15		433	119
2010–11	156 951		2 639		183		5 267	3.45		530	526
2011–12	167 171		2 593		172		3 793	3.59		698	658
2012–13	185 553		2 400		159		5 652	3.72		833	858
2013–14	196 635		2 635		141		4 213	3.74		899	1 067

^k NGL represents natural gas liquid hydrocarbons other than methane, while LNG represents liquid natural gas (principally methane).

^l Australian energy production of uranium is measured in terms of tonnes of uranium metal equivalent, rather than ore extracted.

^m Bagasse production figures are not available before 2002–03.

Note: Data are not readily available for missing years.

Source: Industry (2015b).

Table E 3.1b Energy production and trade—Australian energy production (primary fuels), by fuel type—Victoria

Financial year	Black coal	Brown coal	Bagasse and wood	Crude oil, NGL ^k and naturally occurring LPG	Natural gas ^k	Ethane	Hydro-electricity	Solar hotwater	Uranium ^l	Wind	Solar PV
	kilo-tonnes	kilo-tonnes	kilo-tonnes	mega-litres	giga-litres	giga-litres	gigawatt hours	petajoules	tonnes	gigawatt hours	gigawatt hours
1974–75		27 542	1 874	23 103	2 414	64	991	0.00		0	0
1975–76		29 212	1 827	24 027	2 793	73	810	0.00		0	0
1976–77		30 994	1 739	25 177	3 171	103	538	0.00		0	0
1977–78		30 473	1 764	26 377	3 366	129	515	0.00		0	0
1978–79		32 101	1 786	26 239	3 810	144	557	0.00		0	0
1979–80		32 895	1 793	25 192	4 347	147	584	0.00		0	0
1980–81		32 103	1 853	24 405	5 264	139	670	0.00		0	0
1981–82		37 567	1 921	24 024	5 919	150	737	0.00		0	0
1982–83		34 708	1 979	23 093	5 631	168	929	0.00		0	0
1983–84		33 257	1 885	27 181	5 957	175	532	0.10		0	0
1984–85		38 380	1 822	29 541	5 444	172	525	0.10		0	0
1985–86		36 075	1 856	28 716	5 643	159	697	0.10		0	0
1986–87		41 804	1 871	27 325	5 422	154	706	0.10		0	0
1987–88		43 399	1 834	25 800	5 376	153	945	0.10		0	0
1988–89		48 289	1 870	21 387	5 645	153	688	0.10		0	0
1989–90		45 989	1 953	21 362	6 393	158	803	0.10		0	0
1990–91		49 386	1 960	19 983	5 679	146	765	0.10		0	0
1991–92		50 723	1 981	19 431	5 899	149	734	0.10		0	0
1992–93		47 648	2 031	20 580	6 053	162	713	0.10		0	0
1993–94		48 752	2 106	19 267	5 793	162	1 117	0.10		0	0
1994–95		50 751	2 110	16 948	6 415	181	1 042	0.20		0	0
1995–96		53 712	2 141	14 499	6 520	165	642	0.20		0	0
1996–97		58 156	2 154	14 052	5 924	156	1 024	0.20		0	0
1997–98		65 274	2 088	15 856	5 975	176	1 152	0.20		0	0
1998–99		66 648	2 067	11 366	5 655	121	748	0.20		0	0
1999–00		67 363	2 049	13 528	5 860	140	512	0.20		0	0
2000–01		64 958	2 003	11 134	6 359	332	625	0.20		0	0
2001–02		66 661	1 995	10 884	6 533	269	761	0.20		0	0
2002–03		66 809	1 892	9 125	7 051	163	1 064	0.18		0	0
2003–04		66 343	1 850	8 531	7 827	172	854	0.17		0	0
2004–05		67 152	1 804	6 917	8 165	182	817	0.17		0	0
2005–06		67 737	1 734	6 219	8 665	187	465	0.16		0	0
2006–07		65 613	1 690	6 327	9 632	190	590	0.36		0	0
2007–08		66 033	1 638	5 932	10 984	195	1 583	0.63		0	0
2008–09		68 252	1 505	6 184	10 667	139	558	1.05		573	24
2009–10		68 751	1 497	6 386	9 564	173	844	1.68		1 406	66
2010–11		66 733	1 473	5 617	11 086	151	1 119	1.94		1 434	205
2011–12		69 124	1 515	4 829	10 553	160	1 047	2.14		1 416	379
2012–13		59 854	1 557	4 696	11 597	163	940	2.35		2 005	580
2013–14		58 600	1 587	4 976	10 842	187	1 103	2.37		2 772	756

^k NGL represents natural gas liquid hydrocarbons other than methane, while LNG represents liquid natural gas (principally methane).

^l Australian energy production of uranium is measured in terms of tonnes of uranium metal equivalent, rather than ore extracted.

Note: Data are not readily available for missing years.

Source: Industry (2015b).

Table E 3.1c Energy production and trade—Australian energy production (primary fuels), by fuel type—Queensland

Financial year	Black coal	Brown coal	Bagasse and wood ^m	Crude oil, NGL ^k and naturally occurring LPG	Natural gas ^k	Ethane	Hydro-electricity	Solar hotwater	Uranium ^l	Wind	Solar PV
	kilo-tonnes	kilo-tonnes	kilo-tonnes	mega-litres	giga-litres	giga-litres	gigawatt hours	petajoules	tonnes	gigawatt hours	gigawatt hours
1974–75	23 902		572	73	258		694	0.00	0	0	0
1975–76	23 921		552	73	238		804	0.00	120	0	0
1976–77	25 671		526	65	237		814	0.00	486	0	0
1977–78	24 954		533	62	277		598	0.00	493	0	0
1978–79	26 939		543	71	280		710	0.10	680	0	0
1979–80	27 510		565	80	313		569	0.10	813	0	0
1980–81	32 849		517	81	338		727	0.20	836	0	0
1981–82	34 276		466	86	356		720	0.20	907	0	0
1982–83	35 812		409	103	434		428	0.30	354	0	0
1983–84	44 036		394	284	434		480	0.30	0	0	0
1984–85	54 288		397	1 263	479		1 118	0.30	0	0	0
1985–86	63 997		399	1 809	517		1 123	0.40	0	0	0
1986–87	68 820		386	1 937	524		979	0.40	0	0	0
1987–88	65 819		390	1 663	601		770	0.40	0	0	0
1988–89	74 118		406	1 661	541		874	0.40	0	0	0
1989–90	74 931		433	1 565	579		978	0.40	0	0	0
1990–91	78 363		443	1 407	1 102		1 027	0.40	0	0	0
1991–92	84 085		483	1 328	1 292		758	0.40	0	0	0
1992–93	85 301		498	1 220	1 635		685	0.40	0	0	0
1993–94	85 648		502	1 192	2 142		834	0.40	0	0	0
1994–95	94 381		508	1 206	2 657		756	0.40	0	0	0
1995–96	93 763		493	1 144	2 778		883	0.40	0	0	0
1996–97	99 437		498	1 029	2 644		897	0.40	0	0	0
1997–98	105 752		506	901	3 286		600	0.40	0	0	0
1998–99	112 634		510	873	3 775		896	0.40	0	0	0
1999–00	124 348		502	781	4 811		926	0.40	0	0	0
2000–01	138 286		505	735	4 770		868	0.40	0	0	0
2001–02	148 587		501	719	5 557		594	0.40	0	0	0
2002–03	153 602		9 749	646	5 670		354	0.43	0	0	0
2003–04	160 183		10 411	635	5 459		562	0.41	0	0	0
2004–05	173 712		11 152	660	5 826		528	0.41	0	0	0
2005–06	171 689		11 292	643	5 735		552	0.39	0	0	0
2006–07	184 082		11 416	968	5 993		880	0.97	0	0	0
2007–08	180 518		11 654	1 064	6 487		924	1.06	0	0	0
2008–09	190 450		8 417	1 022	6 484		820	1.25	0	27	51
2009–10	208 946		10 591	672	7 996		573	1.71	0	31	121
2010–11	179 834		8 689	532	8 595		966	2.05	0	27	401
2011–12	188 247		8 815	563	8 979		723	2.26	0	28	760
2012–13	202 688		10 190	569	8 326		684	2.39	0	31	1 310
2013–14	224 886		9 515	564	9 132		821	2.40	0	34	1 618

^k NGL represents natural gas liquid hydrocarbons other than methane, while LNG represents liquid natural gas (principally methane).

^l Australian energy production of uranium is measured in terms of tonnes of uranium metal equivalent, rather than ore extracted.

^m Bagasse production figures are not available before 2002–03.

Note: Data are not readily available for missing years.

Source: Industry (2015b).

Table E 3.1d Energy production and trade—Australian energy production (primary fuels), by fuel type—Western Australia

Financial year	Black coal	Brown coal	Bagasse and wood	Crude oil, NGL ^k and naturally occurring LPG	Natural gas ^k	Ethane	Hydro-electricity	Solar hotwater	Uranium ^l	Wind	Solar PV
	kilo-tonnes	kilo-tonnes	kilo-tonnes	mega-litres	giga-litres	giga-litres	gigawatt hours	petajoules	tonnes	gigawatt hours	gigawatt hours
1974–75	1 877		701	2 095	831		13	0.10		0	0
1975–76	2 143		685	1 962	843		10	0.10		0	0
1976–77	2 376		628	1 843	858		1	0.20		0	0
1977–78	2 424		603	1 802	819		1	0.30		0	0
1978–79	2 407		610	1 708	842		0	0.30		0	0
1979–80	3 029		621	1 507	867		0	0.50		0	0
1980–81	3 118		586	1 530	880		0	0.50		0	0
1981–82	3 415		530	1 241	836		1	0.60		0	0
1982–83	3 962		526	1 325	1 003		2	0.80		0	0
1983–84	3 925		522	1 260	1 012		0	0.90		0	0
1984–85	3 654		537	1 415	1 911		2	1.00		0	0
1985–86	3 750		503	1 812	2 928		3	1.10		0	0
1986–87	3 782		503	2 174	3 377		0	1.00		0	0
1987–88	3 686		541	3 100	3 887		0	1.00		0	0
1988–89	3 891		597	3 205	4 071		0	1.00		0	0
1989–90	4 125		633	5 809	7 446		1	1.00		0	0
1990–91	5 206		656	6 897	9 389		0	1.00		0	0
1991–92	5 477		622	7 350	10 439		1	1.00		0	0
1992–93	5 395		638	6 693	11 866		6	1.00		0	0
1993–94	5 153		682	7 639	13 579		4	1.10		0	0
1994–95	5 824		695	12 680	15 774		4	1.10		0	0
1995–96	5 971		702	14 322	16 407		2	1.10		0	0
1996–97	5 593		713	15 974	16 734		6	1.10		0	0
1997–98	5 798		715	17 561	18 140		200	1.10		0	0
1998–99	5 741		719	16 848	18 545		206	1.10		0	0
1999–00	6 628		723	19 489	18 885		207	1.10		0	0
2000–01	6 193		724	20 623	19 178		202	1.10		0	0
2001–02	6 595		770	23 135	19 444		212	1.10		0	0
2002–03	6 136		651	21 604	20 179		207	1.18		0	0
2003–04	5 981		639	19 191	20 561		206	1.09		0	0
2004–05	6 099		623	19 153	24 582		212	1.09		0	0
2005–06	6 681		609	18 201	25 887		163	0.98		0	0
2006–07	6 018		596	21 636	27 198		150	2.44		0	0
2007–08	6 231		585	19 802	27 499		51	2.47		0	0
2008–09	6 979		529	20 826	29 712		na	2.50		675	19
2009–10	6 712		460	20 986	32 847		na	2.75		664	57
2010–11	7 234		444	21 473	34 492		na	2.89		719	198
2011–12	6 986		439	18 787	32 083		0	3.01		1 279	331
2012–13	7 494		394	15 755	38 958		221	3.25		1 300	449
2013–14	6 370		401	14 523	40 099		205	3.29		1 579	555

^k NGL represents natural gas liquid hydrocarbons other than methane, while LNG represents liquid natural gas (principally methane).

^l Australian energy production of uranium is measured in terms of tonnes of uranium metal equivalent, rather than ore extracted.

Note: Data are not readily available for missing years.

Source: Industry (2015b).

Table E 3.1e Energy production and trade—Australian energy production (primary fuels), by fuel type—South Australia

Financial year	Black coal	Brown coal	Bagasse and wood	Crude oil, NGL ^k and naturally occurring LPG	Natural gas ^k	Ethane	Hydro-electricity	Solar hotwater	Uranium ^l	Wind	Solar PV
	kilo-tonnes	kilo-tonnes	kilo-tonnes	mega-litres	giga-litres	giga-litres	gigawatt hours	petajoules	tonnes	gigawatt hours	gigawatt hours
1974–75	1 793	666	35	1 314	0		0.00	0	0	0	0
1975–76	1 819	655	42	1 502	0		0.00	0	0	0	0
1976–77	1 945	550	43	2 132	0		0.00	0	0	0	0
1977–78	1 780	533	46	2 591	0		0.00	0	0	0	0
1978–79	1 471	532	49	2 932	0		0.00	0	0	0	0
1979–80	1 717	562	44	3 567	0		0.00	0	0	0	0
1980–81	1 732	581	61	4 037	0		0.10	0	0	0	0
1981–82	1 436	568	65	4 537	0		0.10	0	0	0	0
1982–83	1 451	606	453	4 686	0		0.10	0	0	0	0
1983–84	1 328	555	1 233	4 907	0		0.10	0	0	0	0
1984–85	1 745	563	2 525	5 307	28		0.10	0	0	0	0
1985–86	2 167	606	3 225	5 373	37		0.20	0	0	0	0
1986–87	2 426	612	3 034	5 444	26		0.10	0	0	0	0
1987–88	2 519	620	3 043	5 348	36		0.10	0	0	0	0
1988–89	2 758	632	3 222	5 452	32		0.10	912	0	0	0
1989–90	2 943	656	3 137	5 512	26		0.10	1 005	0	0	0
1990–91	2 527	686	3 053	4 912	26		0.10	1 458	0	0	0
1991–92	2 887	711	2 895	4 905	27		0.20	1 349	0	0	0
1992–93	2 785	753	2 596	4 645	23		0.20	1 351	0	0	0
1993–94	2 692	875	2 428	4 539	17		0.20	1 271	0	0	0
1994–95	3 039	865	2 213	4 091	21		0.20	1 073	0	0	0
1995–96	2 447	863	2 014	3 744	38		0.20	1 635	0	0	0
1996–97	2 594	868	1 862	4 047	279		0.20	1 737	0	0	0
1997–98	2 697	838	1 851	3 674	390		0.20	1 626	0	0	0
1998–99	2 799	840	1 946	3 738	441		0.20	2 012	0	0	0
1999–00	2 874	830	1 767	3 234	472		0.20	4 073	0	0	0
2000–01	3 160	824	1 722	3 432	344		0.20	4 963	0	0	0
2001–02	3 365	551	1 636	3 257	269		0.20	4 017	0	0	0
2002–03	3 240	787	1 650	3 262	243		0.19	3 860	0	0	0
2003–04	3 208	742	1 510	2 388	207		0.19	4 902	0	0	0
2004–05	3 381	711	1 343	1 932	225		0.19	5 420	0	0	0
2005–06	3 479	734	1 354	1 660	269		0.20	4 790	0	0	0
2006–07	3 880	775	1 963	1 661	249		0.50	4 328	0	0	0
2007–08	3 874	754	2 161	1 548	259		0.53	4 850	0	0	0
2008–09	3 619	692	2 817	1 945	256		0.59	4 633	2 020	23	
2009–10	3 796	622	2 304	1 563	166		0.72	2 847	2 029	51	
2010–11	3 670	598	1 460	1 435	116		0.78	4 392	2 890	183	
2011–12	2 867	538	1 583	1 563	171		0.81	4 366	3 127	398	
2012–13	2 481	514	1 885	2 024	164		0.84	4 605	3 314	559	
2013–14	1 943	565	2 496	1 758	174		0.84	4 435	4 150	747	

^k NGL represents natural gas liquid hydrocarbons other than methane, while LNG represents liquid natural gas (principally methane).

^l Australian energy production of uranium is measured in terms of tonnes of uranium metal equivalent, rather than ore extracted.

Note: Data are not readily available for missing years.

Source: Industry (2015b).

Table E 3.1f Energy production and trade—Australian energy production (primary fuels), by fuel type—Tasmania

Financial year	Black coal	Brown coal	Bagasse and wood	Crude oil, NGL ^k and naturally occurring LPG	Natural gas ^k	Ethane	Hydro-electricity	Solar hotwater	Uranium ^l	Wind	Solar PV
	kilo-tonnes	kilo-tonnes	kilo-tonnes	mega-litres	giga-litres	giga-litres	gigawatt hours	petajoules	tonnes	gigawatt hours	gigawatt hours
1974–75	101		395				5 918			0	0
1975–76	133		385				5 899			0	0
1976–77	163		378				6 789			0	0
1977–78	156		378				7 113			0	0
1978–79	195		381				7 599			0	0
1979–80	163		385				7 843			0	0
1980–81	208		405				7 844			0	0
1981–82	249		448				7 659			0	0
1982–83	329		451				7 526			0	0
1983–84	280		524				7 715			0	0
1984–85	321		554				8 033			0	0
1985–86	310		587				8 381			0	0
1986–87	394		621				8 378			0	0
1987–88	380		689				8 786			0	0
1988–89	407		750				8 900			0	0
1989–90	356		763				8 357			0	0
1990–91	350		783				8 076			0	0
1991–92	342		733				8 977			0	0
1992–93	301		758				8 907			0	0
1993–94	378		723				8 924			0	0
1994–95	401		736				8 709			0	0
1995–96	400		751				9 146			0	0
1996–97	392		761				9 646			0	0
1997–98	414		764				9 725			0	0
1998–99	419		732				9 908			0	0
1999–00	387		724				10 045			0	0
2000–01	339		717				10 081			0	0
2001–02	360		784				10 213			0	0
2002–03	343		614				9 997			0	0
2003–04	350		604				9 898			0	0
2004–05	388		588				9 620			0	0
2005–06	420		551				9 236			0	0
2006–07	406		551				8 258			0	0
2007–08	437		544				6 854			0	0
2008–09	384		516				7 314			487	2
2009–10	372		479				8 307			489	6
2010–11	381		392				9 452			484	12
2011–12	304		412				8 516			423	23
2012–13	360		402				10 766			478	53
2013–14	360		425				12 073			818	88

^k NGL represents natural gas liquid hydrocarbons other than methane, while LNG represents liquid natural gas (principally methane).

^l Australian energy production of uranium is measured in terms of tonnes of uranium metal equivalent, rather than ore extracted.

Note: Data are not readily available for missing years.

Source: Industry (2015b).

Table E 3.1g Energy production and trade—Australian energy production (primary fuels), by fuel type—Northern Territory

Financial year	Black coal	Brown coal	Bagasse and wood	Crude oil, NGL ^k and naturally occurring LPG	Natural gas ^k	Ethane	Hydro-electricity	Solar hotwater	Uranium ^l	Wind	Solar PV
	kilo-tonnes	kilo-tonnes	kilo-tonnes	mega-litres	giga-litres	giga-litres	gigawatt hours	petajoules	tonnes	gigawatt hours	gigawatt hours
1974–75			19	0	0				0		0
1975–76			19	0	0				0		0
1976–77			19	0	0				0		0
1977–78			19	0	0				0		0
1978–79			19	0	0				0		0
1979–80			19	0	0				0		0
1980–81			19	0	0				0		0
1981–82			19	0	0				4 157		0
1982–83			19	0	0				4 231		0
1983–84			19	0	3				4 384		0
1984–85			20	75	26				4 327		0
1985–86			21	187	31				4 450		0
1986–87			21	935	127				4 505		0
1987–88			21	1 478	276				4 193		0
1988–89			21	2 542	259				3 595		0
1989–90			22	3 907	324				3 084		0
1990–91			23	4 164	341				2 909		0
1991–92			24	3 893	353				2 980		0
1992–93			25	3 425	354				1 335		0
1993–94			26	2 120	351				1 462		0
1994–95			27	1 734	378				1 548		0
1995–96			27	1 545	441				3 453		0
1996–97			25	1 140	462				4 238		0
1997–98			25	936	479				4 162		0
1998–99			25	770	494				4 375		0
1999–00			25	6 268	535				4 144		0
2000–01			10	9 682	529				4 586		0
2001–02			6	6 059	540				3 806		0
2002–03			6	4 977	452				5 312		0
2003–04			5	2 648	424				4 667		0
2004–05			5	1 928	479				5 544		0
2005–06			5	1 456	494				5 184		0
2006–07			5	1 524	532				5 261		0
2007–08			5	882	541				5 273		0
2008–09			4	866	537				5 678	1	
2009–10			4	1 078	512				4 262		4
2010–11			4	597	607				2 677		6
2011–12			4	2 119	667				3 284		10
2012–13			4	2 007	661				4 313		17
2013–14			4	1 484	669				1 113		26

^k NGL represents natural gas liquid hydrocarbons other than methane, while LNG represents liquid natural gas (principally methane).

^l Australian energy production of uranium is measured in terms of tonnes of uranium metal equivalent, rather than ore extracted.

Note: Data are not readily available for missing years.

Does not include production in the Joint Petroleum Development Area.

Source: Industry (2015b).

Table E 3.1h Energy production and trade—Australian energy production (primary fuels), by fuel type—Australia

Financial year	Black coal	Brown coal	Bagasse and wood	Crude oil, NGL ^k and naturally occurring LPG	Natural gas ^k	Ethane	Hydro-electricity	Solar hotwater	Uranium ^l	Wind	Solar PV
	kilo-tonnes	kilo-tonnes	kilo-tonnes	mega-litres	giga-litres	giga-litres	gigawatt hours	petajoules	tonnes	gigawatt hours	gigawatt hours
1974–75	62 501	29 335	11 887	25 306	4 817	64	15 105	0.14	0	0	0
1975–76	61 328	31 031	12 085	26 059	5 376	73	15 509	0.19	484	0	0
1976–77	68 417	32 939	12 314	27 128	6 398	103	13 670	0.27	480	0	0
1977–78	69 906	32 253	12 255	28 287	7 053	129	14 458	0.39	696	0	0
1978–79	72 007	33 572	11 448	28 067	7 864	144	16 035	0.57	951	0	0
1979–80	72 389	34 612	11 604	26 823	9 094	147	13 782	0.81	1 837	0	0
1980–81	85 830	33 835	12 492	26 077	10 519	139	14 827	1.03	3 944	0	0
1981–82	89 453	39 003	13 083	25 419	11 648	150	14 572	1.27	5 968	0	0
1982–83	98 223	36 159	12 921	24 978	11 754	168	12 914	1.55	4 334	0	0
1983–84	104 583	34 585	12 629	29 960	12 312	175	12 888	1.81	5 836	0	0
1984–85	117 504	40 125	13 070	34 820	13 167	200	14 966	2.11	4 327	0	0
1985–86	133 383	38 242	13 036	35 750	14 495	195	15 514	2.49	4 450	0	0
1986–87	147 765	44 230	13 316	35 431	14 895	180	14 550	2.40	4 505	0	0
1987–88	134 807	45 918	13 480	35 187	15 483	196	14 964	2.40	4 193	0	0
1988–89	147 778	51 047	14 409	32 018	15 964	189	15 030	2.41	4 507	0	0
1989–90	158 834	48 932	14 744	35 779	20 077	191	14 880	2.41	4 089	0	0
1990–91	164 937	51 913	14 539	35 502	21 049	180	16 103	2.41	4 367	0	0
1991–92	175 130	53 610	13 088	34 898	23 297	182	15 768	2.46	4 329	0	11
1992–93	176 527	50 433	14 811	34 483	24 417	194	16 953	2.46	2 686	0	13
1993–94	176 650	51 444	15 687	32 646	26 567	188	16 649	2.48	2 733	4	16
1994–95	191 055	53 790	16 488	34 799	29 264	203	16 239	2.53	2 622	7	19
1995–96	193 437	56 159	17 572	33 900	29 890	203	15 731	2.56	5 088	7	23
1996–97	206 303	60 750	18 452	34 838	29 861	435	16 852	2.57	5 975	7	28
1997–98	222 369	67 971	18 718	38 398	31 666	566	15 733	2.59	5 788	8	34
1998–99	225 014	69 447	18 346	31 802	32 397	562	16 563	2.63	6 387	28	38
1999–00	239 430	70 237	17 891	41 833	33 541	612	16 720	2.65	8 217	58	44
2000–01	258 218	68 118	17 013	43 895	34 490	676	16 933	2.60	9 549	210	50
2001–02	273 236	70 026	15 420	42 432	35 039	538	16 054	2.71	7 823	364	58
2002–03	271 613	70 049	16 410	38 001	36 826	406	16 490	2.78	9 172	703	58
2003–04	280 753	69 551	16 903	32 515	36 872	380	16 331	2.62	9 569	705	68
2004–05	300 034	70 533	17 480	30 001	41 194	407	15 612	2.62	10 964	885	78
2005–06	303 402	71 216	17 464	27 873	42 701	456	16 029	2.43	9 974	1 713	90
2006–07	321 391	69 493	17 636	32 418	45 301	439	14 517	6.00	9 589	2 611	105
2007–08	322 163	69 907	17 640	29 841	47 199	454	12 057	6.67	10 123	3 093	123
2008–09	335 611	71 871	14 310	31 715	49 470	395	11 869	8.24	10 311	3 824	156
2009–10	363 329	72 547	16 351	31 427	52 651	339	13 549	10.49	7 109	5 052	425
2010–11	344 400	70 403	14 238	29 678	56 398	267	16 807	11.63	7 069	6 085	1 530
2011–12	362 709	71 991	14 315	27 881	54 017	331	14 083	12.35	7 650	6 970	2 559
2012–13	396 095	62 335	15 461	24 911	61 724	327	18 270	13.13	8 918	7 960	3 826
2013–14	428 251	60 543	15 135	24 046	62 642	361	18 421	13.22	5 548	10 252	4 858

^k NGL represents natural gas liquid hydrocarbons other than methane, while LNG represents liquid natural gas (principally methane).

^l Australian energy production of uranium is measured in terms of tonnes of uranium metal equivalent, rather than ore extracted.

Note: Data are not readily available for missing years.

Source: Industry (2015b).

Table E 3.2 Energy production and trade—Australian energy imports, by fuel type

Financial year	Natural gas	Petroleum products							Fuel oil	Bitumen, lubricants and greases
		Crude oil and other refinery fuel	LPG	Automotive gasoline	Aviation turbine fuel	Automotive diesel oil	Fuel oil			
		gigalitres	megalitres	megalitres	megalitres	megalitres	megalitres			
1974–75	0	10 171	0	407	96	479	2 574	69		
1975–76	0	9 702	0	876	101	377	2 123	59		
1976–77	0	10 116	0	922	129	492	2 234	28		
1977–78	0	11 214	0	758	100	529	2 001	57		
1978–79	0	10 407	0	708	193	411	2 482	61		
1979–80	0	11 263	0	488	178	620	2 649	77		
1980–81	0	11 450	1	419	150	637	2 070	71		
1981–82	0	12 460	2	399	106	523	1 529	61		
1982–83	0	11 780	2	553	107	468	1 180	50		
1983–84	0	8 553	6	338	63	322	1 419	30		
1984–85	0	7 294	4	590	95	679	1 102	54		
1985–86	0	6 186	1	505	165	715	1 093	53		
1986–87	0	7 724	38	1 276	219	1 016	1 180	57		
1987–88	0	9 577	42	908	171	708	1 010	54		
1988–89	0	12 058	39	1 565	197	847	309	52		
1989–90	0	11 603	85	1 703	234	1 028	0	122		
1990–91	0	13 389	36	717	104	462	0	30		
1991–92	0	15 332	49	357	103	390	413	38		
1992–93	0	19 421	115	440	36	702	1 124	30		
1993–94	0	20 296	164	447	189	764	944	56		
1994–95	0	20 639	266	745	231	767	948	64		
1995–96	0	23 703	415	447	302	1 110	720	34		
1996–97	0	24 768	588	1 074	306	952	809	36		
1997–98	0	25 017	511	483	111	770	795	53		
1998–99	0	29 729	496	890	140	1 435	596	71		
1999–00	0	26 936	519	1 065	171	1 400	799	137		
2000–01	0	26 489	633	1 189	387	1 129	814	102		
2001–02	0	27 308	588	1 436	225	1 280	557	93		
2002–03	0	27 959	299	1 673	429	1 627	611	313		
2003–04	0	23 499	785	3 242	681	3 374	1 285	461		
2004–05	0	26 056	540	3 131	983	3 944	1 281	716		
2005–06	1 295	24 418	599	3 687	817	6 122	1 418	741		
2006–07	5 805	25 345	748	2 912	1 045	5 439	1 363	715		
2007–08	5 483	26 223	965	3 533	1 846	7 470	1 625	812		
2008–09	6 462	24 302	1 002	4 087	2 026	8 246	1 682	752		
2009–10	5 643	27 284	1 067	3 884	2 168	8 668	1 797	707		
2010–11	6 526	32 225	888	2 944	2 086	8 820	1 559	820		
2011–12	5 811	29 495	1 023	3 672	2 252	1 1 225	1 623	1 047		
2012–13	6 517	29 966	920	3 707	3 201	12 504	1 677	1 196		
2013–14	6 938	28 310	730	3 598	3 482	13 603	1 338	1 334		

Source: Industry (2015b).

Table E 3.3a Energy production and trade—Australian energy exports, by fuel type—petroleum exports

Financial year	Crude oil and other refinery feedstock	LPG	Automotive gasoline	Aviation gasoline	Aviation turbine fuel	Automotive diesel oil	Fuel oil	Bitumen, lubricants and greases
megalitres								
1974–75	0	2 000	249	24	356	336	540	0
1975–76	0	1 950	155	14	278	387	823	0
1976–77	0	2 253	211	21	271	263	713	0
1977–78	221	2 864	286	23	326	522	396	278
1978–79	371	3 031	339	20	314	735	253	259
1979–80	127	2 764	312	8	210	638	352	251
1980–81	86	2 569	268	18	277	705	323	173
1981–82	44	2 622	340	43	268	669	307	227
1982–83	61	2 334	513	57	267	793	466	222
1983–84	1 056	2 851	592	72	382	1 035	505	247
1984–85	5 819	2 620	342	83	375	576	517	245
1985–86	5 051	2 977	397	70	329	578	723	181
1986–87	5 702	2 675	251	68	303	444	765	230
1987–88	6 453	2 402	360	81	398	682	754	224
1988–89	4 789	2 178	288	63	514	941	639	236
1989–90	7 202	1 983	212	83	541	756	443	253
1990–91	8 830	1 508	314	63	321	882	878	299
1991–92	8 967	1 568	700	158	248	830	1 043	419
1992–93	10 098	1 483	678	69	390	657	1 053	402
1993–94	9 538	1 290	891	59	400	809	713	400
1994–95	11 445	1 189	648	42	284	673	853	448
1995–96	10 899	1 469	1 127	69	552	1 201	629	351
1996–97	12 401	2 421	1 293	43	708	1 363	928	363
1997–98	14 785	2 824	1 521	56	658	1 305	633	402
1998–99	14 291	2 486	1 533	74	547	1 231	253	320
1999–00	20 877	2 857	1 371	79	579	1 070	585	259
2000–01	24 044	2 785	1 288	28	755	1 276	724	281
2001–02	23 936	3 211	1 186	71	549	948	293	171
2002–03	20 950	3 194	1 058	52	645	1 052	95	163
2003–04	17 526	2 916	774	36	528	872	81	122
2004–05	15 731	2 844	774	38	240	367	201	156
2005–06	13 026	2 800	714	85	127	419	490	179
2006–07	15 965	2 824	771	81	120	288	209	207
2007–08	15 975	2 589	628	96	149	462	257	161
2008–09	16 588	2 500	244	56	106	357	188	164
2009–10	18 064	2 776	222	32	72	187	109	189
2010–11	19 638	2 471	175	20	12	117	194	200
2011–12	17 438	2 115	175	25	2	130	485	288
2012–13	15 761	2 386	100	22	13	91	220	429
2013–14	14 817	2 459	131	20	2	61	47	337

Source: Industry (2015b).

Table E 3.3b Energy production and trade—Australian energy exports, by fuel type—non-petroleum exports

Financial year	Black coal					
	Coking kilotonnes	Steaming kilotonnes	Uranium tonnes	Briquettes kilotonnes	Coke ⁿ kilotonnes	LNG kilotonnes
1974–75	28 666	3 756	0	1	421	0
1975–76	27 431	2 994	0	2	182	0
1976–77	32 219	3 153	750	44	189	0
1977–78	33 634	4 277	1 452	42	149	0
1978–79	33 257	5 021	1 317	25	147	0
1979–80	36 144	7 017	1 210	25	122	0
1980–81	36 404	10 844	1 625	39	21	0
1981–82	36 539	9 582	5 460	46	9	0
1982–83	38 866	15 779	3 233	47	5	0
1983–84	44 509	19 819	3 259	54	14	0
1984–85	50 800	35 300	3 441	47	11	0
1985–86	51 800	38 500	3 210	62	217	0
1986–87	54 400	43 300	4 364	53	108	0
1987–88	57 100	45 000	4 552	75	816	0
1988–89	57 208	40 448	5 061	24	986	0
1989–90	60 605	43 975	4 812	31	574	2 010
1990–91	61 904	51 468	6 129	44	897	3 400
1991–92	65 077	58 225	4 729	82	724	4 660
1992–93	69 533	59 651	2 289	61	599	4 984
1993–94	69 889	59 166	3 992	100	529	6 032
1994–95	73 335	62 901	4 069	105	295	7 018
1995–96	77 412	61 138	5 286	98	421	7 482
1996–97	78 688	67 064	5 701	95	329	7 486
1997–98	84 073	78 538	6 415	28	178	7 650
1998–99	85 260	84 153	5 989	0	67	7 819
1999–00	96 808	78 970	8 025	0	24	7 923
2000–01	105 527	87 975	9 722	0	19	7 530
2001–02	105 833	92 040	7 367	0	81	7 600
2002–03	107 794	99 950	9 593	0	262	7 826
2003–04	111 732	106 694	9 099	0	1	7 914
2004–05	124 915	106 396	11 249	0	0	10 589
2005–06	120 479	110 821	10 253	0	0	12 029
2006–07	131 965	111 624	9 519	0	0	14 332
2007–08	136 921	115 069	10 139	0	0	13 678
2008–09	125 238	136 362	10 114	0	0	15 410
2009–10	157 265	134 985	7 555	0	0	17 866
2010–11	140 455	143 320	6 950	0	0	19 957
2011–12	142 396	158 436	6 917	0	543	18 866
2012–13	154 193	181 659	8 391	0	1 039	23 503
2013–14	180 458	194 586	6 701	0	912	23 246

ⁿ Coke exports have been confidentialised since 2003–04, values since then are Department of Industry's estimates.
Source: Industry (2015b).

Table E 3.4 Electricity usage—Australian electricity consumption, by state/territory

Financial year	NSW	VIC	QLD	WA	SA	TAS	NT	Australia
<i>gigawatt hours</i>								
1974–75	27 250	18 922	9 430	5 989	5 665	6 100	646	74 002
1975–76	27 879	19 962	9 779	6 508	5 966	6 034	701	76 828
1976–77	30 309	21 023	10 615	6 986	6 520	6 873	729	83 055
1977–78	31 787	21 395	11 300	7 229	6 797	7 201	775	86 484
1978–79	34 201	22 820	11 884	7 492	6 934	7 787	831	91 950
1979–80	36 708	23 595	12 558	7 733	7 074	7 950	1 100	96 717
1980–81	38 845	25 396	13 501	7 885	7 458	8 096	1 175	102 356
1981–82	39 666	26 587	14 640	8 199	7 618	8 173	1 183	106 065
1982–83	38 475	26 457	16 125	8 365	7 879	8 006	1 235	106 542
1983–84	41 253	27 152	18 551	8 647	7 681	8 173	1 296	112 752
1984–85	44 712	28 080	20 626	9 711	8 144	8 320	1 368	120 960
1985–86	46 895	29 176	22 267	10 321	8 370	8 451	1 456	126 936
1986–87	48 900	31 123	23 344	10 881	8 426	8 463	1 494	132 631
1987–88	50 011	33 909	24 313	11 455	8 824	9 011	1 564	139 088
1988–89	51 741	37 435	25 677	12 848	9 254	9 135	1 705	147 796
1989–90	54 216	38 226	27 473	14 261	9 791	9 223	1 828	155 019
1990–91	54 140	38 476	28 423	14 809	9 851	9 219	1 899	156 818
1991–92	54 542	38 907	29 823	15 208	9 979	9 131	1 966	159 556
1992–93	56 167	39 642	30 992	15 624	10 210	9 054	1 961	163 652
1993–94	58 229	39 229	32 214	16 295	10 433	9 099	1 967	167 466
1994–95	59 725	40 229	33 999	17 362	10 876	8 877	2 095	173 162
1995–96	61 371	40 062	35 555	18 106	10 879	9 277	2 351	177 602
1996–97	63 101	41 145	36 967	18 291	11 193	9 783	2 463	182 944
1997–98	65 653	44 258	41 909	19 542	11 571	9 882	2 559	195 375
1998–99	67 487	46 782	43 318	21 407	12 386	10 027	2 585	203 991
1999–2000	69 215	47 576	44 911	22 869	12 816	10 137	2 706	210 230
2000–01	71 690	52 153	50 692	23 135	13 676	10 412	2 883	224 641
2001–02	72 547	53 091	51 363	23 378	13 492	10 724	2 969	227 563
2002–03	73 522	49 323	51 777	20 487	13 546	10 963	2 362	221 980
2003–04	75 649	49 972	55 374	20 757	14 188	11 302	2 394	229 636
2004–05	74 318	50 643	54 351	20 935	13 958	11 778	2 388	228 370
2005–06	75 556	51 893	54 403	22 382	14 276	11 503	2 536	232 549
2006–07	78 760	53 669	56 795	23 414	14 950	12 180	3 082	242 849
2007–08	78 317	53 417	56 828	24 370	14 863	12 069	3 060	242 924
2008–09	78 210	53 184	58 351	27 710	15 328	11 797	2 910	247 491
2009–10	79 908	54 622	58 408	28 862	15 219	12 035	3 279	252 334
2010–11	80 807	51 775	57 577	31 941	15 875	12 554	3 094	253 623
2011–12	78 166	52 387	57 552	32 308	15 512	11 668	3 131	250 724
2012–13	74 586	51 037	59 076	33 876	15 949	11 844	3 308	249 676
2013–14	73 249	49 513	57 734	36 727	15 947	11 693	3 473	248 337

Source: Industry (2015b).

Table E 3.5a Electricity usage—Australian electricity consumption, by industry—New South Wales

Financial year	Mining	Manufacturing			Electricity, gas and water		Other industries	Household consumption
		Iron and steel	Basic non-ferrous metals	Total manufacturing	Electricity generation	Other electricity, gas and water		
gigawatt hours								
1974–75	889	np	np	8 833	3 917	222	4 278	9 111
1975–76	889	np	np	8 830	3 860	250	4 471	9 580
1976–77	945	np	np	9 029	4 778	250	4 834	10 473
1977–78	973	np	np	9 392	5 085	250	5 140	10 948
1978–79	1 000	np	np	9 724	5 834	278	5 557	11 808
1979–80	1 055	np	np	10 551	6 525	333	6 164	12 079
1980–81	1 167	np	np	11 281	6 502	417	6 641	12 837
1981–82	1 194	np	np	11 166	6 555	472	6 805	13 472
1982–83	1 222	np	np	10 306	6 306	472	6 806	13 362
1983–84	1 222	np	np	12 501	6 612	472	6 945	13 501
1984–85	1 305	np	np	14 636	7 276	444	7 387	13 664
1985–86	1 528	np	np	15 974	6 529	528	7 945	14 391
1986–87	1 584	np	np	16 782	6 835	500	8 363	14 837
1987–88	1 528	np	np	17 420	6 446	528	9 002	15 087
1988–89	1 639	np	np	17 997	7 054	528	9 498	15 025
1989–90	1 889	np	np	18 637	7 083	528	10 054	16 026
1990–91	1 889	np	np	18 639	6 278	528	10 584	16 223
1991–92	1 916	np	np	18 995	6 304	555	10 636	16 135
1992–93	1 944	np	np	19 806	6 361	556	10 722	16 778
1993–94	1 972	np	np	21 641	6 501	556	10 862	16 696
1994–95	2 083	np	np	21 668	6 889	556	11 417	17 112
1995–96	2 223	np	np	21 476	6 973	556	12 641	17 503
1996–97	2 194	np	np	22 274	6 888	583	12 970	18 192
1997–98	2 333	np	np	23 190	7 415	611	13 803	18 302
1998–99	2 417	np	np	23 866	7 418	611	14 614	18 560
1999–00	2 417	np	np	24 341	7 613	639	14 921	19 284
2000–01	3 212	np	np	24 304	8 101	1 052	14 781	20 239
2001–02	3 287	np	np	24 297	7 861	1 115	15 293	20 695
2002–03	3 060	np	np	21 174	8 362	1 218	18 611	21 098
2003–04	3 559	np	np	21 093	8 954	1 288	18 956	21 799
2004–05	3 465	np	np	20 499	8 945	1 240	18 723	21 446
2005–06	3 471	np	np	20 667	9 417	1 317	19 162	21 522
2006–07	3 729	np	np	22 127	9 547	1 381	20 114	21 863
2007–08	3 761	np	np	21 813	9 326	1 358	20 000	22 059
2008–09	3 757	np	np	21 598	9 441	1 044	19 670	22 700
2009–10	3 848	np	np	21 947	9 374	1 032	20 278	23 430
2010–11	3 864	np	np	22 432	9 012	906	20 540	24 053
2011–12	4 141	np	np	21 319	8 251	840	20 239	23 377
2012–13	4 496	np	np	18 304	6 885	620	21 178	23 103
2013–14	4 675	np	np	17 854	7 118	634	21 178	21 790

np: Not available for publication but included in the totals.

Source: Industry (2014a) and Industry (2015b).

Table E 3.5b Electricity usage—Australian electricity consumption, by industry—Victoria

Financial year	Mining	Manufacturing		Total manufacturing	Electricity, gas and water		Other industries	Household consumption
	Iron and steel	Basic non-ferrous metals	Electricity generation		Other electricity, gas and water			
gigawatt hours								
1974–75	361	np	np	6 613	2 890	222	3 001	5 835
1975–76	416	np	np	6 885	3 137	222	3 221	6 080
1976–77	472	np	np	6 887	3 333	222	3 416	6 693
1977–78	500	np	np	6 974	3 223	250	3 501	6 946
1978–79	527	np	np	7 496	3 498	250	3 831	7 218
1979–80	500	np	np	7 865	3 502	278	4 030	7 420
1980–81	528	np	np	8 780	3 862	278	4 335	7 613
1981–82	583	np	np	9 223	4 167	306	4 445	7 862
1982–83	584	np	np	8 921	4 057	306	4 724	7 865
1983–84	639	np	np	9 301	4 109	305	4 886	7 912
1984–85	667	np	np	9 499	4 527	333	5 111	7 944
1985–86	750	np	np	9 920	4 585	306	5 446	8 169
1986–87	750	np	np	11 060	4 863	333	5 780	8 337
1987–88	778	np	np	13 136	5 027	333	6 276	8 359
1988–89	778	np	np	15 690	5 582	333	6 582	8 470
1989–90	778	np	np	15 807	5 445	361	7 084	8 751
1990–91	695	np	np	15 752	5 473	361	7 334	8 862
1991–92	722	np	np	15 802	5 832	361	7 387	8 803
1992–93	750	np	np	16 223	5 639	361	7 723	8 945
1993–94	750	np	np	16 058	5 445	361	7 946	8 668
1994–95	750	np	np	15 808	5 695	361	8 501	9 113
1995–96	666	np	np	15 297	5 442	389	8 829	9 439
1996–97	722	np	np	15 492	5 442	389	9 328	9 773
1997–98	750	np	np	16 392	6 779	417	9 641	10 280
1998–99	750	np	np	16 640	8 362	417	9 973	10 640
1999–00	805	np	np	17 081	8 526	417	10 332	10 415
2000–01	796	np	np	20 435	8 640	455	11 084	10 743
2001–02	796	np	np	21 185	8 787	455	11 403	10 465
2002–03	357	np	np	14 610	8 841	482	13 739	11 294
2003–04	355	np	np	14 690	8 853	523	14 065	11 486
2004–05	419	np	np	15 506	9 070	504	13 981	11 162
2005–06	514	np	np	15 628	9 332	550	14 342	11 527
2006–07	558	np	np	16 475	8 451	582	15 611	11 992
2007–08	566	np	np	16 671	8 038	569	15 582	11 991
2008–09	598	np	np	16 198	8 161	607	15 845	11 774
2009–10	629	np	np	17 291	7 961	746	16 212	11 784
2010–11	731	np	np	14 970	7 281	489	16 534	11 771
2011–12	683	np	np	14 888	8 474	468	16 539	11 334
2012–13	641	np	np	14 353	7 684	425	16 841	11 092
2013–14	469	np	np	13 657	7 904	419	16 894	10 171

np: Not available for publication but included in the totals.

Source: Industry (2014a) and Industry (2015b).

Table E 3.5c Electricity usage—Australian electricity consumption, by industry—Queensland

Financial year	Mining	Manufacturing			Electricity, gas and water		Other industries	Household consumption
		Iron and steel	Basic non-ferrous metals	Total manufacturing	Electricity generation	Other electricity, gas and water		
gigawatt hours								
1974–75	1 248	np	np	2 247	1 331	55	1 609	2 940
1975–76	1 250	np	np	2 389	1 472	56	1 584	3 028
1976–77	1 334	np	np	2 529	1 584	56	1 834	3 279
1977–78	1 333	np	np	2 582	1 721	56	2 055	3 554
1978–79	1 361	np	np	2 610	1 944	56	2 166	3 748
1979–80	1 334	np	np	2 834	1 945	56	2 528	3 862
1980–81	1 417	np	np	2 889	2 195	56	2 834	4 111
1981–82	1 528	np	np	3 167	2 306	56	3 111	4 473
1982–83	1 637	np	np	4 080	2 359	83	3 219	4 746
1983–84	1 583	np	np	6 026	2 666	83	3 305	4 888
1984–85	1 693	np	np	6 774	3 498	83	3 553	5 025
1985–86	1 805	np	np	7 024	4 165	83	3 998	5 192
1986–87	1 971	np	np	7 272	4 191	111	4 413	5 385
1987–88	2 112	np	np	7 586	3 918	83	4 946	5 668
1988–89	2 276	np	np	7 828	4 053	83	5 524	5 913
1989–90	2 472	np	np	8 195	4 389	111	5 972	6 334
1990–91	2 584	np	np	8 363	4 473	111	6 335	6 557
1991–92	2 777	np	np	8 386	5 026	139	6 692	6 803
1992–93	2 916	np	np	8 692	5 138	111	7 054	7 082
1993–94	3 083	np	np	9 081	5 221	111	7 331	7 387
1994–95	3 222	np	np	9 305	5 555	111	8 055	7 750
1995–96	3 194	np	np	9 555	5 917	111	8 805	7 972
1996–97	3 333	np	np	9 776	6 166	139	9 332	8 221
1997–98	3 583	np	np	12 720	6 999	139	9 887	8 582
1998–99	3 888	np	np	13 301	7 053	139	10 108	8 830
1999–00	4 222	np	np	13 832	7 027	139	10 665	9 027
2000–01	6 150	np	np	15 524	7 672	149	11 136	10 061
2001–02	6 105	np	np	15 738	7 943	0	11 411	10 166
2002–03	4 673	np	np	15 837	7 621	0	13 047	10 599
2003–04	4 800	np	np	15 989	10 087	0	13 336	11 162
2004–05	4 796	np	np	16 632	8 220	165	13 332	11 205
2005–06	4 800	np	np	16 918	7 824	162	13 415	11 285
2006–07	4 753	np	np	16 440	9 443	172	14 304	11 682
2007–08	4 940	np	np	16 208	8 823	314	14 575	11 968
2008–09	5 166	np	np	16 274	9 605	355	14 662	12 289
2009–10	5 104	np	np	16 432	9 311	244	14 743	12 573
2010–11	5 180	np	np	16 587	7 949	237	14 685	12 938
2011–12	5 318	np	np	16 741	8 104	234	14 337	12 818
2012–13	5 605	np	np	17 002	7 923	234	15 373	12 938
2013–14	5 891	np	np	16 691	6 841	270	15 376	12 666

np: Not available for publication but included in the totals.

Source: Industry (2014a) and Industry (2015b).

Table E 3.5d Electricity usage—Australian electricity consumption, by industry—South Australia

Financial year	Mining	Manufacturing		Total manufacturing	Electricity, gas and water		Other industries	Household consumption
	Iron and steel	Basic non-ferrous metals	Electricity generation		Other electricity, gas and water			
gigawatt hours								
1974–75	111	np	np	1 694	833	111	972	1 944
1975–76	111	np	np	1 693	860	166	1 082	2 053
1976–77	111	np	np	1 776	888	361	1 138	2 247
1977–78	111	np	np	1 803	943	416	1 248	2 275
1978–79	111	np	np	1 914	943	194	1 304	2 469
1979–80	139	np	np	1 970	999	194	1 359	2 413
1980–81	139	np	np	1 913	1 137	250	1 469	2 551
1981–82	139	np	np	2 002	1 084	195	1 529	2 669
1982–83	139	np	np	1 914	971	444	1 637	2 774
1983–84	250	np	np	1 830	1 109	194	1 636	2 662
1984–85	278	np	np	1 918	1 167	250	1 723	2 807
1985–86	278	np	np	2 002	1 224	278	1 780	2 809
1986–87	278	np	np	2 030	1 307	139	1 808	2 864
1987–88	277	np	np	2 137	1 332	139	1 970	2 969
1988–89	361	np	np	2 251	1 417	139	2 112	2 974
1989–90	416	np	np	2 524	1 359	139	2 219	3 134
1990–91	444	np	np	2 525	1 249	194	2 275	3 163
1991–92	445	np	np	2 585	1 390	195	2 252	3 113
1992–93	444	np	np	2 747	1 276	83	2 386	3 274
1993–94	416	np	np	2 830	1 360	194	2 442	3 191
1994–95	444	np	np	2 969	1 332	250	2 497	3 385
1995–96	444	np	np	2 970	1 415	139	2 525	3 386
1996–97	417	np	np	2 972	1 416	139	2 666	3 583
1997–98	416	np	np	3 080	1 415	194	2 775	3 691
1998–99	583	np	np	3 277	1 555	250	2 916	3 805
1999–00	612	np	np	3 336	1 640	306	2 975	3 948
2000–01	681	np	np	3 263	1 873	312	3 291	4 256
2001–02	655	np	np	3 103	1 964	313	3 444	4 013
2002–03	1 257	np	np	2 594	1 643	349	3 694	4 009
2003–04	1 248	np	np	2 631	1 706	347	3 812	4 444
2004–05	1 354	np	np	2 553	1 641	329	3 752	4 330
2005–06	1 318	np	np	2 852	1 571	323	3 818	4 394
2006–07	1 451	np	np	3 007	1 459	331	4 045	4 657
2007–08	1 413	np	np	2 928	1 435	325	4 088	4 675
2008–09	1 458	np	np	2 776	1 665	456	4 178	4 795
2009–10	1 312	np	np	2 788	1 605	298	4 251	4 966
2010–11	1 616	np	np	2 743	1 890	309	4 221	5 096
2011–12	1 631	np	np	2 658	1 699	343	4 129	5 052
2012–13	1 705	np	np	2 535	1 735	565	4 401	5 008
2013–14	1 772	np	np	2 647	1 912	453	4 360	4 803

np: Not available for publication but included in the totals.

Source: Industry (2014a) and Industry (2015b).

Table E 3.5e Electricity usage—Australian electricity consumption, by industry—Western Australia

Financial year	Mining	Manufacturing			Electricity, gas and water		Other industries	Household consumption
		Iron and steel	Basic non-ferrous metals	Total manufacturing	Electricity generation	Other electricity, gas and water		
gigawatt hours								
1974–75	1 414	np	np	1 414	776	55	1 054	1 275
1975–76	1 474	np	np	1 585	807	56	1 168	1 418
1976–77	1 497	np	np	1 830	804	55	1 275	1 525
1977–78	1 418	np	np	1 891	890	56	1 362	1 613
1978–79	1 360	np	np	1 998	943	55	1 415	1 720
1979–80	1 168	np	np	2 142	946	56	1 586	1 836
1980–81	1 083	np	np	2 082	1 000	83	1 638	1 999
1981–82	1 195	np	np	2 057	1 056	56	1 751	2 084
1982–83	1 167	np	np	2 112	1 056	56	1 862	2 112
1983–84	1 168	np	np	2 280	1 057	56	1 946	2 141
1984–85	1 276	np	np	2 747	1 249	55	2 109	2 275
1985–86	1 554	np	np	2 941	1 304	83	2 136	2 303
1986–87	1 554	np	np	3 053	1 332	83	2 415	2 443
1987–88	1 779	np	np	3 225	1 390	56	2 586	2 419
1988–89	2 497	np	np	3 330	1 498	83	2 886	2 553
1989–90	3 308	np	np	3 558	1 585	83	3 086	2 641
1990–91	3 473	np	np	3 584	1 639	111	3 223	2 778
1991–92	3 663	np	np	3 746	1 637	111	3 247	2 803
1992–93	3 719	np	np	3 996	1 665	111	3 330	2 803
1993–94	3 720	np	np	4 331	1 749	83	3 525	2 887
1994–95	4 167	np	np	4 500	1 833	83	3 695	3 083
1995–96	4 554	np	np	4 665	1 944	111	3 749	3 082
1996–97	4 580	np	np	4 718	1 860	83	3 886	3 164
1997–98	4 997	np	np	5 108	1 915	83	4 025	3 414
1998–99	5 359	np	np	6 386	1 971	111	4 026	3 554
1999–00	5 669	np	np	7 197	2 084	111	4 113	3 696
2000–01	4 627	np	np	7 016	2 540	151	4 657	4 143
2001–02	4 730	np	np	6 628	2 681	151	4 880	4 308
2002–03	4 773	np	np	5 392	1 089	118	4 775	4 341
2003–04	4 743	np	np	5 450	1 139	127	4 928	4 370
2004–05	4 787	np	np	5 490	1 355	123	4 954	4 226
2005–06	7 511	np	np	4 042	1 423	134	4 874	4 398
2006–07	7 214	np	np	4 892	1 370	141	5 196	4 602
2007–08	6 996	np	np	4 894	1 880	530	5 302	4 768
2008–09	8 013	np	np	6 950	2 241	397	5 400	4 709
2009–10	8 815	np	np	7 466	2 338	366	5 144	4 733
2010–11	10 779	np	np	6 452	2 701	630	5 647	5 731
2011–12	10 515	np	np	6 538	2 354	749	6 074	6 079
2012–13	11 712	np	np	7 121	2 259	802	6 326	5 656
2013–14	14 303	np	np	6 950	2 234	881	6 494	5 866

np: Not available for publication but included in the totals.

Source: Industry (2014a) and Industry (2015b).

Table E 3.5f Electricity usage—Australian electricity consumption, by industry—Tasmania

Financial year	Mining	Manufacturing		Total manufacturing	Electricity, gas and water		Other industries	Household consumption
	Iron and steel	Basic non-ferrous metals			Electricity generation	Other electricity, gas and water		
gigawatt hours								
1974–75	499	np	np	3 521	582	28	582	887
1975–76	473	np	np	3 420	556	28	640	918
1976–77	473	np	np	4 063	612	28	696	1 002
1977–78	500	np	np	4 309	584	28	723	1 057
1978–79	501	np	np	4 756	640	28	751	1 112
1979–80	500	np	np	4 837	639	28	778	1 167
1980–81	499	np	np	4 741	776	28	860	1 192
1981–82	500	np	np	4 893	639	28	862	1 251
1982–83	500	np	np	4 726	612	28	862	1 279
1983–84	473	np	np	4 837	667	28	890	1 279
1984–85	471	np	np	4 909	693	0	943	1 303
1985–86	500	np	np	4 976	695	0	945	1 334
1986–87	499	np	np	4 939	666	0	971	1 387
1987–88	501	np	np	5 479	667	28	1 001	1 335
1988–89	555	np	np	5 470	750	28	1 000	1 333
1989–90	583	np	np	5 556	750	28	1 000	1 306
1990–91	500	np	np	5 665	694	28	1 027	1 305
1991–92	500	np	np	5 523	694	28	1 055	1 332
1992–93	500	np	np	5 444	667	28	1 055	1 361
1993–94	527	np	np	5 465	666	28	1 054	1 359
1994–95	472	np	np	5 160	666	0	1 248	1 332
1995–96	556	np	np	5 277	667	28	1 361	1 389
1996–97	528	np	np	5 753	695	28	1 390	1 390
1997–98	527	np	np	5 802	722	0	1 443	1 388
1998–99	556	np	np	5 888	694	28	1 444	1 417
1999–00	555	np	np	5 916	694	28	1 472	1 472
2000–01	851	np	np	5 646	709	28	1 674	1 504
2001–02	569	np	np	5 803	711	28	1 735	1 877
2002–03	232	np	np	5 978	750	25	2 058	1 920
2003–04	387	np	np	5 979	768	27	2 060	2 080
2004–05	411	np	np	6 470	739	26	1 937	2 195
2005–06	422	np	np	6 204	725	28	1 925	2 200
2006–07	436	np	np	6 768	681	29	2 032	2 233
2007–08	463	np	np	6 620	657	28	2 041	2 259
2008–09	470	np	np	6 222	654	37	2 119	2 295
2009–10	447	np	np	6 331	741	19	2 106	2 392
2010–11	500	np	np	6 529	1 058	60	2 035	2 373
2011–12	534	np	np	6 057	683	66	1 984	2 344
2012–13	510	np	np	6 224	699	16	2 057	2 339
2013–14	466	np	np	6 120	706	75	2 025	2 301

np: Not available for publication but included in the totals.

Source: Industry (2014a) and Industry (2015b).

Table E 3.5g Electricity usage—Australian electricity consumption, by industry—Northern Territory

Financial year	Mining	Manufacturing			Electricity, gas and water		Other industries	Household consumption
		Iron and steel	Basic non-ferrous metals	Total manufacturing	Electricity generation	Other electricity, gas and water		
gigawatt hours								
1974–75	56	np	np	np	28	28	421	112
1975–76	56	np	np	np	84	28	393	140
1976–77	56	np	np	np	84	28	421	140
1977–78	55	np	np	np	111	28	443	138
1978–79	55	np	np	np	83	55	471	166
1979–80	138	np	np	np	83	55	633	193
1980–81	140	np	np	np	84	56	671	224
1981–82	165	np	np	np	83	55	660	220
1982–83	137	np	np	np	82	55	741	220
1983–84	138	np	np	np	83	55	772	248
1984–85	140	np	np	np	112	56	782	279
1985–86	168	np	np	np	112	56	812	308
1986–87	166	np	np	np	111	28	885	304
1987–88	168	np	np	np	84	56	922	335
1988–89	252	np	np	np	140	28	950	335
1989–90	332	np	np	np	111	55	997	332
1990–91	335	np	np	np	140	28	1 061	335
1991–92	305	np	np	np	166	55	1 080	360
1992–93	304	np	np	np	138	28	1 132	359
1993–94	305	np	np	np	111	55	1 108	388
1994–95	335	np	np	np	140	28	1 173	419
1995–96	526	np	np	np	111	55	1 217	443
1996–97	581	np	np	np	111	55	1 273	443
1997–98	599	np	np	np	136	54	1 280	490
1998–99	528	np	np	np	139	56	1 418	445
1999–00	530	np	np	np	139	56	1 451	530
2000–01	425	np	np	np	152	91	1 669	546
2001–02	606	np	np	np	151	91	1 575	545
2002–03	132	np	np	np	182	67	1 341	639
2003–04	141	np	np	np	187	72	1 357	636
2004–05	235	np	np	np	179	70	1 330	574
2005–06	317	np	np	np	184	54	1 338	643
2006–07	689	np	np	np	223	59	1 451	661
2007–08	638	np	np	np	204	59	1 491	669
2008–09	306	np	np	np	259	7	1 602	736
2009–10	367	np	np	np	300	48	1 786	778
2010–11	355	np	np	np	256	27	1 881	576
2011–12	489	np	np	np	173	16	1 985	468
2012–13	559	np	np	np	324	1	2 023	401
2013–14	660	np	np	np	81	41	2 257	435

np: Not available for publication but included in the totals.

Source: Industry (2014a) and Industry (2015b).

Table E 3.5h Electricity usage—Australian electricity consumption, by industry—Australia

Financial year	Mining	Manufacturing		Other manufacturing	Electricity, gas and water		Other industries	Household consumption
	Iron and steel	Basic non-ferrous metals			Electricity generation	Other electricity, gas and water		
gigawatt hours								
1974–75	4 583	4 500	6 972	13 084	10 361	694	11 695	22 112
1975–76	4 666	4 305	7 222	13 499	10 805	778	12 332	23 221
1976–77	4 917	4 250	7 972	14 083	12 083	1 000	13 417	25 333
1977–78	4 862	4 445	8 223	14 446	12 529	1 111	14 335	26 531
1978–79	4 917	4 861	8 695	15 140	13 862	945	15 334	28 196
1979–80	4 805	4 694	9 499	16 332	14 610	1 000	16 805	28 971
1980–81	5 000	4 833	10 555	16 666	15 527	1 167	18 110	30 498
1981–82	5 277	4 083	10 582	18 108	15 886	1 111	19 024	31 994
1982–83	5 416	3 472	11 165	17 720	15 470	1 389	19 581	32 329
1983–84	5 445	3 806	15 361	17 945	16 306	1 222	20 028	32 639
1984–85	5 861	3 916	18 304	18 637	18 498	1 250	21 192	33 302
1985–86	6 527	4 055	19 749	19 415	18 610	1 333	22 776	34 470
1986–87	6 777	4 083	21 193	20 193	19 277	1 194	24 360	35 553
1987–88	7 139	4 528	23 445	21 362	18 862	1 250	26 334	36 168
1988–89	8 361	4 527	25 776	22 637	20 471	1 250	28 137	36 637
1989–90	9 749	5 027	26 304	23 304	20 693	1 278	30 109	38 553
1990–91	9 888	4 777	26 581	23 553	19 887	1 389	31 497	39 246
1991–92	10 306	4 944	26 861	23 278	21 083	1 333	32 445	39 306
1992–93	10 582	5 138	27 748	24 026	20 887	1 278	33 358	40 635
1993–94	10 750	5 472	28 943	24 999	20 999	1 417	34 332	40 554
1994–95	11 472	5 722	27 860	25 860	22 055	1 500	36 527	42 166
1995–96	12 166	5 694	28 165	25 360	22 471	1 417	39 137	43 192
1996–97	12 304	5 832	29 440	25 718	22 580	1 444	40 855	44 771
1997–98	13 245	5 942	33 460	26 852	25 352	1 527	42 818	46 178
1998–99	14 085	6 084	35 864	27 447	27 169	1 611	44 504	47 227
1999–00	14 806	6 278	37 307	28 584	27 723	1 722	45 474	48 335
2000–01	16 434	6 250	45 686	24 912	29 715	2 199	47 798	51 647
2001–02	16 465	6 424	45 721	25 233	30 153	2 083	49 338	52 145
2002–03	14 484	3 288	35 417	26 895	28 488	2 257	57 250	53 901
2003–04	15 233	3 320	35 677	26 851	31 694	2 383	58 500	55 977
2004–05	15 467	3 874	37 183	26 107	30 150	2 457	57 995	55 138
2005–06	18 353	3 649	36 740	25 935	30 475	2 567	58 859	55 970
2006–07	18 830	3 869	38 438	27 449	31 174	2 695	62 705	57 690
2007–08	18 775	3 838	38 013	27 338	30 363	3 184	63 024	58 390
2008–09	19 769	3 561	40 051	26 463	32 025	2 903	63 421	59 298
2009–10	20 522	3 674	41 801	26 864	31 630	2 752	64 435	60 656
2010–11	23 026	4 390	38 539	27 381	30 146	2 658	64 946	62 537
2011–12	23 311	3 622	38 389	26 748	29 738	2 716	64 729	61 472
2012–13	25 228	3 664	36 809	25 760	27 510	2 663	67 505	60 538
2013–14	28 236	3 553	36 568	24 390	26 796	2 772	67 991	58 031

Source: Industry (2014a) and Industry (2015b).

Table E 3.6a Electricity usage—number of electricity customers, by state/territory—residential

At end of financial year	NSW ⁿ	VIC	QLD	SA ^o	WA ^p	TAS	NT ^q	ACT ⁿ	Australia
number									
1975–76	1 638 763	1 238 954	590 368	438 811	314 455	135 391	^r 16910	59 634	4 433 286
1976–77	1 670 130	1 267 648	609 173	453 501	337 193	139 132	^r 18540	63 732	4 559 049
1977–78	1 704 606	1 295 514	627 874	464 066	362 365	142 729	20 168	66 152	4 683 474
1978–79	1 736 954	1 319 274	641 056	471 670	372 467	145 780	20 254	69 954	4 777 409
1979–80	1 778 482	1 344 255	686 986	479 005	382 500	148 777	20 930	70 529	4 911 464
1980–81	1 827 382	1 368 502	715 571	486 018	397 740	151 615	21 537	72 518	5 040 883
1981–82	1 871 428	1 390 366	747 572	492 616	400 255	153 942	24 106	75 027	5 155 312
1982–83	1 910 929	1 410 782	778 871	500 328	407 679	156 016	25 678	77 517	5 267 800
1983–84	1 941 518	1 434 797	810 816	510 369	410 000	158 448	27 704	79 306	5 372 958
1984–85	1 977 262	1 463 053	841 251	522 654	443 222	161 755	30 842	81 784	5 521 823
1985–86	2 016 735	1 495 878	866 602	534 823	464 403	165 435	33 535	84 978	5 662 389
1986–87	2 047 229	1 523 100	889 389	544 326	481 310	168 796	33 883	88 542	5 776 575
1987–88	2 076 298	1 552 603	914 714	522 980	514 316	172 109	35 417	91 010	5 879 447
1988–89	2 110 063	1 585 877	954 244	561 293	520 623	175 472	36 592	93 549	6 037 713
1989–90	2 155 493	1 618 058	996 542	571 712	544 680	178 291	37 439	96 122	6 198 337
1990–91	2 197 765	1 639 066	1 031 612	581 503	556 378	182 340	38 252	99 078	6 325 994
1991–92	2 231 018	1 661 567	1 073 548	591 655	571 727	186 134	41 304	101 920	6 458 873
1992–93	2 302 524	1 684 837	1 123 671	594 229	590 546	190 308	42 588	105 588	6 634 291
1993–94	2 329 499	1 709 280	1 174 558	605 481	609 852	194 314	48 190	109 005	6 780 179
1994–95									
1995–96									
1996–97									
1997–98	2 555 906	1 804 169	1 346 548	630 060	673 571	206 926	54 998	7 272 178	
1998–99	2 513 792	1 800 026	1 382 747	636 283	676 947	205 138	56 686	7 271 619	
1999–00	2 572 324	1 871 775	1 426 420	642 878	692 475	207 285	58 550	7 471 707	
2000–01	2 610 259	1 896 991	1 460 916	649 387	722 853	207 336	54 748	7 602 490	
2001–02	2 661 016	1 942 595	1 487 968	657 209	736 100	208 380	55 779	7 749 047	
2002–03	2 850 155	2 005 664	1 491 127	660 926	742 270	208 795	62 317	8 021 254	
2003–04	2 876 498	2 048 182	1 558 783	659 211	748 903	211 422	62 330	8 165 329	
2004–05	2 919 583	2 097 560	1 574 167	670 743	820 703	213 832	61 222	8 357 810	
2005–06	2 949 376	2 109 756	1 603 756	679 069		216 983	61 555		
2006–07	2 923 107	2 141 284	1 629 232	688 524	807 136	219 809	61 783	8 470 875	
2007–08	2 977 603	2 164 899	1 670 789	697 518	883 932	220 148	63 800	8 678 689	
2008–09	3 000 551	2 190 588	1 697 545	708 242	909 680		60 805		
2009–10	3 058 479	2 248 207	1 742 545	717 813	928 654	229 420	62 522	8 987 640	
2010–11	3 089 086	2 269 037	1 767 850	725 439	946 513	228 128	64 854	9 090 907	
2011–12	3 116 809	2 312 250	1 806 860	732 350	961 804	229 663	64 808	9 224 544	
2012–13	3 148 350	2 344 031	1 842 983	737 582	971 097	233 979	67 441	9 345 463	
2013–14	3 189 194	2 377 337	1 857 602	743 918	996 657	235 170	75 669	9 475 547	

ⁿ From 1997–98, customer connections for ACT are included in the NSW figure.

^o The method of compiling South Australian customer numbers changed from 2003–04 and is not comparable to earlier years.

^p A breakdown of customer connections for Western Australia was not available for 2005–06. The method of compiling Western Australian customer numbers changed from 2007–08 and again in 2008–09. Estimates are not comparable to earlier years.

^q The method of compiling Northern Territory customer numbers changed from 2005–06 and is not comparable to earlier years.

^r Estimate only.

Note: Data are not readily available for missing years.

Source: esaa (2005) and esaa (2015).

Table E 3.6b Electricity usage—number of electricity customers, by state/territory—business

At end of financial year	NSW ⁿ	VIC	QLD	SA ^o	WA ^p	TAS	NT ^q	ACT ⁿ	Australia
number									
1975–76	189 831	212 722	103 590	76 372	33 852	31 999	3 725	6 886	658 977
1976–77	193 256	214 602	105 777	78 171	35 165	32 574	3 842	7 293	670 680
1977–78	197 424	215 600	109 315	79 736	37 812	33 141	3 957	7 698	684 683
1978–79	201 962	218 117	120 791	81 439	40 458	33 945	3 772	7 877	708 361
1979–80	205 546	221 392	110 348	83 387	42 675	34 689	4 201	7 593	709 831
1980–81	210 005	225 018	117 797	84 719	41 490	35 300	4 458	7 829	726 616
1981–82	214 174	226 919	126 009	85 849	59 156	35 609	4 659	7 319	759 694
1982–83	219 349	228 718	130 232	86 831	68 258	35 842	4 733	7 474	781 437
1983–84	223 425	232 144	135 705	87 792	80 639	36 755	4 795	7 636	808 892
1984–85	227 898	236 536	139 314	89 016	69 073	37 253	5 276	8 173	812 539
1985–86	233 894	238 419	146 119	90 830	71 707	37 849	5 768	8 507	833 093
1986–87	240 513	240 848	150 231	90 847	74 242	38 503	6 140	8 821	850 145
1987–88	247 375	246 856	156 614	91 283	70 558	39 209	6 617	9 369	867 881
1988–89	242 024	255 125	162 348	92 488	75 840	40 063	6 689	9 816	884 393
1989–90	248 015	255 895	165 650	93 570	78 318	40 670	6 950	10 244	899 312
1990–91	252 036	254 817	169 271	93 576	84 304	41 731	7 064	10 697	913 496
1991–92	264 021	256 222	172 743	93 784	85 050	42 000	8 330	10 820	932 970
1992–93	260 095	259 862	175 658	85 228	86 785	42 356	8 133	11 175	929 292
1993–94	270 419	262 286	181 103	85 559	89 622	43 086	9 315	11 669	953 059
1994–95									
1995–96									
1996–97									
1997–98	\$ 391 107	\$ 283 882	\$ 185 486	\$ 94 471	\$ 88 133	\$ 38 572	\$ 11 128		\$ 1 092 779
1998–99	337 090	285 271	\$ 193 566	66 303	\$ 98 655	27 821	\$ 11 663		\$ 1 020 369
1999–2000	358 674	226 217	173 719	64 199	\$ 102 271	28 653	\$ 11 283		\$ 965 016
2000–01	337 054	265 878	162 095	\$ 66 672	\$ 87 715	\$ 40 563	10 762		\$ 970 739
2001–02	319 964	268 453	164 248	\$ 67 743	\$ 92 013	27 662	11 093		\$ 951 176
2002–03	319 156	301 925	195 682	95 061	104 788	42 098	12 664		1 071 374
2003–04	337 501	303 481	192 454	95 626	118 164	42 100	13 066		1 102 392
2004–05	343 345	271 844	199 802	86 885	109 215	42 190	15 305		1 068 586
2005–06	348 482	311 820	205 283	97 425		42 147	12 078		
2006–07	410 577	313 330	216 421	97 980	117 977	43 102	13 499		1 212 886
2007–08	394 249	313 735	221 671	98 695	128 965	44 159	11 874		1 213 348
2008–09	394 817	315 256	211 191	99 311	141 654		11 275		
2009–10	371 501	313 895	204 783	99 457	127 207	50 369	11 482		1 178 694
2010–11	374 819	316 665	212 902	99 779	113 756	47 408	11 749		1 177 078
2011–12	378 233	321 226	215 740	99 723	124 490	48 293	12 900		1 200 605
2012–13	387 369	319 840	221 300	98 783	128 942	44 777	15 104		1 216 115
2013–14	407 330	321 142	227 379	99 203	129 259	42 356	13 632		1 240 301

ⁿ From 1997–98, customer connections for ACT are included in the NSW figure.

^o The method of compiling South Australian customer numbers changed from 2003–04 and is not comparable to earlier years.

^p A breakdown of customer connections for Western Australia was not available for 2005–06. The method of compiling Western Australian customer numbers changed from 2007–08 and again in 2008–09. Estimates are not comparable to earlier years.

^q The method of compiling Northern Territory customer numbers changed from 2005–06 and is not comparable to earlier years.

^s The number of “other” electricity customers is not separately available and has been included in estimates of the number of business customers.

Note: Data are not readily available for missing years.

Source: esaa (2005) and esaa (2015).

Table E 3.6c Electricity usage—number of electricity customers, by state/territory—other (including public lighting and traction)

At end of financial year	NSW ⁿ	VIC	QLD	SA	WA	TAS	NT	ACT ⁿ	Australia
number									
1975–76	661	377	131	145	190	117	3	660	2 284
1976–77	647	1 324	132	138	213	136	3	712	3 305
1977–78	683	1 424	132	145	237	135	0	755	3 511
1978–79	680	1 522	131	143	261	136	0	777	3 650
1979–80	877	1 582	132	133	281	141	0	823	3 969
1980–81	844	1 667	133	133	288	157	0	776	3 998
1981–82	701	1 732	133	134	169	176	0	792	3 837
1982–83	667	1 782	133	141	201	176	0	801	3 901
1983–84	729	1 836	133	145	179	184	0	986	4 192
1984–85	819	1 858	133	167	146	189	0	819	4 131
1985–86	732	1 926	133	165	144	205	0	821	4 126
1986–87	755	2 071	133	168	146	199	0	838	4 310
1987–88	749	2 073	133	172	146	209	5	867	4 354
1988–89	15 631	2 037	133	173	146	208	5	871	19 204
1989–90	16 723	2 009	133	172	148	208	5	912	20 310
1990–91	29 815	1 870	133	173	148	212	5	924	33 280
1991–92	29 300	2 007	133	166	150	214	5	950	32 925
1992–93	29 637	2 099	133	790	146	231	17	1 002	34 055
1993–94	25 461	14 121	132	1 496	151	207	33	1 005	42 606
1994–95									
1995–96									
1996–97									
1997–98	\$	\$	\$	\$	\$	\$	\$	\$	\$
1998–99	131 371	68 132	\$	31 197	\$	12 226	\$	\$	\$
1999–00	84 338	58 399	29 356	29 307	\$	12 322	\$	\$	\$
2000–01	129 084	55 843	32 496	\$	\$	\$	6 657	\$	\$
2001–02	132 889	57 418	32 272	\$	\$	12 502	6 939	\$	\$
2002–03									
2003–04									
2004–05									
2005–06									
2006–07									
2007–08									
2008–09									
2009–10									
2010–11									
2011–12									
2012–13									
2013–14									

ⁿ From 1997–98, customer connections for ACT are included in the NSW figure.

^s The number of other electricity customers is not separately available and has been included in estimates of the number of business customers.

Note: Data are not readily available for missing years.

Source: esaa (2005) and esaa updates.

Table E 3.6d Electricity usage—number of electricity customers, by state/territory—total

At end of financial year	NSW ⁿ	VIC	QLD	SA ^o	WA ^p	TAS	NT ^q	ACT ⁿ	Australia
number									
1975–76	1 829 255	1 452 053	694 089	515 328	348 497	167 507	20 638	67 180	5 094 547
1976–77	1 864 033	1 483 574	715 082	531 810	372 571	171 842	22 385	71 737	5 233 034
1977–78	1 902 713	1 512 538	737 321	543 947	400 414	176 005	24 125	74 605	5 371 668
1978–79	1 939 596	1 538 913	761 978	553 252	413 186	179 861	24 026	78 608	5 489 420
1979–80	1 984 905	1 567 229	797 466	562 525	425 456	183 607	25 131	78 945	5 625 264
1980–81	2 038 231	1 595 187	833 501	570 870	439 518	187 072	25 995	81 123	5 771 497
1981–82	2 086 303	1 619 017	873 714	578 599	459 580	189 727	28 765	83 138	5 918 843
1982–83	2 130 945	1 641 282	909 236	587 300	476 138	192 034	30 411	85 792	6 053 138
1983–84	2 165 672	1 668 777	946 654	598 306	490 818	195 387	32 499	87 928	6 186 041
1984–85	2 205 979	1 701 447	980 698	611 837	512 441	199 197	36 118	90 776	6 338 493
1985–86	2 251 361	1 736 223	1 012 854	625 818	536 254	203 489	39 303	94 306	6 499 608
1986–87	2 288 497	1 766 019	1 039 753	635 341	555 698	207 498	40 023	98 201	6 631 030
1987–88	2 324 422	1 801 532	1 071 461	614 435	585 020	211 527	42 039	101 246	6 751 682
1988–89	2 367 718	1 843 039	1 116 725	653 954	596 609	215 743	43 286	104 236	6 941 310
1989–90	2 420 231	1 875 962	1 162 325	665 454	623 146	219 169	44 394	107 278	7 117 959
1990–91	2 479 616	1 895 753	1 201 016	675 252	640 830	224 283	45 321	110 699	7 272 770
1991–92	2 524 339	1 919 796	1 246 424	685 605	656 927	228 348	49 639	113 690	7 424 768
1992–93	2 592 256	1 946 798	1 299 462	680 247	677 477	232 895	50 738	117 765	7 597 638
1993–94	2 625 379	1 985 687	1 355 793	692 536	699 625	237 607	57 538	121 679	7 775 844
1994–95	2 797 616	2 002 363	1 410 842	704 156	706 634	239 876	59 226		7 920 713
1995–96	2 834 776	2 035 584	1 457 364	711 050	725 430	241 818	61 305		8 067 327
1996–97	2 875 350	2 062 587	1 495 900	713 333	742 150	243 522	63 533		8 196 375
1997–98	2 947 013	2 088 051	1 532 034	724 531	761 704	245 498	66 126		8 364 957
1998–99	2 982 253	2 153 429	1 576 313	733 783	775 602	245 185	68 349		8 534 914
1999–00	3 015 336	2 156 391	1 629 495	736 384	794 746	248 260	69 833		8 650 445
2000–01	3 076 397	2 218 712	1 655 507	744 128	810 568	247 899	72 167		8 825 378
2001–02	3 113 869	2 268 466	1 684 488	751 802	828 113	248 544	73 811		8 969 093
2002–03	3 169 311	2 307 589	1 686 809	755 987	847 058	250 893	74 981		9 092 628
2003–04	3 213 999	2 351 663	1 751 237	754 837	867 067	253 522	75 396		9 267 721
2004–05	3 262 928	2 369 404	1 773 969	757 628	929 918	256 022	76 527		9 426 396
2005–06	3 297 858	2 421 576	1 809 039	776 494	892 601	259 130	73 633		9 530 331
2006–07	3 333 684	2 454 614	1 845 653	786 504	925 113	262 911	75 282		9 683 761
2007–08	3 371 852	2 478 634	1 892 460	796 213	1 012 897	264 307	75 674		9 892 037
2008–09	3 395 368	2 505 844	1 908 736	807 553	1 051 334	269 556	72 080		10 010 471
2009–10	3 426 356	2 562 102	1 947 328	817 270	1 055 861	279 789	74 004		10 162 710
2010–11	3 459 414	2 585 702	1 980 752	825 218	1 060 269	275 536	76 603		10 263 494
2011–12	3 485 897	2 633 476	2 022 600	832 073	1 086 294	277 956	77 708		10 416 004
2012–13	3 535 719	2 663 871	2 064 283	836 365	1 100 039	278 756	82 545		10 561 578
2013–14	3 596 524	2 698 479	2 084 981	843 121	1 125 916	277 526	89 301		10 715 848

ⁿ From 1997–98, customer connections for ACT are included in the NSW figure.

^o The method of compiling South Australian customer numbers changed from 2003–04 and is not comparable to earlier years.

^p A breakdown of customer connections for Western Australia was not available for 2005–06. The method of compiling Western Australian customer numbers changed from 2007–08 and again in 2008–09. Estimates are not comparable to earlier years.

^q The method of compiling Northern Territory customer numbers changed from 2005–06 and is not comparable to earlier years.

Source: esaa (2005) and esaa (2015).

Table E 3.7 Electricity usage—price index for residential electricity supply, by capital city

Average over financial year ending	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra
base of each index: 2011–12 = 100								
Jun-1981	14.5	18.3	18.9	14.1	24.8	14.6	22.7	14.9
Jun-1982	17.3	21.2	22.3	17.1	28.3	16.8	26.1	17.7
Jun-1983	23.7	24.7	26.8	21.3	32.5	18.7	32.2	24.9
Jun-1984	24.3	26.9	30.0	23.5	37.4	21.4	35.9	26.0
Jun-1985	25.3	28.1	34.0	26.6	38.8	23.6	38.7	26.8
Jun-1986	27.1	29.5	37.6	27.3	40.5	24.5	48.7	28.8
Jun-1987	27.8	31.5	38.7	28.3	45.1	27.8	53.9	30.5
Jun-1988	30.0	33.2	39.7	30.5	47.7	29.1	54.7	34.6
Jun-1989	32.9	34.3	40.3	32.0	47.7	30.6	54.7	36.8
Jun-1990	34.0	35.9	40.3	33.0	51.1	32.2	54.7	38.3
Jun-1991	33.6	38.5	40.9	34.1	55.1	36.1	55.2	39.9
Jun-1992	37.2	41.0	41.8	36.1	56.2	38.1	58.3	41.3
Jun-1993	38.3	44.8	42.5	36.9	56.2	39.8	59.4	43.4
Jun-1994	38.3	47.8	42.8	37.5	56.2	41.4	59.7	43.4
Jun-1995	38.3	47.8	43.1	37.1	56.2	41.8	59.7	43.5
Jun-1996	38.3	47.8	43.1	37.8	56.2	42.3	59.7	44.6
Jun-1997	38.9	48.2	43.1	39.5	56.2	43.7	59.7	44.6
Jun-1998	38.9	48.5	43.1	40.0	58.3	45.1	59.7	45.3
Jun-1999	38.9	42.1	43.1	40.8	58.3	45.4	62.9	46.5
Jun-2000	39.0	42.6	43.1	41.6	58.3	46.6	62.9	48.0
Jun-2001	42.7	48.0	48.7	46.7	63.7	53.0	68.6	54.1
Jun-2002	42.9	53.5	50.3	48.1	63.7	52.9	68.6	55.8
Jun-2003	44.3	55.3	51.9	56.2	63.7	55.0	68.6	56.3
Jun-2004	45.5	55.3	54.1	63.6	63.7	56.8	68.6	63.1
Jun-2005	49.4	55.0	55.5	62.8	63.7	58.2	68.6	63.9
Jun-2006	52.9	55.1	57.8	60.7	63.7	59.6	68.6	66.3
Jun-2007	55.9	55.8	59.9	62.3	63.7	62.0	70.5	69.1
Jun-2008	60.1	61.0	66.8	64.9	63.7	67.1	74.2	81.6
Jun-2009	65.5	69.1	72.4	69.8	65.3	73.8	77.1	87.0
Jun-2010	79.7	79.8	83.6	73.0	82.0	78.0	93.2	93.3
Jun-2011	86.9	91.9	94.5	81.9	95.2	86.6	97.6	94.9
Jun-2012	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Jun-2013	118.6	121.8	113.4	116.7	112.1	110.7	120.1	118.7
Jun-2014	123.5	127.0	134.8	117.4	116.4	109.7	134.3	122.3
Jun-2015	114.5	120.4	139.4	118.0	111.2	98.3	132.4	112.6
Jun-2016	109.3	122.7	141.4	107.5	118.0	100.2	131.9	107.4

Source: ABS (2016d).

Table E 3.8a Gas usage—Australian gas consumption, by industry—New South Wales

Financial year	Mining	Manufacturing			Electricity, gas and water		Other industries	Household consumption
		Petroleum, coal and chemicals	Basic non-ferrous metals	Other manufacturing	Electricity generation	Other electricity, gas and water		
gigalitres								
1974–75	0	np	np	196	0	39	68	157
1975–76	0	np	np	188	0	39	68	146
1976–77	0	np	np	225	0	251	68	146
1977–78	0	np	np	454	0	311	81	144
1978–79	0	np	np	689	0	295	99	144
1979–80	0	np	np	1 138	0	292	112	141
1980–81	0	np	np	1 441	0	292	123	146
1981–82	0	np	np	1 572	23	313	159	157
1982–83	0	np	np	1 655	31	319	172	170
1983–84	0	np	np	1 804	31	316	204	178
1984–85	0	np	np	1 820	42	303	209	188
1985–86	0	np	np	1 958	47	266	222	214
1986–87	0	np	np	2 084	44	292	245	222
1987–88	0	np	np	1 893	47	245	251	235
1988–89	0	np	np	1 906	42	219	266	245
1989–90	0	np	np	1 987	44	209	287	274
1990–91	0	np	np	1 854	44	172	303	298
1991–92	0	np	np	1 820	44	157	324	319
1992–93	0	np	np	1 869	44	123	342	358
1993–94	0	np	np	1 919	44	104	334	368
1994–95	0	np	np	1 971	44	91	366	397
1995–96	0	np	np	1 888	136	78	399	426
1996–97	0	np	np	2 282	274	81	415	454
1997–98	0	np	np	2 245	292	70	454	483
1998–99	0	np	np	2 230	397	63	473	535
1999–00	0	np	np	2 279	420	65	499	546
2000–01	31	np	np	2 491	436	97	277	554
2001–02	34	np	np	2 397	457	99	282	569
2002–03	47	np	np	2 410	431	36	312	548
2003–04	23	np	np	2 392	454	36	297	542
2004–05	30	np	np	2 237	471	43	303	541
2005–06	40	np	np	2 167	469	43	302	548
2006–07	44	np	np	2 131	326	2	296	555
2007–08	24	np	np	2 132	284	1	282	560
2008–09	0	np	np	1 993	552	25	284	585
2009–10	0	np	np	1 940	1 021	16	292	610
2010–11	0	np	np	1 975	978	20	291	634
2011–12	0	np	np	1 861	957	25	304	656
2012–13	0	np	np	1 775	1 068	219	311	672
2013–14	25	np	np	1 665	1 142	213	318	687

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.8b Gas usage—Australian gas consumption, by industry—Victoria

Financial year	Mining	Manufacturing			Electricity, gas and water		Other industries	Household consumption
		Petroleum, coal and chemicals	Basic non-ferrous metals	Other manufacturing	Electricity generation	Other electricity, gas and water		
gigalitres								
1974–75	379	np	np	1 204	np	np	353	588
1975–76	446	np	np	1 446	np	np	405	624
1976–77	464	np	np	1 649	np	np	515	763
1977–78	428	np	np	1 825	np	np	539	822
1978–79	464	np	np	1 938	np	np	763	910
1979–80	477	np	np	2 147	np	np	1 039	954
1980–81	430	np	np	2 291	np	np	1 747	1 044
1981–82	412	np	np	2 330	np	np	2 245	1 186
1982–83	528	np	np	2 240	np	np	1 920	1 219
1983–84	624	np	np	2 271	np	np	2 124	1 281
1984–85	552	np	np	2 332	np	np	1 572	1 343
1985–86	482	np	np	2 338	np	np	1 745	1 394
1986–87	492	np	np	2 394	np	np	1 322	1 508
1987–88	564	np	np	2 466	np	np	1 204	1 423
1988–89	539	np	np	2 534	np	np	1 410	1 464
1989–90	564	np	np	2 485	np	np	1 951	1 701
1990–91	521	np	np	2 299	np	np	1 459	1 691
1991–92	577	np	np	2 265	np	np	1 580	1 760
1992–93	580	np	np	2 325	np	np	1 639	1 812
1993–94	490	np	np	2 338	np	np	1 490	1 750
1994–95	523	np	np	2 446	np	np	1 832	1 918
1995–96	590	np	np	2 371	np	np	1 760	2 049
1996–97	603	np	np	2 392	np	np	1 119	2 046
1997–98	652	np	np	2 405	np	np	1 093	2 088
1998–99	459	np	np	2 188	np	np	1 126	2 000
1999–00	567	np	np	2 314	np	np	1 165	2 075
2000–01	552	np	np	2 263	np	np	1 410	2 137
2001–02	534	np	np	2 237	np	np	1 521	2 193
2002–03	475	np	np	2 202	np	np	1 513	2 205
2003–04	554	np	np	2 255	np	np	1 677	2 215
2004–05	470	np	np	2 250	np	np	1 740	2 234
2005–06	485	np	np	2 183	np	np	1 694	2 318
2006–07	489	np	np	2 129	np	np	1 724	2 352
2007–08	493	np	np	2 188	np	np	1 885	2 389
2008–09	627	np	np	2 251	np	np	1 867	2 462
2009–10	530	np	np	2 221	np	np	1 716	2 517
2010–11	542	np	np	2 150	np	np	1 576	2 584
2011–12	582	np	np	2 285	np	np	1 509	2 602
2012–13	591	np	np	2 240	np	np	1 798	2 677
2013–14	754	np	np	2 052	np	np	1 839	2 756

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.8c Gas usage—Australian gas consumption, by industry—Queensland

Financial year	Mining	Manufacturing						Other industries	Household consumption
		Petroleum, coal and chemicals	Basic non-ferrous metals	Other manufacturing	Electricity generation	Other electricity, gas and water			
gigalitres									
1974–75	0	np	np	228	np	np	35	28	
1975–76	0	np	np	205	np	np	35	30	
1976–77	0	np	np	205	np	np	38	28	
1977–78	0	np	np	243	np	np	38	30	
1978–79	0	np	np	246	np	np	38	30	
1979–80	0	np	np	284	np	np	35	33	
1980–81	0	np	np	304	np	np	33	35	
1981–82	5	np	np	319	np	np	35	35	
1982–83	10	np	np	372	np	np	41	35	
1983–84	15	np	np	382	np	np	46	33	
1984–85	25	np	np	370	np	np	84	33	
1985–86	35	np	np	370	np	np	89	35	
1986–87	38	np	np	380	np	np	81	35	
1987–88	56	np	np	453	np	np	84	38	
1988–89	51	np	np	405	np	np	84	38	
1989–90	46	np	np	418	np	np	89	41	
1990–91	43	np	np	797	np	np	91	41	
1991–92	73	np	np	820	np	np	91	41	
1992–93	94	np	np	805	np	np	94	41	
1993–94	122	np	np	904	np	np	89	43	
1994–95	124	np	np	914	np	np	84	43	
1995–96	122	np	np	939	np	np	114	33	
1996–97	127	np	np	924	np	np	111	28	
1997–98	132	np	np	962	np	np	142	35	
1998–99	144	np	np	1 101	np	np	349	35	
1999–00	142	np	np	1 134	np	np	554	38	
2000–01	253	np	np	1 167	np	np	780	38	
2001–02	266	np	np	1 165	np	np	818	38	
2002–03	215	np	np	1 523	np	np	607	36	
2003–04	229	np	np	1 528	np	np	677	37	
2004–05	247	np	np	1 551	np	np	610	62	
2005–06	266	np	np	1 588	np	np	581	64	
2006–07	284	np	np	1 621	np	np	2 228	66	
2007–08	358	np	np	1 731	np	np	2 347	68	
2008–09	441	np	np	1 816	np	np	2 575	69	
2009–10	413	np	np	1 838	np	np	2 626	70	
2010–11	449	np	np	1 838	np	np	2 521	72	
2011–12	483	np	np	1 853	np	np	3 708	73	
2012–13	554	np	np	2 053	np	np	3 261	77	
2013–14	601	np	np	2 046	np	np	3 642	80	

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.8d Gas usage—Australian gas consumption, by industry—South Australia

Financial year	Mining	Manufacturing			Electricity, gas and water		Other industries	Household consumption
		Petroleum, coal and chemicals	Basic non-ferrous metals	Other manufacturing	Electricity generation	Other electricity, gas and water		
gigalitres								
1974–75	57	np	np	253	np	np	898	107
1975–76	63	np	np	285	np	np	1 042	112
1976–77	60	np	np	389	np	np	1 332	128
1977–78	78	np	np	386	np	np	1 457	131
1978–79	86	np	np	381	np	np	1 520	141
1979–80	136	np	np	465	np	np	1 564	138
1980–81	157	np	np	496	np	np	1 640	138
1981–82	222	np	np	517	np	np	1 833	149
1982–83	240	np	np	512	np	np	1 843	154
1983–84	345	np	np	470	np	np	1 812	151
1984–85	554	np	np	543	np	np	1 872	159
1985–86	561	np	np	585	np	np	1 601	159
1986–87	593	np	np	525	np	np	1 535	170
1987–88	624	np	np	585	np	np	1 499	159
1988–89	577	np	np	561	np	np	1 606	170
1989–90	598	np	np	621	np	np	1 480	175
1990–91	567	np	np	621	np	np	1 159	178
1991–92	546	np	np	608	np	np	1 319	185
1992–93	538	np	np	574	np	np	1 397	191
1993–94	525	np	np	700	np	np	1 527	178
1994–95	538	np	np	760	np	np	1 389	191
1995–96	525	np	np	786	np	np	1 094	191
1996–97	530	np	np	791	np	np	1 081	196
1997–98	619	np	np	752	np	np	1 222	198
1998–99	621	np	np	715	np	np	1 608	201
1999–00	582	np	np	728	np	np	1 616	204
2000–01	679	np	np	616	np	np	1 671	206
2001–02	676	np	np	642	np	np	1 687	211
2002–03	764	np	np	704	np	np	1 613	228
2003–04	747	np	np	725	np	np	1 631	241
2004–05	661	np	np	785	np	np	1 697	267
2005–06	569	np	np	800	np	np	1 489	280
2006–07	443	np	np	787	np	np	2 059	278
2007–08	418	np	np	817	np	np	2 283	281
2008–09	478	np	np	683	np	np	2 054	287
2009–10	476	np	np	734	np	np	1 629	278
2010–11	445	np	np	673	np	np	1 779	278
2011–12	463	np	np	713	np	np	1 782	305
2012–13	446	np	np	650	np	np	1 832	309
2013–14	492	np	np	626	np	np	1 610	312

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.8e Gas usage—Australian gas consumption, by industry—Western Australia

Financial year	Mining	Manufacturing			Electricity, gas and water		Other industries	Household consumption
		Petroleum, coal and chemicals	Basic non-ferrous metals	Other manufacturing	Electricity generation	Other electricity, gas and water		
gigalitres								
1974–75	17	np	np	672	0	14	24	31
1975–76	17	np	np	682	0	14	22	34
1976–77	14	np	np	689	0	14	27	48
1977–78	14	np	np	655	2	14	22	48
1978–79	14	np	np	667	2	10	29	55
1979–80	12	np	np	689	2	12	31	53
1980–81	14	np	np	694	2	12	34	55
1981–82	19	np	np	646	2	12	39	53
1982–83	27	np	np	778	2	12	48	58
1983–84	24	np	np	757	17	10	65	60
1984–85	133	np	np	1 364	154	10	55	67
1985–86	142	np	np	1 622	805	14	123	75
1986–87	154	np	np	1 831	1 031	14	89	84
1987–88	255	np	np	1 954	1 253	29	104	94
1988–89	398	np	np	2 116	1 067	29	108	104
1989–90	829	np	np	2 227	1 111	14	113	125
1990–91	988	np	np	2 265	858	14	111	135
1991–92	1 077	np	np	2 306	896	14	120	142
1992–93	1 354	np	np	2 424	904	17	142	159
1993–94	1 480	np	np	2 600	1 164	22	181	173
1994–95	1 723	np	np	2 655	1 501	22	212	181
1995–96	1 993	np	np	2 614	1 301	22	227	190
1996–97	2 046	np	np	2 677	1 699	22	231	198
1997–98	2 207	np	np	2 718	2 058	22	243	205
1998–99	2 352	np	np	2 839	2 043	22	270	207
1999–00	2 458	np	np	2 913	2 031	24	284	207
2000–01	1 624	np	np	3 545	2 443	24	284	212
2001–02	1 680	np	np	3 627	2 451	24	316	219
2002–03	1 167	np	np	3 510	2 338	32	321	217
2003–04	1 166	np	np	3 703	2 473	33	320	210
2004–05	1 470	np	np	3 916	2 474	35	338	219
2005–06	1 678	np	np	3 978	2 482	38	348	218
2006–07	1 993	np	np	4 343	2 726	8	362	227
2007–08	2 026	np	np	4 117	3 088	6	367	233
2008–09	2 174	np	np	3 873	4 926	5	268	234
2009–10	2 153	np	np	3 991	4 830	4	240	236
2010–11	2 279	np	np	3 894	5 298	3	206	241
2011–12	2 339	np	np	3 993	5 315	2	209	243
2012–13	2 517	np	np	4 081	5 258	22	210	248
2013–14	2 553	np	np	4 322	5 456	24	229	253

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.8f Gas usage—Australian gas consumption, by industry—Tasmania

Financial year	Mining	Manufacturing			Electricity, gas and water		Other industries	Household consumption
		Petroleum, coal and chemicals	Basic non-ferrous metals	Other manufacturing	Electricity generation	Other electricity, gas and water		
<i>gigalitres</i>								
1974–75	0	np	np	0	np	np	3	3
1975–76	0	np	np	0	np	np	3	3
1976–77	0	np	np	0	np	np	3	3
1977–78	0	np	np	0	np	np	3	0
1978–79	0	np	np	0	np	np	0	3
1979–80	0	np	np	0	np	np	0	3
1980–81	0	np	np	0	np	np	0	3
1981–82	0	np	np	0	np	np	3	0
1982–83	0	np	np	0	np	np	3	0
1983–84	0	np	np	0	np	np	3	0
1984–85	0	np	np	0	np	np	3	0
1985–86	0	np	np	0	np	np	3	0
1986–87	0	np	np	0	np	np	3	0
1987–88	0	np	np	0	np	np	3	0
1988–89	0	np	np	0	np	np	3	0
1989–90	0	np	np	0	np	np	3	0
1990–91	0	np	np	0	np	np	3	0
1991–92	0	np	np	0	np	np	3	0
1992–93	0	np	np	0	np	np	3	0
1993–94	0	np	np	0	np	np	3	0
1994–95	0	np	np	0	np	np	3	0
1995–96	0	np	np	0	np	np	3	0
1996–97	0	np	np	0	np	np	3	0
1997–98	0	np	np	0	np	np	3	0
1998–99	0	np	np	0	np	np	0	3
1999–00	0	np	np	0	np	np	0	3
2000–01	0	np	np	0	np	np	3	0
2001–02	0	np	np	0	np	np	3	0
2002–03	0	np	np	16	np	np	13	2
2003–04	0	np	np	16	np	np	13	2
2004–05	0	np	np	28	np	np	14	2
2005–06	0	np	np	24	np	np	14	2
2006–07	0	np	np	32	np	np	14	2
2007–08	0	np	np	33	np	np	15	3
2008–09	0	np	np	116	np	np	3	3
2009–10	0	np	np	112	np	np	4	3
2010–11	0	np	np	158	np	np	3	3
2011–12	0	np	np	102	np	np	1	3
2012–13	0	np	np	108	np	np	1	3
2013–14	0	np	np	108	np	np	1	3

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.8g Gas usage—Australian gas consumption, by industry—Northern Territory

Financial year	Mining	Manufacturing			Electricity, gas and water		Other industries	Household consumption
		Petroleum, coal and chemicals	Basic non-ferrous metals	Other manufacturing	Electricity generation	Other electricity, gas and water		
gigalitres								
1974–75	0	np	np	0	0	0	0	0
1975–76	0	np	np	0	0	0	0	0
1976–77	0	np	np	0	0	0	0	0
1977–78	0	np	np	0	0	0	0	0
1978–79	0	np	np	0	0	0	0	0
1979–80	0	np	np	0	0	0	0	0
1980–81	0	np	np	0	0	0	0	0
1981–82	0	np	np	0	0	0	0	0
1982–83	0	np	np	0	0	0	0	0
1983–84	0	np	np	0	2	0	0	0
1984–85	2	np	np	0	25	0	0	0
1985–86	7	np	np	0	25	0	0	0
1986–87	12	np	np	0	114	0	0	0
1987–88	10	np	np	0	264	0	5	0
1988–89	2	np	np	0	264	0	5	0
1989–90	2	np	np	0	304	0	2	0
1990–91	2	np	np	0	321	0	2	0
1991–92	2	np	np	0	333	0	0	0
1992–93	0	np	np	0	336	0	5	0
1993–94	2	np	np	0	333	0	2	0
1994–95	2	np	np	0	363	0	5	0
1995–96	2	np	np	0	420	0	2	0
1996–97	2	np	np	2	435	0	7	0
1997–98	5	np	np	2	447	0	10	0
1998–99	5	np	np	2	479	0	12	0
1999–00	5	np	np	2	521	0	12	0
2000–01	5	np	np	2	528	0	5	0
2001–02	5	np	np	2	541	0	5	0
2002–03	4	np	np	1	336	0	8	0
2003–04	18	np	np	1	338	0	6	0
2004–05	18	np	np	1	355	0	6	0
2005–06	161	np	np	1	290	0	6	0
2006–07	489	np	np	1	348	0	6	0
2007–08	456	np	np	1	307	0	7	0
2008–09	519	np	np	1	461	0	7	0
2009–10	512	np	np	1	627	0	5	0
2010–11	392	np	np	1	612	0	5	0
2011–12	411	np	np	1	618	0	4	0
2012–13	479	np	np	0	621	0	5	0
2013–14	487	np	np	0	645	0	36	0

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.8h Gas usage—Australian gas consumption, by industry—Australia

Financial year	Mining	Manufacturing			Electricity, gas and water		Other industries	Household consumption
		Petroleum, coal and chemicals	Basic non-ferrous metals	Other manufacturing	Electricity generation	Other electricity, gas and water		
gigalitres								
1974–75	453	416	617	1 519	871	259	306	914
1975–76	525	460	614	1 731	1 023	259	346	949
1976–77	538	594	650	1 913	1 346	480	422	1 116
1977–78	521	764	655	2 145	1 447	548	471	1 175
1978–79	565	871	688	2 363	1 691	533	532	1 283
1979–80	625	1 132	721	2 869	1 937	571	580	1 322
1980–81	602	1 226	759	3 241	2 704	546	633	1 422
1981–82	659	1 366	774	3 243	3 324	589	753	1 580
1982–83	805	1 600	924	3 033	2 988	607	797	1 636
1983–84	1 008	1 592	881	3 211	3 151	607	872	1 703
1984–85	1 265	1 523	1 506	3 400	2 818	622	886	1 790
1985–86	1 228	1 551	1 655	3 665	3 412	584	943	1 878
1986–87	1 289	1 526	1 770	3 918	3 278	579	916	2 019
1987–88	1 509	1 671	1 808	3 873	3 550	515	922	1 949
1988–89	1 566	1 615	1 947	3 959	3 646	485	973	2 021
1989–90	2 039	1 775	2 059	3 903	4 093	475	1 041	2 316
1990–91	2 121	1 803	2 435	3 599	3 080	414	1 045	2 341
1991–92	2 276	1 754	2 539	3 527	3 351	411	1 119	2 447
1992–93	2 566	1 765	2 646	3 588	3 463	386	1 196	2 560
1993–94	2 618	1 881	2 790	3 788	3 715	371	1 209	2 512
1994–95	2 910	1 960	2 846	3 940	4 250	363	1 299	2 729
1995–96	3 232	1 973	2 828	3 797	3 847	343	1 367	2 888
1996–97	3 308	2 458	2 861	3 749	3 760	343	1 375	2 922
1997–98	3 615	2 465	2 879	3 740	4 238	335	1 484	3 009
1998–99	3 581	2 491	2 945	3 640	4 989	317	1 536	2 982
1999–00	3 754	2 643	2 986	3 743	5 251	330	1 612	3 072
2000–01	3 144	2 978	2 976	4 130	6 137	404	1 418	3 146
2001–02	3 194	2 902	2 999	4 169	6 276	444	1 482	3 231
2002–03	2 671	3 649	3 081	3 636	5 711	407	1 556	3 237
2003–04	2 739	3 737	3 200	3 683	6 137	462	1 553	3 246
2004–05	2 896	3 556	3 472	3 741	6 355	347	1 613	3 324
2005–06	3 199	3 611	3 564	3 566	6 068	352	1 604	3 429
2006–07	3 742	3 429	3 685	3 929	8 504	278	1 618	3 481
2007–08	3 774	3 668	3 543	3 808	9 333	280	1 648	3 533
2008–09	4 239	3 677	3 319	3 738	11 517	285	1 453	3 639
2009–10	4 084	4 001	3 107	3 729	11 531	280	1 505	3 713
2010–11	4 107	3 779	3 149	3 761	11 906	289	1 483	3 813
2011–12	4 278	3 854	3 420	3 535	13 065	294	1 471	3 883
2012–13	4 587	3 848	3 715	3 346	13 139	366	1 541	3 986
2013–14	4 912	3 862	3 800	3 157	13 478	333	1 593	4 090

Source: BITRE estimates based on Industry (2015b).

Table E 3.9 Gas usage—price index for gas and other household fuels, by capital city

Average over financial year ending	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra
base of each index: 2011–12 = 100								
Jun-1990	36.0	39.7	36.6	35.4	34.8	45.2	38.8	31.2
Jun-1991	39.1	42.0	39.2	37.6	38.0	51.2	41.8	35.2
Jun-1992	40.0	44.1	40.5	39.2	38.5	49.6	42.7	36.2
Jun-1993	39.8	47.5	40.8	39.8	38.5	49.7	43.5	36.5
Jun-1994	39.7	49.6	41.0	39.9	38.5	51.2	43.8	37.1
Jun-1995	39.8	51.7	41.2	40.8	38.7	51.3	45.0	37.8
Jun-1996	42.3	51.7	41.8	42.4	38.8	52.2	47.9	40.4
Jun-1997	43.3	52.7	41.8	44.0	39.0	53.6	49.2	41.9
Jun-1998	45.9	53.3	41.8	45.4	38.9	51.7	51.9	42.9
Jun-1999	47.3	50.8	41.8	46.0	39.4	51.2	54.2	44.5
Jun-2000	46.6	49.5	41.9	47.4	39.6	55.2	59.8	45.1
Jun-2001	53.2	54.1	47.8	53.7	43.9	62.9	68.0	52.1
Jun-2002	57.4	55.3	49.4	56.2	46.2	63.7	68.7	51.8
Jun-2003	62.5	58.5	51.0	59.2	47.7	67.0	70.3	55.1
Jun-2004	67.6	62.1	52.8	62.5	49.6	71.6	70.4	58.5
Jun-2005	70.1	65.4	56.1	66.9	51.4	75.1	73.4	62.2
Jun-2006	72.7	68.0	65.8	71.2	54.2	81.0	76.8	65.9
Jun-2007	75.0	70.9	70.6	74.7	56.6	80.8	83.2	68.9
Jun-2008	78.7	74.6	77.3	77.8	58.7	87.2	91.4	74.0
Jun-2009	83.0	81.8	83.8	84.9	68.5	94.8	97.9	84.8
Jun-2010	89.1	88.6	88.6	87.9	81.5	94.8	98.7	92.1
Jun-2011	94.0	94.5	93.1	93.1	89.7	96.5	104.7	95.1
Jun-2012	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Jun-2013	114.8	120.1	115.8	117.7	113.0	101.2	103.0	111.1
Jun-2014	125.8	124.8	122.2	131.6	119.2	104.2	113.5	116.1
Jun-2015	140.9	122.0	125.6	144.5	118.1	108.2	109.2	125.2
Jun-2016	109.3	130.8	128.3	150.0	119.7	110.7	105.8	131.1

Source: ABS (2016d).

Table E 3.10a Black coal usage—Australian black coal consumption, by industry—New South Wales

Financial year	Manufacturing						Electricity generation	Coastal bunkers (water transport)	Other industries
	Food beverages and tobacco	Wood, paper and printing	Cement, lime, plaster and concrete	Iron and steel	Basic non-ferrous metals	Other manufacturing			
kilotonnes									
1974–75	242	0	np	np	np	8 515	9 593	0	320
1975–76	251	0	np	np	np	8 072	9 239	0	343
1976–77	246	0	np	np	np	7 271	11 615	0	311
1977–78	231	0	np	np	np	7 454	12 450	0	287
1978–79	220	0	np	np	np	7 245	12 890	0	262
1979–80	215	0	np	np	np	6 909	14 642	0	231
1980–81	205	0	np	np	np	7 202	15 239	0	211
1981–82	205	0	np	np	np	6 577	14 664	0	173
1982–83	188	0	np	np	np	5 171	15 489	0	163
1983–84	217	0	np	np	np	4 956	16 255	0	158
1984–85	208	0	np	np	np	5 175	16 942	0	155
1985–86	217	0	np	np	np	5 002	18 195	0	148
1986–87	205	0	np	np	np	5 149	18 765	0	148
1987–88	213	0	np	np	np	5 313	19 205	0	139
1988–89	205	0	np	np	np	5 993	20 002	0	135
1989–90	200	0	np	np	np	5 486	20 516	0	126
1990–91	243	0	np	np	np	5 397	20 180	0	108
1991–92	229	0	np	np	np	5 487	20 501	0	79
1992–93	181	0	np	np	np	5 298	21 186	0	67
1993–94	185	0	np	np	np	5 558	21 683	0	54
1994–95	163	0	np	np	np	5 442	22 245	0	42
1995–96	166	0	np	np	np	4 950	23 305	0	33
1996–97	159	0	np	np	np	5 188	23 669	0	29
1997–98	151	0	np	np	np	5 197	24 016	0	21
1998–99	144	0	np	np	np	5 168	24 517	0	21
1999–00	142	0	np	np	np	4 590	24 808	0	17
2000–01	145	0	np	np	np	3 965	26 466	0	25
2001–02	146	0	np	np	np	4 030	26 649	0	25
2002–03	157	0	np	np	np	4 448	26 738	0	23
2003–04	158	0	np	np	np	4 806	27 819	0	26
2004–05	163	0	np	np	np	4 883	27 542	0	26
2005–06	169	0	np	np	np	4 823	28 207	0	10
2006–07	174	0	np	np	np	4 830	28 366	0	8
2007–08	194	0	np	np	np	4 918	30 691	0	3
2008–09	183	0	np	np	np	3 492	29 771	0	0
2009–10	178	0	np	np	np	4 601	27 631	0	0
2010–11	173	0	np	np	np	4 726	25 950	0	0
2011–12	124	0	np	np	np	3 900	25 639	0	0
2012–13	119	0	np	np	np	3 682	24 293	0	0
2013–14	120	0	np	np	np	3 409	22 768	0	0

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.10b Black coal usage—Australian black coal consumption, by industry—Victoria

Financial year	Manufacturing						Electricity generation	Coastal bunkers (water transport)	Other industries
	Food beverages and tobacco	Wood, paper and printing	Cement, lime, plaster and concrete	Iron and steel	Basic non-ferrous metals	Other manufacturing			
kilotonnes									
1974–75	0	0	np	np	np	3	0	0	0
1975–76	0	0	np	np	np	0	0	0	3
1976–77	0	0	np	np	np	4	0	0	0
1977–78	0	0	np	np	np	0	0	0	2
1978–79	0	0	np	np	np	0	0	0	2
1979–80	0	0	np	np	np	4	0	0	0
1980–81	0	0	np	np	np	4	0	0	0
1981–82	0	0	np	np	np	5	0	0	0
1982–83	0	0	np	np	np	3	0	0	0
1983–84	0	0	np	np	np	4	0	0	0
1984–85	0	0	np	np	np	4	0	0	0
1985–86	0	0	np	np	np	4	0	0	0
1986–87	0	0	np	np	np	3	0	0	0
1987–88	0	0	np	np	np	9	0	0	0
1988–89	0	0	np	np	np	2	0	0	0
1989–90	0	0	np	np	np	2	0	0	0
1990–91	0	0	np	np	np	0	0	0	0
1991–92	0	0	np	np	np	0	0	0	0
1992–93	0	0	np	np	np	0	0	0	0
1993–94	0	0	np	np	np	0	0	0	0
1994–95	0	0	np	np	np	0	0	0	0
1995–96	0	0	np	np	np	0	0	0	0
1996–97	0	0	np	np	np	0	0	0	0
1997–98	0	0	np	np	np	0	0	0	0
1998–99	0	0	np	np	np	0	0	0	0
1999–00	0	0	np	np	np	0	0	0	0
2000–01	0	0	np	np	np	0	0	0	0
2001–02	0	0	np	np	np	0	0	0	0
2002–03	0	0	np	np	np	0	0	0	0
2003–04	0	0	np	np	np	1	0	0	0
2004–05	0	0	np	np	np	2	0	0	0
2005–06	0	0	np	np	np	2	0	0	0
2006–07	0	0	np	np	np	2	0	0	0
2007–08	0	0	np	np	np	2	0	0	0
2008–09	0	0	np	np	np	2	0	0	0
2009–10	0	0	np	np	np	2	0	0	0
2010–11	0	0	np	np	np	2	0	0	0
2011–12	0	0	np	np	np	2	0	0	0
2012–13	0	0	np	np	np	2	0	0	0
2013–14	0	0	np	np	np	2	0	0	0

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.10c Black coal usage—Australian black coal consumption, by industry—Queensland

Financial year	Manufacturing						Electricity generation	Coastal bunkers (water transport)	Other industries
	Food beverages and tobacco	Wood, paper and printing	Cement, lime, plaster and concrete	Iron and steel	Basic non-ferrous metals	Other manuf-			
kilotonnes									
1974–75	54	54	np	np	np	1 379	3 732	0	37
1975–76	50	62	np	np	np	1 409	3 789	0	33
1976–77	46	62	np	np	np	1 538	4 111	0	33
1977–78	32	56	np	np	np	1 404	4 539	0	36
1978–79	31	55	np	np	np	1 528	4 537	0	31
1979–80	51	59	np	np	np	1 606	4 899	0	39
1980–81	79	59	np	np	np	1 601	5 305	0	39
1981–82	100	73	np	np	np	1 606	5 775	0	42
1982–83	100	77	np	np	np	1 641	6 620	23	42
1983–84	114	85	np	np	np	1 648	7 822	151	45
1984–85	112	84	np	np	np	1 688	8 368	136	44
1985–86	135	93	np	np	np	1 836	8 750	140	47
1986–87	151	98	np	np	np	2 004	9 497	169	44
1987–88	147	107	np	np	np	1 958	9 824	156	40
1988–89	156	89	np	np	np	2 137	10 295	174	40
1989–90	165	101	np	np	np	2 064	11 042	160	42
1990–91	179	97	np	np	np	2 008	11 379	171	40
1991–92	179	101	np	np	np	2 119	12 008	182	38
1992–93	195	86	np	np	np	2 112	12 615	186	27
1993–94	235	97	np	np	np	2 128	13 041	180	37
1994–95	255	96	np	np	np	2 165	13 928	182	32
1995–96	319	97	np	np	np	2 075	14 898	183	30
1996–97	313	134	np	np	np	2 178	15 226	197	29
1997–98	292	119	np	np	np	2 024	17 261	193	21
1998–99	299	60	np	np	np	2 140	17 842	191	16
1999–00	251	56	np	np	np	2 058	16 499	192	1 242
2000–01	165	64	np	np	np	2 191	19 047	225	- 37
2001–02	142	64	np	np	np	2 183	20 413	230	- 41
2002–03	269	144	np	np	np	1 994	21 551	242	29
2003–04	259	145	np	np	np	2 035	23 643	280	28
2004–05	251	159	np	np	np	2 242	25 718	387	28
2005–06	247	159	np	np	np	2 199	26 289	334	28
2006–07	251	161	np	np	np	2 315	27 158	358	28
2007–08	255	161	np	np	np	2 465	23 710	387	26
2008–09	252	0	np	np	np	2 430	27 043	234	26
2009–10	216	0	np	np	np	2 367	23 284	200	21
2010–11	249	0	np	np	np	1 973	21 321	142	16
2011–12	195	0	np	np	np	1 984	20 643	122	9
2012–13	218	0	np	np	np	2 187	20 252	0	5
2013–14	200	0	np	np	np	2 218	18 759	0	5

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.10d Black coal usage—Australian black coal consumption, by industry—South Australia

Financial year	Manufacturing						Electricity generation	Coastal bunkers (water transport)	Other industries
	Food beverages and tobacco	Wood, paper and printing	Cement, lime, plaster and concrete	Iron and steel	Basic non-ferrous metals	Other manufacturing			
kilotonnes									
1974–75	4	0	np	np	np	1 135	0	0	8
1975–76	0	0	np	np	np	1 065	0	0	0
1976–77	0	0	np	np	np	1 095	0	0	4
1977–78	0	0	np	np	np	1 006	0	0	5
1978–79	0	0	np	np	np	1 272	0	0	0
1979–80	0	0	np	np	np	1 211	0	0	0
1980–81	0	0	np	np	np	1 431	0	0	- 4
1981–82	0	0	np	np	np	1 154	0	0	0
1982–83	0	0	np	np	np	935	0	0	0
1983–84	0	0	np	np	np	1 193	0	0	0
1984–85	0	0	np	np	np	1 317	0	0	0
1985–86	0	0	np	np	np	1 443	0	0	0
1986–87	0	0	np	np	np	1 468	0	0	0
1987–88	0	0	np	np	np	1 551	0	0	- 5
1988–89	0	0	np	np	np	1 560	0	0	- 5
1989–90	0	0	np	np	np	1 548	0	0	- 5
1990–91	0	0	np	np	np	1 419	0	0	0
1991–92	0	0	np	np	np	1 395	0	0	0
1992–93	0	0	np	np	np	1 369	0	0	0
1993–94	0	0	np	np	np	1 295	0	0	- 5
1994–95	0	0	np	np	np	1 302	0	0	0
1995–96	0	0	np	np	np	1 307	0	0	0
1996–97	0	0	np	np	np	1 315	0	0	0
1997–98	0	0	np	np	np	1 355	0	0	0
1998–99	0	0	np	np	np	1 375	0	0	0
1999–00	0	0	np	np	np	928	0	0	0
2000–01	0	0	np	np	np	1 074	0	0	5
2001–02	0	0	np	np	np	750	0	0	0
2002–03	0	0	np	np	np	833	0	0	0
2003–04	0	0	np	np	np	840	0	0	0
2004–05	0	0	np	np	np	897	0	0	0
2005–06	0	0	np	np	np	904	0	0	0
2006–07	0	0	np	np	np	897	0	0	0
2007–08	0	0	np	np	np	880	0	0	0
2008–09	0	0	np	np	np	825	0	0	0
2009–10	0	0	np	np	np	908	0	0	0
2010–11	0	0	np	np	np	890	0	0	0
2011–12	0	0	np	np	np	878	0	0	0
2012–13	0	0	np	np	np	953	0	0	0
2013–14	0	0	np	np	np	872	0	0	0

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.10e Black coal usage—Australian black coal consumption, by industry—Western Australia

Financial year	Manufacturing						Electricity generation	Coastal bunkers (water transport)	Other industries
	Food beverages and tobacco	Wood, paper and printing	Cement, lime, plaster and concrete	Iron and steel	Basic non-ferrous metals	Other manuf-			
kilotonnes									
1974–75	0	0	np	np	np	76	1 708	0	46
1975–76	0	0	np	np	np	137	1 971	0	46
1976–77	0	0	np	np	np	157	2 094	0	35
1977–78	0	0	np	np	np	167	2 136	0	36
1978–79	0	0	np	np	np	177	2 188	0	46
1979–80	0	0	np	np	np	152	2 721	0	46
1980–81	0	0	np	np	np	208	2 914	0	46
1981–82	0	0	np	np	np	223	2 983	0	56
1982–83	0	0	np	np	np	269	3 136	0	35
1983–84	0	0	np	np	np	324	3 236	0	41
1984–85	0	0	np	np	np	755	3 365	0	56
1985–86	0	0	np	np	np	786	2 388	0	56
1986–87	0	0	np	np	np	608	2 331	0	132
1987–88	0	0	np	np	np	562	2 361	0	172
1988–89	0	0	np	np	np	578	3 233	0	182
1989–90	0	0	np	np	np	826	3 625	0	299
1990–91	0	0	np	np	np	856	4 398	0	284
1991–92	0	0	np	np	np	922	4 408	0	309
1992–93	0	0	np	np	np	1 033	4 461	0	304
1993–94	0	0	np	np	np	993	4 325	0	284
1994–95	0	0	np	np	np	988	3 977	0	375
1995–96	0	0	np	np	np	1 037	4 746	0	395
1996–97	0	0	np	np	np	983	4 576	0	405
1997–98	0	0	np	np	np	1 004	4 391	0	330
1998–99	0	0	np	np	np	1 013	4 312	0	329
1999–00	0	0	np	np	np	998	4 737	0	345
2000–01	0	0	np	np	np	1 061	4 629	0	325
2001–02	0	0	np	np	np	1 082	4 753	0	325
2002–03	0	0	np	np	np	1 382	5 393	0	0
2003–04	0	0	np	np	np	1 414	5 432	0	0
2004–05	0	0	np	np	np	1 335	5 315	0	0
2005–06	0	0	np	np	np	1 360	5 134	0	0
2006–07	0	0	np	np	np	1 410	5 103	0	0
2007–08	0	0	np	np	np	1 451	4 563	0	0
2008–09	0	0	np	np	np	1 620	5 017	0	422
2009–10	0	0	np	np	np	1 197	4 884	0	289
2010–11	0	0	np	np	np	1 208	5 135	0	283
2011–12	0	0	np	np	np	1 220	4 878	0	246
2012–13	0	0	np	np	np	1 484	5 397	0	157
2013–14	0	0	np	np	np	1 505	4 919	0	185

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.10f Black coal usage—Australian black coal consumption, by industry—Tasmania

Financial year	Manufacturing						Electricity generation	Coastal bunkers (water transport)	Other industries
	Food beverages and tobacco	Wood, paper and printing	Cement, lime, plaster and concrete	Iron and steel	Basic non-ferrous metals	Other manufacturing			
kilotonnes									
1974–75	4	0	np	np	np	88	0	0	18
1975–76	4	0	np	np	np	108	0	0	17
1976–77	4	0	np	np	np	165	0	0	17
1977–78	4	0	np	np	np	155	0	0	13
1978–79	4	0	np	np	np	174	0	0	9
1979–80	4	0	np	np	np	175	0	0	9
1980–81	9	0	np	np	np	181	0	0	17
1981–82	13	0	np	np	np	233	0	0	22
1982–83	16	0	np	np	np	287	0	0	21
1983–84	13	0	np	np	np	262	0	0	30
1984–85	26	0	np	np	np	293	0	0	30
1985–86	34	0	np	np	np	318	0	0	39
1986–87	39	0	np	np	np	324	0	0	22
1987–88	39	0	np	np	np	335	0	0	34
1988–89	39	0	np	np	np	375	0	0	34
1989–90	39	0	np	np	np	360	0	0	30
1990–91	35	0	np	np	np	376	0	0	22
1991–92	34	0	np	np	np	329	0	0	26
1992–93	34	0	np	np	np	301	0	0	22
1993–94	34	0	np	np	np	366	0	0	22
1994–95	38	0	np	np	np	375	0	0	26
1995–96	34	0	np	np	np	376	0	0	21
1996–97	34	0	np	np	np	391	0	0	17
1997–98	39	0	np	np	np	383	0	0	17
1998–99	39	0	np	np	np	364	0	0	17
1999–00	38	0	np	np	np	359	0	0	21
2000–01	68	0	np	np	np	325	0	0	21
2001–02	69	0	np	np	np	325	0	0	17
2002–03	67	0	np	np	np	203	0	0	8
2003–04	63	0	np	np	np	230	0	0	8
2004–05	62	0	np	np	np	256	0	0	8
2005–06	65	0	np	np	np	280	0	0	8
2006–07	60	0	np	np	np	285	0	0	8
2007–08	63	0	np	np	np	282	0	0	7
2008–09	75	0	np	np	np	342	0	0	7
2009–10	80	0	np	np	np	298	0	0	6
2010–11	75	0	np	np	np	206	0	0	4
2011–12	57	0	np	np	np	212	0	0	2
2012–13	57	0	np	np	np	316	0	0	1
2013–14	57	0	np	np	np	283	0	0	0

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.10g Black coal usage—Australian black coal consumption, by industry—Northern Territory

Financial year	Manufacturing						Electricity generation	Coastal bunkers (water transport)	Other industries
	Food beverages and tobacco	Wood, paper and printing	Cement, lime, plaster and concrete	Iron and steel	Basic non-ferrous metals	Other manufacturing			
kilotonnes									
1974–75	0	0	np	np	np	0	0	0	0
1975–76	0	0	np	np	np	0	0	0	0
1976–77	0	0	np	np	np	0	0	0	0
1977–78	0	0	np	np	np	0	0	0	0
1978–79	0	0	np	np	np	0	0	0	0
1979–80	0	0	np	np	np	0	0	0	0
1980–81	0	0	np	np	np	0	0	0	0
1981–82	0	0	np	np	np	0	0	0	0
1982–83	0	0	np	np	np	0	0	0	0
1983–84	0	0	np	np	np	0	0	0	0
1984–85	0	0	np	np	np	0	0	0	0
1985–86	0	0	np	np	np	0	0	0	0
1986–87	0	0	np	np	np	0	0	0	0
1987–88	0	0	np	np	np	0	0	0	0
1988–89	0	0	np	np	np	0	0	0	0
1989–90	0	0	np	np	np	0	0	0	0
1990–91	0	0	np	np	np	0	0	0	0
1991–92	0	0	np	np	np	0	0	0	0
1992–93	0	0	np	np	np	0	0	0	0
1993–94	0	0	np	np	np	0	0	0	0
1994–95	0	0	np	np	np	0	0	0	0
1995–96	0	0	np	np	np	0	0	0	0
1996–97	0	0	np	np	np	0	0	0	0
1997–98	0	0	np	np	np	0	0	0	0
1998–99	0	0	np	np	np	0	0	0	0
1999–00	0	0	np	np	np	0	0	0	0
2000–01	0	0	np	np	np	0	0	0	0
2001–02	0	0	np	np	np	0	0	0	0
2002–03	0	0	np	np	np	0	0	0	0
2003–04	0	0	np	np	np	0	0	0	0
2004–05	0	0	np	np	np	0	0	0	0
2005–06	0	0	np	np	np	0	0	0	0
2006–07	0	0	np	np	np	0	0	0	0
2007–08	0	0	np	np	np	0	0	0	0
2008–09	0	0	np	np	np	0	0	0	0
2009–10	0	0	np	np	np	0	0	0	0
2010–11	0	0	np	np	np	0	0	0	0
2011–12	0	0	np	np	np	0	0	0	0
2012–13	0	0	np	np	np	0	0	0	0
2013–14	0	0	np	np	np	0	0	0	0

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.10h Black coal usage—Australian black coal consumption, by industry—Australia

Financial year	Manufacturing						Electricity generation	Coastal bunkers (water transport)	Other industries
	Food beverages and tobacco	Wood, paper and printing	Cement, lime, plaster and concrete	Iron and steel	Basic non-ferrous metals	Other manufacturing			
kilotonnes									
1974–75	303	56	813	8 549	940	886	15 042	0	425
1975–76	303	65	745	8 186	1 006	839	15 015	0	439
1976–77	294	65	767	7 473	1 105	896	17 811	0	398
1977–78	266	60	700	7 488	1 045	812	19 264	0	377
1978–79	254	60	755	7 576	1 161	794	19 725	0	348
1979–80	271	64	732	7 230	1 238	758	22 359	0	322
1980–81	295	64	763	7 725	1 241	802	23 548	0	307
1981–82	322	80	861	6 859	1 169	801	23 520	0	291
1982–83	310	84	807	5 316	1 202	885	25 328	25	260
1983–84	346	89	688	5 464	1 272	904	27 360	157	272
1984–85	348	89	787	5 691	1 582	1 075	28 758	145	283
1985–86	390	96	793	5 635	1 704	1 149	29 430	144	290
1986–87	396	97	662	5 897	1 862	1 054	30 672	167	349
1987–88	400	106	646	6 099	1 847	1 027	31 495	155	387
1988–89	402	88	778	6 808	1 892	1 065	33 627	172	393
1989–90	404	98	739	6 334	1 883	1 219	35 294	154	502
1990–91	456	93	676	6 226	1 886	1 181	36 048	165	460
1991–92	442	97	643	6 311	2 007	1 186	37 024	176	460
1992–93	409	84	658	6 084	2 052	1 208	38 376	181	426
1993–94	451	93	769	6 234	2 087	1 159	39 146	173	399
1994–95	454	93	779	6 134	2 102	1 167	40 244	177	482
1995–96	513	93	688	5 786	2 032	1 171	43 026	176	490
1996–97	500	129	696	6 001	2 088	1 177	43 571	190	490
1997–98	480	116	754	5 924	2 063	1 124	45 763	189	400
1998–99	479	59	776	5 889	2 098	1 156	46 806	187	397
1999–00	435	57	706	5 052	2 066	1 098	46 037	194	1 638
2000–01	381	62	824	4 553	2 043	1 164	50 174	218	350
2001–02	357	62	820	4 581	2 034	1 169	51 579	222	335
2002–03	484	136	1 090	5 085	1 815	1 153	53 429	227	59
2003–04	473	136	1 131	5 461	1 852	1 190	56 618	264	61
2004–05	470	150	1 062	5 559	2 080	1 244	58 283	365	62
2005–06	476	150	1 069	5 509	2 051	1 275	59 328	315	45
2006–07	480	152	1 111	5 560	2 155	1 254	60 323	338	42
2007–08	506	152	1 145	5 607	2 276	1 264	58 711	364	35
2008–09	505	0	1 090	4 202	2 381	1 308	61 562	220	472
2009–10	471	0	1 098	5 441	1 983	1 140	55 510	188	328
2010–11	491	0	1 094	5 535	1 664	1 007	52 112	134	316
2011–12	370	0	1 024	4 716	1 687	1 037	50 894	114	268
2012–13	386	0	969	4 504	1 996	1 435	49 662	0	169
2013–14	370	0	914	4 108	2 164	1 353	46 195	0	197

Source: BITRE estimates based on Industry (2015b).

Table E 3.11 Black coal usage—coal prices (export)

Average over financial year ending	Hard coking coal	Semisoft coking coal \$A/tonne	Thermal coal
Jun-2002	81.77	66.51	57.51
Jun-2003	77.08	56.25	44.50
Jun-2004	64.26	49.10	40.98
Jun-2005	95.28	69.40	59.55
Jun-2006	157.49	111.65	65.02
Jun-2007	132.96	81.97	60.54
Jun-2008	129.66	97.46	72.70
Jun-2009	318.28	251.46	131.16
Jun-2010	174.59	125.37	88.06
Jun-2011	230.81	177.06	97.37
Jun-2012	237.00	177.13	108.04
Jun-2013	157.85	124.70	89.01
Jun-2014	136.84	114.82	85.83
Jun-2015	122.74	104.67	78.54

Source: Industry (2015c).

Table E 3.12a Brown coal usage—Australian brown coal consumption, by industry—New South Wales

Financial year	Mining	Manufacturing	Electricity generation kilotonnes	Households	Other industries
1974–75	0	0	0	0	0
1975–76	0	0	0	0	0
1976–77	0	0	0	0	0
1977–78	0	0	0	0	0
1978–79	0	0	0	0	0
1979–80	0	0	0	0	0
1980–81	0	0	0	0	0
1981–82	0	0	0	0	0
1982–83	0	0	0	0	0
1983–84	0	0	0	0	0
1984–85	0	0	0	0	0
1985–86	0	0	0	0	0
1986–87	0	0	0	0	0
1987–88	0	0	0	0	0
1988–89	0	0	0	0	0
1989–90	0	0	0	0	0
1990–91	0	0	0	0	0
1991–92	0	0	0	0	0
1992–93	0	0	0	0	0
1993–94	0	5	0	0	0
1994–95	0	5	0	0	0
1995–96	0	5	0	0	0
1996–97	0	0	0	0	0
1997–98	0	0	0	0	0
1998–99	0	10	0	0	0
1999–00	0	10	0	0	0
2000–01	0	9	0	0	0
2001–02	0	9	0	0	0
2002–03	0	3	0	0	0
2003–04	0	3	0	0	0
2004–05	0	3	0	0	0
2005–06	0	3	0	0	0
2006–07	0	3	0	0	0
2007–08	0	3	0	0	0
2008–09	0	2	0	0	0
2009–10	0	1	0	0	0
2010–11	0	0	0	0	0
2011–12	0	0	0	0	0
2012–13	0	0	0	0	0
2013–14	0	0	0	0	0

Source: BITRE estimates based on Industry (2015b).

Table E 3.12b Brown coal usage—Australian brown coal consumption, by industry—Victoria

Financial year	Mining	Manufacturing	Electricity generation kilotonnes	Households	Other industries
1974–75	2 673	na	na	304	na
1975–76	2 295	na	na	204	na
1976–77	2 501	na	na	166	na
1977–78	2 584	na	na	125	na
1978–79	2 715	na	na	101	na
1979–80	3 005	na	na	78	na
1980–81	2 612	na	na	65	na
1981–82	2 448	na	na	47	na
1982–83	1 819	na	na	33	na
1983–84	1 835	na	na	28	na
1984–85	1 953	na	na	23	na
1985–86	2 004	na	na	19	na
1986–87	1 935	na	na	19	na
1987–88	1 909	na	na	14	na
1988–89	1 663	na	na	14	na
1989–90	1 680	na	na	14	na
1990–91	1 686	na	na	9	na
1991–92	1 895	na	na	9	na
1992–93	1 200	na	na	9	na
1993–94	1 399	na	na	9	na
1994–95	1 358	na	na	9	na
1995–96	1 251	na	na	10	na
1996–97	1 472	na	na	10	na
1997–98	1 190	na	na	5	na
1998–99	922	na	na	5	na
1999–00	1 108	na	na	5	na
2000–01	859	na	na	5	na
2001–02	1 254	na	na	5	na
2002–03	26	na	na	5	na
2003–04	17	na	na	3	na
2004–05	18	na	na	4	na
2005–06	14	na	na	3	na
2006–07	11	na	na	2	na
2007–08	10	na	na	2	na
2008–09	0	na	na	2	na
2009–10	0	na	na	1	na
2010–11	0	na	na	1	na
2011–12	0	na	na	1	na
2012–13	0	na	na	1	na
2013–14	0	na	na	1	na

na: not available.

Source: BITRE estimates based on Industry (2015b).

Table E 3.12c Brown coal usage—Australian brown coal consumption, by industry—Australia

Financial year	Mining	Manufacturing	Electricity generation kilotonnes	Households	Other industries
1974–75	2 673	1 088	25 115	304	104
1975–76	2 295	1 024	27 417	204	94
1976–77	2 501	910	29 043	166	98
1977–78	2 584	886	28 350	125	88
1978–79	2 715	938	29 680	101	87
1979–80	3 005	893	30 319	78	87
1980–81	2 612	902	29 909	65	83
1981–82	2 448	834	35 436	47	85
1982–83	1 819	777	33 259	33	70
1983–84	1 835	744	31 682	28	79
1984–85	1 953	766	36 897	23	89
1985–86	2 004	865	35 130	19	90
1986–87	1 935	817	41 026	19	79
1987–88	1 909	847	42 941	14	89
1988–89	1 663	669	48 248	14	83
1989–90	1 680	585	46 292	14	90
1990–91	1 686	529	49 375	9	89
1991–92	1 895	443	50 804	9	85
1992–93	1 200	425	48 381	9	80
1993–94	1 399	381	49 252	9	85
1994–95	1 358	382	51 253	9	90
1995–96	1 251	374	54 198	10	97
1996–97	1 472	416	58 610	10	76
1997–98	1 190	385	67 102	5	57
1998–99	922	280	70 876	5	68
1999–00	1 108	310	71 360	5	95
2000–01	859	207	69 904	5	147
2001–02	1 254	108	70 448	5	127
2002–03	26	1 608	65 276	5	97
2003–04	17	1 119	67 218	3	50
2004–05	18	1 223	66 939	4	66
2005–06	14	949	68 557	3	53
2006–07	11	865	68 220	2	43
2007–08	10	809	68 635	2	39
2008–09	0	760	71 080	2	38
2009–10	0	632	70 504	1	34
2010–11	0	698	69 201	1	33
2011–12	0	781	70 418	1	34
2012–13	0	724	61 538	1	35
2013–14	0	691	59 841	1	50

Source: BITRE estimates based on Industry (2015b).

Table E 3.13a Petroleum usage—Australian petroleum fuel consumption¹, by industry—New South Wales

Financial year	Mining	Manufacturing			Transport				Residential	Total consumption
		Petroleum refining (excluding feedstock)	Basic chemicals	Other manu-fac-tur-ing	Road transport	Water transport	Air transport	Other transport		
gigalitres										
1974–75	73	np	np	2 985	4 938	878	822	214	417	11 176
1975–76	75	np	np	2 772	5 095	761	832	224	417	11 006
1976–77	80	np	np	2 734	5 393	849	831	228	465	11 248
1977–78	80	np	np	2 413	5 606	896	885	231	422	11 203
1978–79	86	np	np	2 314	5 903	780	858	240	420	4 890
1979–80	96	np	np	2 189	6 026	788	876	234	293	4 801
1980–81	104	np	np	1 806	6 175	800	848	224	214	4 920
1981–82	112	np	np	1 699	6 454	643	926	242	201	5 023
1982–83	111	np	np	1 132	6 187	647	837	185	154	8 948
1983–84	101	np	np	1 164	6 417	630	910	203	132	9 334
1984–85	96	np	np	1 042	6 601	573	1 000	218	128	9 486
1985–86	103	np	np	1 089	6 684	507	1 018	179	115	9 463
1986–87	116	np	np	989	6 763	450	1 027	207	109	9 353
1987–88	108	np	np	1 097	7 000	448	1 206	215	92	9 827
1988–89	136	np	np	1 145	7 171	470	1 334	205	83	10 159
1989–90	155	np	np	1 156	7 252	402	1 313	186	94	10 388
1990–91	158	np	np	1 268	7 089	357	1 430	178	112	10 596
1991–92	162	np	np	1 309	7 115	333	1 501	182	116	10 791
1992–93	162	np	np	1 490	7 309	347	1 621	189	91	10 954
1993–94	174	np	np	1 281	7 484	386	1 617	182	88	11 232
1994–95	174	np	np	1 517	7 731	519	1 778	176	88	11 886
1995–96	192	np	np	1 646	7 852	641	2 054	185	83	12 192
1996–97	223	np	np	1 150	8 000	532	2 138	193	101	12 287
1997–98	241	np	np	1 179	8 107	448	2 205	209	97	12 333
1998–99	247	np	np	1 372	8 378	488	2 164	220	88	12 423
1999–00	245	np	np	1 145	8 369	557	2 319	209	56	12 859
2000–01	260	np	np	1 560	8 325	389	2 492	184	81	12 880
2001–02	295	np	np	1 493	8 583	409	2 078	203	86	12 786
2002–03	301	np	np	406	8 269	330	1 805	248	86	12 303
2003–04	407	np	np	379	8 624	310	1 771	259	73	12 648
2004–05	454	np	np	385	8 506	360	1 987	257	74	12 822
2005–06	429	np	np	528	8 584	494	2 139	265	154	13 458
2006–07	410	np	np	565	8 757	470	2 393	268	163	13 870
2007–08	432	np	np	504	8 882	476	2 738	281	192	14 361
2008–09	454	np	np	620	8 939	367	2 679	269	189	14 358
2009–10	544	np	np	716	9 046	325	3 027	272	199	14 966
2010–11	644	np	np	652	9 372	251	3 205	295	232	15 473
2011–12	737	np	np	671	9 242	316	3 318	317	198	15 598
2012–13	815	np	np	628	9 193	212	3 396	324	176	15 522
2013–14	805	np	np	528	8 975	406	3 500	317	169	15 523

¹ See end notes.

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.13b Petroleum usage—Australian petroleum fuel consumption¹, by industry—Victoria

Financial year	Mining	Manufacturing			Transport				Residential	Total consumption
		Petroleum refining (excluding feedstock)	Basic chemicals	Other manufacturing	Road transport	Water transport	Air transport	Other transport		
gigalitres										
1974–75	44	np	np	1 725	3 825	682	383	704	596	8 068
1975–76	42	np	np	1 469	4 009	641	396	662	562	7 958
1976–77	49	np	np	1 670	4 229	645	399	670	596	8 499
1977–78	40	np	np	1 712	4 380	763	444	785	537	8 854
1978–79	35	np	np	1 681	4 513	702	422	726	510	8 957
1979–80	31	np	np	1 689	4 514	595	445	618	348	8 636
1980–81	18	np	np	1 515	4 561	570	471	595	240	8 234
1981–82	22	np	np	1 393	4 782	470	493	496	214	8 215
1982–83	18	np	np	1 289	4 766	414	471	424	196	7 711
1983–84	18	np	np	1 444	4 979	389	436	401	197	7 942
1984–85	20	np	np	1 523	5 165	419	470	435	183	8 128
1985–86	19	np	np	1 695	5 418	336	480	350	205	8 414
1986–87	22	np	np	1 675	5 694	403	543	410	220	8 835
1987–88	16	np	np	1 853	6 114	366	576	379	218	9 374
1988–89	16	np	np	1 936	6 428	391	568	399	208	9 832
1989–90	21	np	np	1 939	7 032	401	562	405	289	10 603
1990–91	23	np	np	1 993	6 779	317	591	319	243	9 980
1991–92	21	np	np	1 794	6 713	378	637	382	228	9 740
1992–93	23	np	np	1 915	6 907	309	615	313	261	10 127
1993–94	27	np	np	2 154	6 905	353	613	338	226	10 161
1994–95	26	np	np	2 118	7 023	390	701	373	202	10 525
1995–96	21	np	np	2 193	7 029	360	747	341	190	10 425
1996–97	18	np	np	2 075	6 902	380	785	362	161	10 210
1997–98	18	np	np	2 225	7 000	279	820	262	155	10 426
1998–99	18	np	np	2 180	6 949	295	814	281	113	10 400
1999–00	18	np	np	2 124	7 001	316	912	304	109	10 586
2000–01	25	np	np	1 512	7 214	239	1 007	231	152	10 568
2001–02	25	np	np	1 452	7 355	261	949	250	145	10 844
2002–03	9	np	np	1 014	7 658	252	898	321	134	10 682
2003–04	8	np	np	973	8 099	306	994	377	135	11 256
2004–05	14	np	np	959	7 996	306	1 056	420	130	11 277
2005–06	33	np	np	985	7 876	318	1 147	429	156	11 266
2006–07	39	np	np	792	7 813	296	1 100	421	146	10 886
2007–08	43	np	np	345	7 982	370	963	515	151	10 617
2008–09	40	np	np	333	7 626	425	1 087	573	145	10 336
2009–10	43	np	np	315	7 576	362	1 114	502	123	10 225
2010–11	50	np	np	368	8 154	318	1 152	460	154	10 938
2011–12	54	np	np	422	8 300	248	1 139	403	124	11 056
2012–13	61	np	np	500	8 549	176	1 279	338	158	11 483
2013–14	42	np	np	336	8 657	56	1 420	210	138	11 403

¹ See end notes.

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.13c Petroleum usage—Australian petroleum fuel consumption¹, by industry—Queensland

Financial year	Mining	Manufacturing			Transport				Residential	Total consumption
		Petroleum refining (excluding feedstock)	Basic chemicals	Other manu-fac-tur-ing	Road trans-port	Water trans-port	Air trans-port	Other trans-port		
gigalitres										
1974–75	np	np	np	945	1 962	225	269	162	98	4 566
1975–76	np	np	np	1 093	2 122	243	249	211	99	4 875
1976–77	np	np	np	1 127	2 242	257	236	243	103	5 192
1977–78	np	np	np	1 113	2 362	236	258	219	105	5 290
1978–79	np	np	np	1 104	2 499	239	252	250	103	5 513
1979–80	np	np	np	1 101	2 603	220	264	268	101	5 663
1980–81	np	np	np	1 059	2 735	233	265	262	96	5 791
1981–82	np	np	np	891	2 943	208	387	191	106	6 071
1982–83	np	np	np	605	2 964	176	391	179	76	5 673
1983–84	np	np	np	646	3 120	126	381	214	71	5 642
1984–85	np	np	np	679	3 254	94	402	220	76	5 879
1985–86	np	np	np	660	3 356	89	421	231	81	6 036
1986–87	np	np	np	641	3 454	124	436	224	87	6 141
1987–88	np	np	np	726	3 661	104	496	189	91	6 573
1988–89	np	np	np	740	3 862	147	559	156	87	6 986
1989–90	np	np	np	749	3 990	167	498	146	94	7 144
1990–91	np	np	np	380	3 990	105	624	158	93	6 822
1991–92	np	np	np	327	4 120	84	679	155	80	6 926
1992–93	np	np	np	362	4 315	72	769	166	89	7 287
1993–94	np	np	np	431	4 496	89	861	162	94	7 780
1994–95	np	np	np	440	4 718	172	1 004	177	88	8 282
1995–96	np	np	np	399	4 851	86	1 049	169	83	8 396
1996–97	np	np	np	402	4 912	106	1 103	151	85	8 649
1997–98	np	np	np	430	5 016	120	1 050	164	81	8 684
1998–99	np	np	np	410	5 076	56	1 070	110	77	8 630
1999–00	np	np	np	799	5 252	99	903	189	99	9 308
2000–01	np	np	np	403	5 395	127	936	229	108	9 205
2001–02	np	np	np	402	5 558	119	868	220	104	9 327
2002–03	np	np	np	327	5 784	79	899	296	103	9 342
2003–04	np	np	np	332	6 240	74	905	337	97	9 954
2004–05	np	np	np	343	6 270	78	982	326	86	10 294
2005–06	np	np	np	431	6 462	91	1 042	352	113	10 700
2006–07	np	np	np	417	6 824	130	1 126	372	126	11 256
2007–08	np	np	np	365	6 985	129	1 313	501	138	11 739
2008–09	np	np	np	295	6 897	93	1 352	415	140	11 572
2009–10	np	np	np	340	6 862	108	1 454	411	125	11 686
2010–11	np	np	np	396	6 833	135	1 498	389	144	11 879
2011–12	np	np	np	443	7 108	161	1 558	416	143	12 800
2012–13	np	np	np	440	7 262	136	1 619	440	154	13 352
2013–14	np	np	np	412	7 000	147	1 692	415	158	13 051

¹ See end notes.

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.13d Petroleum usage—Australian petroleum fuel consumption¹, by industry—South Australia

Financial year	Mining	Manufacturing			Transport				Residential	Total consumption
		Petroleum refining (excluding feedstock)	Basic chemicals	Other manufacturing	Road transport	Water transport	Air transport	Other transport		
gigalitres										
1974–75	34	np	np	513	1 349	80	112	91	121	2 677
1975–76	32	np	np	526	1 429	82	111	96	117	2 782
1976–77	79	np	np	344	1 519	102	116	96	127	2 790
1977–78	83	np	np	377	1 545	137	126	99	113	2 830
1978–79	88	np	np	304	1 595	147	129	96	115	1 382
1979–80	88	np	np	305	1 565	162	126	102	85	1 314
1980–81	81	np	np	179	1 541	161	132	107	64	1 290
1981–82	72	np	np	145	1 561	109	122	91	66	1 325
1982–83	53	np	np	99	1 600	129	129	83	50	2 405
1983–84	50	np	np	83	1 676	86	132	99	43	2 416
1984–85	40	np	np	93	1 756	76	137	96	61	2 505
1985–86	44	np	np	163	1 808	58	153	99	83	2 728
1986–87	46	np	np	144	1 838	65	157	101	73	2 700
1987–88	46	np	np	162	1 915	39	154	101	75	2 745
1988–89	50	np	np	176	1 969	55	179	109	70	2 867
1989–90	41	np	np	160	2 023	42	144	109	73	2 895
1990–91	36	np	np	146	1 947	32	178	106	69	2 860
1991–92	41	np	np	111	1 981	27	166	109	66	2 856
1992–93	42	np	np	103	2 022	52	170	112	67	2 891
1993–94	42	np	np	112	2 044	60	170	111	60	2 932
1994–95	46	np	np	135	2 046	44	179	106	73	3 071
1995–96	45	np	np	146	2 059	27	184	104	89	3 154
1996–97	45	np	np	119	2 067	27	189	106	60	2 969
1997–98	45	np	np	100	2 137	29	189	106	60	3 016
1998–99	68	np	np	97	2 158	22	201	106	54	3 086
1999–00	72	np	np	100	2 253	22	198	106	47	3 121
2000–01	79	np	np	92	2 251	10	202	63	48	3 110
2001–02	73	np	np	99	2 299	22	159	52	51	3 072
2002–03	103	np	np	60	2 332	12	145	79	45	3 112
2003–04	74	np	np	38	2 177	6	141	81	24	2 838
2004–05	79	np	np	41	2 173	13	154	67	27	2 860
2005–06	91	np	np	43	2 225	15	201	66	35	2 997
2006–07	80	np	np	54	2 288	14	200	66	36	3 070
2007–08	75	np	np	60	2 303	9	242	67	49	3 156
2008–09	109	np	np	51	2 290	19	212	113	51	3 158
2009–10	109	np	np	45	2 335	27	201	109	54	3 214
2010–11	165	np	np	49	2 371	29	245	127	65	3 352
2011–12	212	np	np	62	2 353	18	272	116	55	3 385
2012–13	278	np	np	54	2 364	19	302	123	56	3 484
2013–14	300	np	np	53	2 415	20	313	127	63	3 593

¹ See end notes.

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.13e Petroleum usage—Australian petroleum fuel consumption¹, by industry—Western Australia

Financial year	Mining	Manufacturing			Transport				Residential	Total consumption
		Petroleum refining (excluding feedstock)	Basic chemicals	Other manufacturing	Road transport	Water transport	Air transport	Other transport		
gigalitres										
1974–75	368	np	np	587	1 358	713	210	158	134	4 441
1975–76	370	np	np	750	1 428	600	216	166	140	4 569
1976–77	424	np	np	975	1 527	755	244	165	138	5 217
1977–78	422	np	np	1 027	1 596	747	256	168	137	5 371
1978–79	467	np	np	1 043	1 650	648	262	164	144	5 453
1979–80	512	np	np	996	1 681	589	260	151	126	5 260
1980–81	283	np	np	903	1 716	577	264	153	112	4 969
1981–82	212	np	np	845	1 814	362	282	138	101	4 655
1982–83	194	np	np	633	1 796	428	303	138	90	4 451
1983–84	200	np	np	865	1 899	323	270	123	83	4 589
1984–85	221	np	np	457	1 975	382	271	144	83	4 207
1985–86	223	np	np	163	2 027	267	294	148	79	3 740
1986–87	248	np	np	135	2 062	259	316	154	71	3 772
1987–88	257	np	np	97	2 167	387	301	148	55	3 955
1988–89	319	np	np	144	2 257	292	299	146	54	4 226
1989–90	404	np	np	96	2 323	256	299	146	58	4 478
1990–91	428	np	np	199	2 278	227	329	156	52	4 503
1991–92	456	np	np	121	2 311	211	351	165	54	4 511
1992–93	485	np	np	88	2 389	219	357	142	58	4 693
1993–94	525	np	np	83	2 476	221	390	150	49	4 888
1994–95	561	np	np	82	2 604	295	436	147	39	5 254
1995–96	683	np	np	133	2 675	259	462	144	39	5 545
1996–97	800	np	np	99	2 779	229	494	150	50	5 660
1997–98	751	np	np	114	2 919	152	490	143	74	5 611
1998–99	741	np	np	130	2 967	160	501	142	69	5 577
1999–00	784	np	np	130	2 998	139	503	147	70	5 587
2000–01	735	np	np	494	2 871	201	521	166	59	5 434
2001–02	792	np	np	679	3 056	279	429	163	113	5 832
2002–03	835	np	np	76	3 179	230	414	200	116	5 889
2003–04	763	np	np	98	3 200	229	406	215	107	5 975
2004–05	811	np	np	105	3 356	335	426	229	129	6 416
2005–06	766	np	np	78	3 228	286	715	239	63	6 385
2006–07	914	np	np	88	3 501	215	898	272	59	7 107
2007–08	985	np	np	225	3 457	235	712	274	66	7 278
2008–09	1 154	np	np	264	3 613	192	741	275	63	7 513
2009–10	1 099	np	np	227	3 620	202	770	296	64	7 474
2010–11	1 276	np	np	228	3 678	194	851	293	67	7 823
2011–12	1 612	np	np	218	3 733	184	905	375	66	8 331
2012–13	1 905	np	np	206	3 692	116	1 008	399	69	8 643
2013–14	1 993	np	np	220	3 713	108	1 081	421	70	9 011

¹ See end notes.

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.13f Petroleum usage—Australian petroleum fuel consumption¹, by industry—Tasmania

Financial year	Mining	Manufacturing			Transport				Residential	Total consumption
		Petroleum refining (excluding feedstock)	Basic chemicals	Other manufacturing	Road transport	Water transport	Air transport	Other transport		
gigalitres										
1974–75	np	np	np	np	415	55	23	10	84	1 050
1975–76	np	np	np	np	426	66	27	10	85	1 062
1976–77	np	np	np	np	461	63	28	11	96	1 081
1977–78	np	np	np	np	474	49	32	10	95	1 080
1978–79	np	np	np	np	493	41	39	10	87	1 108
1979–80	np	np	np	np	494	49	44	11	63	1 138
1980–81	np	np	np	np	491	48	38	10	46	1 094
1981–82	np	np	np	np	498	29	38	10	40	1 102
1982–83	np	np	np	np	491	18	37	10	30	868
1983–84	np	np	np	np	514	27	36	10	23	875
1984–85	np	np	np	np	535	15	37	13	21	872
1985–86	np	np	np	np	549	30	46	10	17	855
1986–87	np	np	np	np	553	28	38	10	17	819
1987–88	np	np	np	np	560	22	38	10	18	819
1988–89	np	np	np	np	579	20	34	10	20	834
1989–90	np	np	np	np	592	20	30	10	19	980
1990–91	np	np	np	np	588	13	33	13	13	1 178
1991–92	np	np	np	np	589	8	30	10	12	844
1992–93	np	np	np	np	618	10	32	10	15	863
1993–94	np	np	np	np	605	26	35	10	10	870
1994–95	np	np	np	np	613	23	36	10	14	887
1995–96	np	np	np	np	620	16	33	10	11	872
1996–97	np	np	np	np	627	13	36	10	10	866
1997–98	np	np	np	np	638	8	29	10	11	887
1998–99	np	np	np	np	642	5	29	10	3	894
1999–00	np	np	np	np	634	5	41	10	3	917
2000–01	np	np	np	np	600	5	33	13	3	897
2001–02	np	np	np	np	618	8	33	13	3	923
2002–03	np	np	np	np	637	17	32	13	3	925
2003–04	np	np	np	np	671	19	35	29	4	956
2004–05	np	np	np	np	658	9	43	30	2	924
2005–06	np	np	np	np	652	8	34	23	15	945
2006–07	np	np	np	np	658	8	33	23	12	949
2007–08	np	np	np	np	657	12	35	23	19	961
2008–09	np	np	np	np	632	5	39	36	20	923
2009–10	np	np	np	np	617	8	29	40	22	919
2010–11	np	np	np	np	605	8	28	27	22	866
2011–12	np	np	np	np	583	7	22	30	22	833
2012–13	np	np	np	np	575	21	22	15	25	830
2013–14	np	np	np	np	569	0	22	37	27	837

¹ See end notes.

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.13g Petroleum usage—Australian petroleum fuel consumption¹, by industry—Northern Territory

Financial year	Mining	Manufacturing			Transport				Residential	Total consumption
		Petroleum refining (excluding feedstock)	Basic chemicals	Other manufac-turing	Road transport	Water transport	Air transport	Other transport		
gigalitres										
1974–75	16	np	np	np	111	22	97	3	8	813
1975–76	13	np	np	np	123	8	65	1	5	778
1976–77	16	np	np	np	141	20	67	0	5	839
1977–78	13	np	np	np	153	8	78	- 1	5	881
1978–79	13	np	np	np	164	15	85	- 1	5	892
1979–80	16	np	np	np	179	33	91	1	5	997
1980–81	18	np	np	np	188	15	77	0	6	1 029
1981–82	13	np	np	np	206	8	80	1	6	964
1982–83	13	np	np	np	208	3	87	1	5	1 011
1983–84	13	np	np	np	226	5	93	- 1	10	1 080
1984–85	30	np	np	np	239	5	95	- 1	8	1 074
1985–86	21	np	np	np	245	3	104	1	9	1 114
1986–87	21	np	np	np	243	8	117	1	9	1 081
1987–88	23	np	np	np	253	8	123	0	10	990
1988–89	31	np	np	np	250	8	97	- 1	10	995
1989–90	37	np	np	np	249	3	113	1	9	1 039
1990–91	37	np	np	np	241	5	112	0	9	1 044
1991–92	31	np	np	np	242	3	139	0	9	1 083
1992–93	31	np	np	np	252	5	154	1	9	1 087
1993–94	28	np	np	np	257	13	173	1	9	1 126
1994–95	26	np	np	np	271	28	193	0	9	1 199
1995–96	34	np	np	np	279	23	186	- 1	9	1 260
1996–97	39	np	np	np	284	26	179	- 1	14	1 289
1997–98	49	np	np	np	283	41	158	- 1	5	1 294
1998–99	45	np	np	np	288	50	163	- 1	6	1 332
1999–00	46	np	np	np	286	51	203	- 1	6	1 370
2000–01	45	np	np	np	260	27	188	3	3	1 227
2001–02	40	np	np	np	264	22	169	2	3	1 215
2002–03	27	np	np	np	313	24	143	14	5	1 222
2003–04	59	np	np	np	296	17	160	14	5	1 289
2004–05	101	np	np	np	289	14	167	14	5	1 275
2005–06	166	np	np	np	243	30	164	11	5	1 228
2006–07	123	np	np	np	320	26	172	12	7	1 381
2007–08	102	np	np	np	316	33	149	12	10	1 457
2008–09	105	np	np	np	357	9	159	36	11	1 509
2009–10	107	np	np	np	411	9	161	14	8	1 153
2010–11	107	np	np	np	369	7	166	37	10	925
2011–12	108	np	np	np	342	5	206	32	10	954
2012–13	107	np	np	np	298	4	228	27	9	858
2013–14	113	np	np	np	280	4	214	25	10	846

¹ See end notes.

np: Not available for publication but included in the 'other manufacturing' category and the totals.

Source: BITRE estimates based on Industry (2015b).

Table E 3.13h Petroleum usage—Australian petroleum fuel consumption¹, by industry—Australia

Financial year	Mining	Manufacturing			Transport				Residential	Total consumption
		Petroleum refining (excluding feedstock)	Basic chemicals	Other manufacturing	Road transport	Water transport	Air transport	Other transport		
gigalitres										
1974–75	712	np	1 535	7 469	13 872	2 656	1 883	293	1 447	33 189
1975–76	712	np	1 254	7 290	14 535	2 399	1 849	362	1 419	33 426
1976–77	843	np	1 298	7 535	15 383	2 690	1 854	413	1 533	35 266
1977–78	837	np	1 261	7 305	16 006	2 835	2 018	376	1 406	35 921
1978–79	875	np	1 248	7 118	16 686	2 568	1 966	417	1 377	36 277
1979–80	933	np	1 451	6 973	16 953	2 434	2 032	419	1 023	35 967
1980–81	702	np	1 347	6 127	17 327	2 402	2 011	421	774	34 807
1981–82	624	np	1 379	5 568	18 227	1 827	2 305	296	729	34 604
1982–83	577	np	1 076	4 297	17 936	1 772	2 234	226	600	32 272
1983–84	572	np	1 252	4 800	18 761	1 554	2 236	245	545	33 363
1984–85	593	np	1 357	4 471	19 430	1 518	2 388	692	521	33 574
1985–86	620	np	1 587	4 446	19 952	1 261	2 496	652	538	34 028
1986–87	688	np	1 483	4 270	20 418	1 300	2 618	659	541	34 325
1987–88	701	np	1 713	4 732	21 424	1 352	2 890	598	503	35 950
1988–89	830	np	1 735	4 883	22 248	1 350	3 032	551	496	37 634
1989–90	955	np	1 966	5 051	22 887	1 274	2 935	472	561	38 619
1990–91	982	np	1 944	4 977	22 513	1 071	3 281	473	557	38 278
1991–92	1 019	np	1 845	4 700	22 672	1 003	3 501	444	534	38 200
1992–93	1 072	np	2 036	5 027	23 356	958	3 709	437	559	39 528
1993–94	1 132	np	2 035	5 147	23 886	1 057	3 856	360	512	40 636
1994–95	1 204	np	2 125	5 419	24 773	1 438	4 339	320	511	42 749
1995–96	1 385	np	2 218	5 477	25 255	1 360	4 728	307	501	43 933
1996–97	1 555	np	1 513	4 530	25 560	1 264	4 945	277	489	43 556
1997–98	1 599	np	1 496	4 732	26 016	1 056	4 945	313	491	44 120
1998–99	1 630	np	1 419	4 792	26 208	1 010	4 937	268	369	44 268
1999–00	1 673	np	1 360	5 004	26 637	1 166	5 083	306	387	45 715
2000–01	1 871	np	1 342	4 734	26 721	1 030	5 388	330	476	45 295
2001–02	2 001	np	1 403	4 877	27 475	1 126	4 691	309	521	46 064
2002–03	2 229	np	649	2 470	28 150	927	4 337	991	489	43 475
2003–04	2 330	np	636	2 389	29 285	930	4 416	1 066	438	44 916
2004–05	2 657	np	623	2 451	29 251	980	4 819	1 092	430	45 868
2005–06	2 614	np	686	2 615	29 305	1 062	5 445	1 114	542	46 979
2006–07	2 654	np	735	2 462	30 315	1 033	5 926	1 191	544	48 519
2007–08	2 819	np	533	2 096	30 657	1 070	6 155	1 352	627	49 569
2008–09	3 070	np	711	2 042	30 546	1 019	6 269	1 318	624	49 369
2009–10	3 147	np	734	2 008	30 650	802	6 756	1 312	595	49 637
2010–11	3 610	np	769	1 952	31 458	695	7 145	1 343	709	51 256
2011–12	4 489	np	736	2 071	31 727	696	7 420	1 484	626	52 957
2012–13	5 205	np	818	1 997	31 913	549	7 854	1 548	677	54 172
2013–14	5 271	np	723	1 702	31 577	625	8 242	1 531	654	54 264

¹ See end notes.

Source: BITRE estimates based on Industry (2015b).

Table E 3.14 Petroleum usage—world crude oil prices, by region of origin

Average over financial year	World Trade Weighted	Dubai ²	Brent ³	West Texas Intermediate ⁴	Gippsland ⁵	Tapis ⁶
				US\$/bbl		
1990–91	21.95	20.74	24.64	25.32		
1991–92	17.76	16.96	19.61	20.89		
1992–93	17.74	16.91	19.08	20.52		
1993–94	14.45	13.88	15.51	16.74		
1994–95	16.83	16.20	17.31	18.48		
1995–96	17.44	16.30	17.92	19.38		
1996–97	20.55	19.35	21.20	22.47		
1997–98	14.88	15.10	16.47	17.59	16.52	18.04
1998–99	12.08	12.61	13.01	14.49	13.33	13.07
1999–00	23.73	22.96	25.07	25.84	25.00	24.33
2000–01	26.35	26.25	28.90	30.10	29.48	29.23
2001–02	21.24	21.78	22.75	23.80	23.01	24.15
2002–03	26.21	25.90	27.78	29.86	28.59	28.79
2003–04	29.20	29.47	31.31	33.76	32.99	33.20
2004–05	41.43	40.80	46.24	48.80	48.36	49.18
2005–06	57.52	58.32	62.42	64.27	64.60	66.73
2006–07	59.96	61.27	63.94	63.37	67.53	69.32
2007–08	92.23	90.42	95.27	96.85	98.45	100.87
2008–09	67.21	63.88	68.75	70.29	71.07	74.13
2009–10	73.39	73.44	74.51	75.15	76.53	77.46
2010–11	93.11	75.07	96.00	89.29	98.87	100.74
2011–12	106.27	109.17	112.09	95.05	116.07	120.53
2012–13		105.71	108.63	92.15	109.25	114.45
2013–14		105.94	109.34	101.27	na	115.55
2014–15		73.12	74.21	70.03	na	77.13

^{2,3,4,5,6} See end notes.

Note: Data are not readily available for missing years.

na: Not available.

Source: Industry (2016a).

CHAPTER 4

Energy safety and emissions

Table E 4.1a Energy safety—number of hospital admissions (separations) due to exposure to electricity, radiation, extreme temperature/pressure—public hospitals

Financial year	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	Australia
1999–00	352	173	576	213	163	64	2	20	1 563
2000–01	352	175	507	257	121	54	7	18	1 491
2001–02	306	177	466	240	84	63	4	29	1 369
2002–03	323	257	373	236	92	69	3	21	1 374
2003–04	364	254	376	175	98	112	4	33	1 416
2004–05	349	212	302	167	99	95	7	12	1 243
2005–06	354	223	299	132	89	54	18	20	1 189
2006–07	357	242	272	128	85	61	10	14	1 169
2007–08	361	263	300	245	88	52	8	24	1 341
2008–09	340	223	251	381	85	49	11	15	1 355
2009–10	292	250	282	506	80	34	12	17	1 473
2010–11	290	262	326	325	55	27	5	21	1 311
2011–12	np	np	1 256						
2012–13	np	np	1 108						
2013–14	np	np	1 073						
change in methodology									
2014–15	np	np	695						

¹ See endnote

Note: 2014–15 data should not be compared with previous years see end notes.

Data on state of hospitalisation should be interpreted with caution because of cross-border flows of patients.

np Not available for publication but included in the totals.

Source: AIHW (2016b).

Table E 4.1b Energy safety—number of hospital admissions (separations) due to exposure to electricity, radiation, extreme temperature/pressure—private hospitals

Financial year	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	Australia
1999–00	18	31	67	18	18	6	0	0	158
2000–01	28	29	76	20	15	6	0	0	174
2001–02	24	20	127	8	np	np	0	0	185
2002–03	39	30	88	12	9	np	np	np	183
2003–04	59	12	85	10	7	np	np	np	180
2004–05	34	18	114	17	7	np	np	np	194
2005–06	40	19	128	19	9	np	np	np	219
2006–07	37	11	84	26	48	np	np	np	212
2007–08	35	9	68	38	59	np	np	np	214
2008–09	50	17	107	16	5	np	np	np	204
2009–10	32	17	92	30	2	np	np	np	178
2010–11	49	26	78	22	5	np	np	np	186
2011–12	np	np	np	np	np	np	np	np	140
2012–13	np	np	np	np	np	np	np	np	189
2013–14	np	np	np	np	np	np	np	np	196
change in methodology									
2014–15	np	np	np	np	np	np	np	np	39

¹ See endnote

Note: Data on state of hospitalisation should be interpreted with caution because of cross-border flows of patients.

Data are not readily available for missing years.

np Not available for publication but included in the totals.

Source: AIHW (2016b).

Table E 4.2 Energy emissions—public electricity and heat production greenhouse gas (carbon dioxide equivalent) emissions, by type of emissions

Year	Carbon dioxide gigagrams of CO ₂ equivalent	Methane	Nitrous oxide
1990	129 096.6	34.6	410.6
1991	131 266.5	33.4	421.8
1992	134 115.6	34.0	428.0
1993	135 024.2	34.5	444.5
1994	136 597.2	35.6	445.6
1995	142 196.8	38.2	464.3
1996	147 213.2	39.4	476.2
1997	152 193.0	40.0	527.3
1998	164 724.5	83.8	587.4
1999	170 956.4	85.2	577.4
2000	174 647.8	149.3	612.2
2001	181 825.9	157.0	699.3
2002	183 036.4	149.4	795.4
2003	185 522.3	144.3	883.4
2004	193 540.4	150.6	907.9
2005	195 666.7	143.9	948.4
2006	200 199.6	157.4	954.2
2007	202 966.7	340.2	996.9
2008	204 797.8	174.4	980.3
2009	210 254.0	392.5	1 048.0
2010	203 738.6	358.2	989.8
2011	197 146.0	245.0	1 098.0
2012	197 716.7	331.7	1 068.7
2013	185 720.4	282.4	1 023.2
2014	179 396.4	393.6	965.0

Source: Environment (2016).

Table E 4.3a Energy emissions—stationary energy, energy industries greenhouse gas (carbon dioxide equivalent) emissions—New South Wales

Calendar year	Solid fuels			Liquid fuels			Gaseous fuels		Renewable	
	Black coal	Brown coal	Brown coal briquettes	Fuel oil	Automotive diesel	Liquified petroleum gas oil (LPG)	Coal gas	Natural gas	Wood and wood waste	Gas biomass
gigagrams of CO ₂ equivalent										
1990	45 717.6		122.4	160.3	316.2	4.4		356.7		
1991	45 816.5		117.6	142.8	333.4	3.0		344.3		
1992	46 245.4		117.0	135.4	352.7	0.4		342.3		
1993	47 648.8		116.4	119.6	380.7	0.4		360.7		
1994	47 146.1		129.4	132.1	406.7	0.4		353.9		
1995	48 077.2		133.2	129.6	435.0	0.4		316.8		
1996	48 723.2		129.7	124.6	439.8	0.4		542.2		
1997	50 442.3		132.6	122.7	529.2	0.5		821.5		
1998	50 790.5		135.0	119.8	625.7	0.5	283.9	572.5		
1999	52 361.5		130.6	117.9	636.7	0.5	318.7	851.0		
2000	53 553.3		110.4	131.5	658.6	0.5	391.6	789.3	0.3	12.0
2001	56 363.8		93.2	139.5	705.1	4.0	463.8	786.7	0.2	11.8
2002	56 589.3		98.3	152.9	711.7	4.0	485.8	826.7	0.0	11.7
2003	56 296.2		68.3	160.3	942.9	6.2	359.8	1 040.6	1.8	14.5
2004	57 749.7		74.6	151.5	1 271.4	15.7		1 035.9	0.4	54.8
2005	57 433.0		74.6	157.5	1 478.6	19.4	335.8	1 157.7	0.5	16.3
2006	59 358.7		74.9	136.5	1 387.8	20.3	311.1	1 202.6	0.4	20.4
2007	60 923.0		75.8	136.2	1 351.1	16.8	388.4	1 976.0	0.2	21.3
2008	63 261.3		77.3	170.5	1 386.2	17.0	283.9	1 090.1	2.5	22.9
2009	62 125.5		60.1	53.5	1 472.8	97.7	186.4	1 292.8	2.2	25.0
2010	57 785.0		53.8	53.8	1 739.9	62.4	300.5	2 149.4	3.3	26.4
2011	54 017.6		63.4	35.0	2 022.5	68.9	321.7	2 106.1	3.5	23.0
2012	53 549.0		55.7	35.9	2 397.2	91.2	363.8	2 026.1	2.0	29.0
2013	50 838.6		50.5	30.8	2 675.8	0.5	375.8	2 145.1	3.4	27.5
2014	49 039.7			51.1	2 764.6	0.8	451.2	2 194.7	5.6	30.2

Note: For years where data are missing, emissions are either not estimated, included elsewhere or are not occurring.

Source: Environment (2016).

Table E 4.3b Energy emissions—stationary energy, energy industries greenhouse gas (carbon dioxide equivalent) emissions—Victoria

Calendar year	Solid fuels			Liquid fuels			Gaseous fuels		Renewable	
	Black coal	Brown coal	Brown coal briquettes	Fuel oil	Auto-motive diesel oil	Liquified petroleum gas (LPG)	Coal gas	Natural gas	Wood and wood waste	Gas biomass
gigagrams of CO ₂ equivalent										
1990	41 228.6	283.9	99.5	1.5			4 069.7			
1991	44 430.9	179.7	58.6	2.6			3 088.1			
1992	45 661.1	188.9	34.1	13.5			3 221.0			
1993	43 245.2	135.3	45.7	10.3			3 320.5			
1994	43 754.4	114.4	25.1	7.3			2 986.6			
1995	45 521.4	116.5	22.1	0.1			3 486.2			
1996	47 836.0	181.5	22.1	15.6			3 408.6			
1997	51 815.0	179.9	22.1	9.7			2 193.0			
1998	58 523.5	215.2	26.3				2 076.7			
1999	60 989.4	160.7	21.5	5.7			1 936.5			
2000	61 904.2	262.1	28.2	1.6			2 074.9		15.4	
2001	61 181.5	261.6	40.5	19.2	3.1		2 401.8		15.1	
2002	59 350.2	125.9	46.6	16.6	3.1		2 656.9		16.9	
2003	60 380.3	167.7	29.3	25.4	3.9		2 709.3		13.7	
2004	63 701.1	41.8	40.7	14.0	0.8		3 210.0	0.6	13.7	
2005	12.5	62 113.2	41.9	41.3	32.8	6.8	3 185.4	0.6	11.5	
2006		62 669.0	68.0	42.3	85.9	8.5	3 328.3	0.6	10.8	
2007		61 583.3	61.5	40.3	57.2	2.6	3 180.8	0.6	10.5	
2008		61 585.6	136.4	40.1	178.9	2.1	3 436.9	0.3	22.3	
2009		63 759.9	135.2	68.5	67.1	1.7	3 659.0		22.1	
2010		63 842.5	115.3	24.3	63.2	1.1	2 961.6		22.3	
2011	2.6	63 337.9	117.9	46.5	53.7	1.2	2 626.9		27.3	
2012	0.4	65 750.2	138.3	45.3	89.1	3.4	2 703.2		29.8	
2013		57 321.6	103.8	51.2	97.3	0.5	3 127.5		29.3	
2014		55 176.5		48.4	119.4	4.9	3 559.7	1.4	34.5	

Note: For years where data are missing, emissions are either not estimated, included elsewhere or are not occurring.

Source: Environment (2016).

Table E 4.3c Energy emissions—stationary energy, energy industries greenhouse gas (carbon dioxide equivalent) emissions—Queensland

Calendar year	Solid fuels			Liquid fuels			Gaseous fuels		Renewable	
	Black coal	Brown coal	Brown coal briquettes	Fuel oil	Auto-motive diesel	Liquified petroleum gas (LPG)	Coal gas	Natural gas	Wood and wood waste	Gas biomass
gigagrams of CO ₂ equivalent										
1990	22 381.5			53.0	917.8	8.9		364.6		
1991	23 012.9			41.6	947.7	6.1		392.4		
1992	24 268.0			35.7	949.8	0.8		419.8		
1993	25 790.0			58.5	992.2	0.8		472.5		
1994	26 370.5			54.0	1 040.2	0.8		492.9		
1995	28 231.3			45.0	1 077.5	0.8		481.1		
1996	29 136.0			43.5	1 116.9	0.8		629.7		
1997	30 392.0			43.4	1 198.5	0.8		645.7		
1998	34 622.5			70.5	1 210.5	0.7		673.6		
1999	35 552.2			58.9	1 296.7	0.7		1 217.3		
2000	35 522.1			32.6	1 485.5	0.7		1 672.1		1.3
2001	38 694.6			160.0	1 346.7	4.0		2 104.3		1.3
2002	41 173.2			35.4	1 519.0	3.9		2 457.6		1.9
2003	41 244.7			35.4	2 886.5	11.2	488.0	1 200.3	3.6	1.2
2004	44 402.6			46.0	2 996.0	0.0	501.6	1 653.1		1.3
2005	45 159.3			40.0	3 576.7	0.0	1 049.1	1 771.2	5.6	1.8
2006	46 758.4			37.4	3 225.6	0.0	1 770.4	1 776.9	5.7	1.8
2007	45 186.8			45.8	3 056.6	0.0	2 085.4	3 284.7	6.1	1.5
2008	44 369.0			43.2	3 104.8		1 956.9	3 788.3	6.1	1.8
2009	45 154.4			69.7	3 279.2	0.4	2 144.7	3 987.6	5.4	5.6
2010	43 658.2			69.5	3 273.7	18.5	3 303.3	2 790.9	6.3	7.7
2011	40 200.8			44.3	3 646.6	0.5	3 764.6	3 235.3	3.4	9.6
2012	39 050.3			11.6	4 409.0	1.8	5 568.7	2 821.7	1.8	9.9
2013	38 060.8			6.6	4 927.6	0.8	4 591.9	2 914.0	4.1	4.8
2014	35 079.4			28.8	5 192.6	21.4	3 476.3	4 908.2	4.5	6.8

Note: For years where data are missing, emissions are either not estimated, included elsewhere or are not occurring.

Source: Environment (2016).

Table E 4.3d Energy emissions—stationary energy, energy industries greenhouse gas (carbon dioxide equivalent) emissions—South Australia

Calendar year	Solid fuels			Liquid fuels			Gaseous fuels		Renewable	
	Black coal	Brown coal	Brown coal briquettes	Fuel oil	Auto-motive diesel oil	Liquified petroleum gas (LPG)	Coal gas	Natural gas	Wood and wood waste	Gas biomass
gigagrams of CO ₂ equivalent										
1990	337.5	3 886.4		26.0	22.4	3.0		3 767.8		
1991	431.9	3 349.6		16.7	42.3	3.0		3 081.4		
1992	605.2	3 657.3		21.1	23.5	2.4		3 334.5		
1993	565.6	3 561.5		24.3	27.3	2.4		3 531.8		
1994	291.6	3 456.0		19.2	29.8	2.4		3 666.2		
1995	213.3	3 410.0		19.5	34.2	2.4		3 437.7		
1996	71.5	3 228.9		54.4	19.7			2 907.7		
1997	311.3	3 535.6		16.3	45.9			2 930.8		
1998	205.1	3 612.2		18.0	50.8			3 270.8		
1999	221.2	3 795.3		86.6	32.5	16.1		3 990.0		
2000	148.1	4 251.5		88.3	32.2	14.9		3 691.1		27.4
2001	122.3	4 614.7		90.9	- 21.0	14.0		3 877.6		26.8
2002	142.2	4 705.8		37.0	11.6			4 061.8		12.1
2003	177.5	5 012.2		25.0	98.9			4 257.0	0.6	12.4
2004	116.9	4 451.6		32.0	176.4	0.0		4 312.6	0.6	12.5
2005	135.0	5 097.3		33.4	97.7	0.0		4 221.9	0.6	5.8
2006	264.0	4 825.1		30.1	104.7	0.0		4 316.0	0.5	6.2
2007	264.9	5 592.5		48.8	96.3	0.0		4 498.2	0.5	5.7
2008	253.3	5 246.7		43.2	92.7	0.0		4 886.1	3.8	3.9
2009	132.9	5 318.2		21.4	97.1	0.0		4 604.8		5.3
2010	182.6	5 090.2		20.1	169.4	0.0		4 373.3		5.2
2011	191.1	4 257.8		16.2	110.7	0.0		4 219.5		5.7
2012	191.6	3 186.6		13.5	117.5	0.0		4 153.1		5.2
2013	246.9	2 334.7		7.8	142.3	0.0		4 240.3		4.2
2014	200.2	2 102.2		6.4	149.4	0.5		3 756.4		5.2

Note: For years where data are missing, emissions are either not estimated, included elsewhere or are not occurring.

Source: Environment (2016).

Table E 4.3e Energy emissions—stationary energy, energy industries greenhouse gas (carbon dioxide equivalent) emissions—Western Australia

Calendar year	Solid fuels			Liquid fuels			Gaseous fuels		Renewable	
	Black coal	Brown coal	Brown coal briquettes	Fuel oil	Auto-motive diesel	Liquified petroleum gas oil (LPG)	Coal gas	Natural gas	Wood and wood waste	Gas biomass
gigagrams of CO ₂ equivalent										
1990	6 661.9			274.8	1 193.8			4 298.3		
1991	8 084.0			279.9	1 147.9			3 992.1		
1992	8 106.7			217.0	1 116.5			4 428.5		
1993	8 207.9			215.7	1 105.4			4 972.1		
1994	7 960.3			214.5	1 081.8			5 755.3		
1995	7 319.3			215.2	1 355.9			6 975.7		
1996	8 738.8			241.8	1 366.0			6 809.5		
1997	8 418.8			208.6	868.0			7 953.0		
1998	8 070.3			14.0	901.9			9 068.6		
1999	7 933.0			42.0	636.6			9 249.0		
2000	8 715.0			22.1	499.1			9 374.4		3.3
2001	8 495.7			25.3	433.4	2.3		10 392.1		3.3
2002	8 724.3			21.5	437.7	2.3		10 663.6		4.4
2003	9 899.5			14.0	982.6	2.9		9 369.6		7.1
2004	9 006.1			23.2	1 235.3	0.6		10 341.7		7.0
2005	9 182.7			77.7	1 256.1	0.7		11 728.9		3.5
2006	9 213.0			180.4	1 216.0	0.8		11 701.6	0.5	3.5
2007	8 432.3			173.4	1 263.1	0.8		12 368.8	0.1	3.3
2008	7 658.1			167.9	1 270.4	1.4		13 116.4		5.2
2009	9 358.0			16.7	1 245.2	3.8		15 046.6		10.2
2010	8 491.8			11.9	1 115.7	1.0		15 130.9		8.6
2011	9 497.9			12.4	1 236.3	0.6		16 120.3		8.2
2012	8 977.9			17.9	1 356.7	0.6		16 136.0		4.7
2013	9 832.5			17.5	1 550.8	0.6		16 314.8		3.4
2014	8 996.1			15.2	1 970.6	0.6		16 734.0		8.2

Note: For years where data are missing, emissions are either not estimated, included elsewhere or are not occurring.

Source: Environment (2016).

Table E 4.3f Energy emissions—stationary energy, energy industries greenhouse gas (carbon dioxide equivalent) emissions—Tasmania

Calendar year	Solid fuels			Liquid fuels			Gaseous fuels		Renewable	
	Black coal	Brown coal	Brown coal briquettes	Fuel oil	Auto-motive diesel oil	Liquified petroleum gas (LPG)	Coal gas	Natural gas	Wood and wood waste	Gas biomass
gigagrams of CO ₂ equivalent										
1990	46.4			503.7	20.2	0.0				
1991	46.4			699.7	10.2	0.0				
1992	46.4			4.1	10.3	0.0				
1993	46.4			0.0	10.9	0.0				
1994	53.6			0.5	11.4	0.0				
1995	53.6			0.0	13.4	0.0				
1996	53.6			0.0	14.5	0.0				
1997	53.6			0.0	14.0	0.0				
1998	53.6			0.0	14.8	0.0				
1999	53.6			5.0	11.0	0.0				
2000	53.6			2.7	8.9	0.0				
2001	53.6			12.5	46.1	0.0				
2002	53.6			47.0	12.6	0.0		58.1		
2003				96.4	- 85.8	3.0		186.8		
2004					9.5	1.9		325.5		
2005					13.2	7.3		482.8		
2006					14.0	8.0		485.5		
2007					11.4	3.9		509.3		
2008					13.2	2.9		651.8	1.6	
2009					10.5	2.2		375.5	2.9	
2010					11.2	1.4		500.1	2.1	
2011					14.4	0.8		634.1	2.1	
2012					12.0	7.5		651.4	2.4	
2013					8.5	0.8		720.6	2.4	
2014				2.4	7.9			409.2	2.2	

Note: For years where data are missing, emissions are either not estimated, included elsewhere or are not occurring.

Source: Environment (2016).

Table E 4.3g Energy emissions—stationary energy, energy industries greenhouse gas (carbon dioxide equivalent) emissions—Northern Territory

Calendar year	Solid fuels			Liquid fuels			Gaseous fuels		Renewable	
	Black coal	Brown coal	Brown coal briquettes	Fuel oil	Auto-motive diesel	Liquified petroleum gas oil (LPG)	Coal gas	Natural gas	Wood and wood waste	Gas biomass
gigagrams of CO ₂ equivalent										
1990				266.7			637.6			
1991				253.2			673.3			
1992				217.6			700.1			
1993				202.1			707.0			
1994				206.4			707.6			
1995				213.6			770.4			
1996				229.0			885.3			
1997				244.5			924.6			
1998				259.1			950.8			
1999				279.8			1 019.8			
2000				164.8			1 098.3			
2001				94.2			1 116.4			
2002				91.8			1 134.5			
2003				412.8			727.3			
2004				665.2			864.7		0.5	
2005				734.7			847.9			
2006				1 015.1	2.3		1 168.9			
2007				588.3	1.0		1 843.0			
2008				993.4	0.8		1 728.8		0.6	
2009				869.9	0.6		2 078.3		0.7	
2010				674.9	0.5		2 426.5		0.7	
2011				526.7	0.2		2 110.6		0.7	
2012				603.8	2.0		2 163.5		0.5	
2013				566.3			2 299.6		0.5	
2014				356.0	0.0		2 366.1		0.7	

Note: For years where data are missing, emissions are either not estimated, included elsewhere or are not occurring.

Source: Environment (2016).

Table E 4.3h Energy emissions—stationary energy, energy industries greenhouse gas (carbon dioxide equivalent) emissions—Australian external territories

Calendar year	Solid fuels			Liquid fuels			Gaseous fuels		Renewable	
	Black coal	Brown coal	Brown coal briquettes	Fuel oil	Auto-motive diesel	Liquified petroleum gas (LPG)	Coal gas	Natural gas	Wood and wood waste	Gas biomass
gigagrams of CO ₂ equivalent										
1990						3.4				
1991						3.6				
1992						3.4				
1993						5.1				
1994						8.4				
1995						4.7				
1996						8.9				
1997						5.6				
1998						2.1				
1999						5.8				
2000						12.7				
2001						7.1				
2002						7.7				
2003						6.6				
2004						7.4				
2005						7.3				
2006						7.1				
2007						8.5				
2008						27.1				
2009						20.4				
2010						18.2				
2011						34.4				
2012						36.6				
2013						36.6				
2014						36.6				

Note: For years where data are missing, emissions are either not estimated, included elsewhere or are not occurring.

Source: Environment (2016).

Table E 4.4 Energy emissions—public electricity and heat production greenhouse gas (carbon dioxide equivalent) emissions, by type of fuel—Australia

Calendar year	Solid fuels			Liquid fuels			Gaseous fuels		Renewable	
	Black coal	Brown coal	Brown coal briquettes	Fuel oil	Auto-motive diesel	Liquified petroleum gas oil (LPG)	Coal gas	Natural gas	Wood and wood waste	Gas biomass
gigagrams of CO ₂ equivalent										
1990	72 906.7	45 092.4	284.0	1 048.6	1 865.8			8 331.0		
1991	74 524.5	47 760.0	179.8	1 173.8	1 804.4			6 254.7		
1992	76 309.2	49 131.9	189.0	379.1	1 711.7			6 836.8		
1993	79 371.8	46 806.6	135.3	392.3	1 716.4			7 056.2		
1994	80 059.9	47 184.2	114.4	369.5	1 758.1			7 566.0		
1995	82 582.3	48 919.3	116.5	352.1	2 044.3			8 656.2		
1996	86 276.2	50 923.5	181.6	407.4	2 078.5			7 829.7		
1997	87 694.7	55 212.8	180.0	332.3	1 634.7			7 671.4		
1998	92 554.5	62 071.2	215.3	166.5	1 599.6		283.9	8 469.4		
1999	94 718.6	64 783.9	160.8	248.0	1 439.5		318.7	9 915.1		
2000	97 128.7	66 110.3	262.2	218.8	1 311.0		391.6	9 893.9	0.3	59.5
2001	103 120.2	65 737.6	261.8	348.9	1 006.4		463.8	11 654.3	0.2	58.2
2002	105 983.8	63 934.9	125.0	208.1	1 152.2		485.8	12 014.5	0.0	47.1
2003	106 740.6	65 154.7	167.8	267.7	1 691.6	8.4	602.1	11 840.1	5.9	48.9
2004	110 677.2	67 580.1	41.6	205.0	2 247.9		239.0	13 484.9	1.6	89.8
2005	111 266.8	66 907.6	41.9	271.2	2 262.1	0.7	1 103.3	14 825.1	7.2	38.9
2006	114 303.6	67 430.1	68.0	357.0	2 357.8	1.0	1 780.6	14 928.3	7.8	42.7
2007	113 500.7	67 114.6	61.5	376.6	2 225.8	0.9	2 152.2	18 609.4	7.5	42.2
2008	114 254.5	66 740.3	136.0	396.4	2 770.1	0.9	1 834.6	19 713.6	12.7	58.4
2009	116 147.1	68 996.7	135.2	113.1	2 426.7	0.8	1 827.0	21 666.9	7.6	71.8
2010	109 112.6	68 868.8	115.3	101.2	2 172.1		3 133.9	21 261.6	9.6	73.0
2011	102 828.8	67 518.3	117.9	97.4	2 188.9		3 379.0	22 089.9	6.9	76.6
2012	100 825.6	68 802.1	138.3	90.0	2 423.7		5 187.7	21 377.6	3.9	81.4
2013	97 901.6	59 579.9	103.8	80.4	2 490.0		4 190.8	22 389.1	7.6	72.0
2014	92 440.0	57 158.0		492.3	2 809.6		3 051.2	24 200.9	11.4	87.6

Note: For years where data are missing, emissions are either not estimated, included elsewhere or are not occurring.

Source: Environment (2016).

Table E 4.5 Energy emissions—natural gas transmission greenhouse gas (carbon dioxide equivalent) emissions, by type of fuel—Australia

Calendar year	Solid fuels			Liquid fuels			Gaseous fuels		Renewable	
	Black coal	Brown coal	Brown coal briquettes	Fuel oil	Auto-motive diesel	Liquified petroleum gas (LPG)	Coal gas	Natural gas	Wood and wood waste	Gas biomass
gigagrams of CO ₂ equivalent										
1990								107.6		
1991								102.7		
1992								112.2		
1993								112.2		
1994								118.1		
1995								125.2		
1996								137.8		
1997								146.3		
1998								146.5		
1999								180.3		
2000								197.6		
2001								203.1		
2002								208.7		
2003								221.2		
2004								221.2		
2005								252.2		
2006								252.2		
2007								268.0		
2008								279.6		
2009								283.2		
2010								297.6		
2011								293.5		
2012								294.6		
2013								309.0		

Note: For years where data are missing, emissions are either not estimated, included elsewhere or are not occurring.

Source: Environment (2015).

PART C: Communication

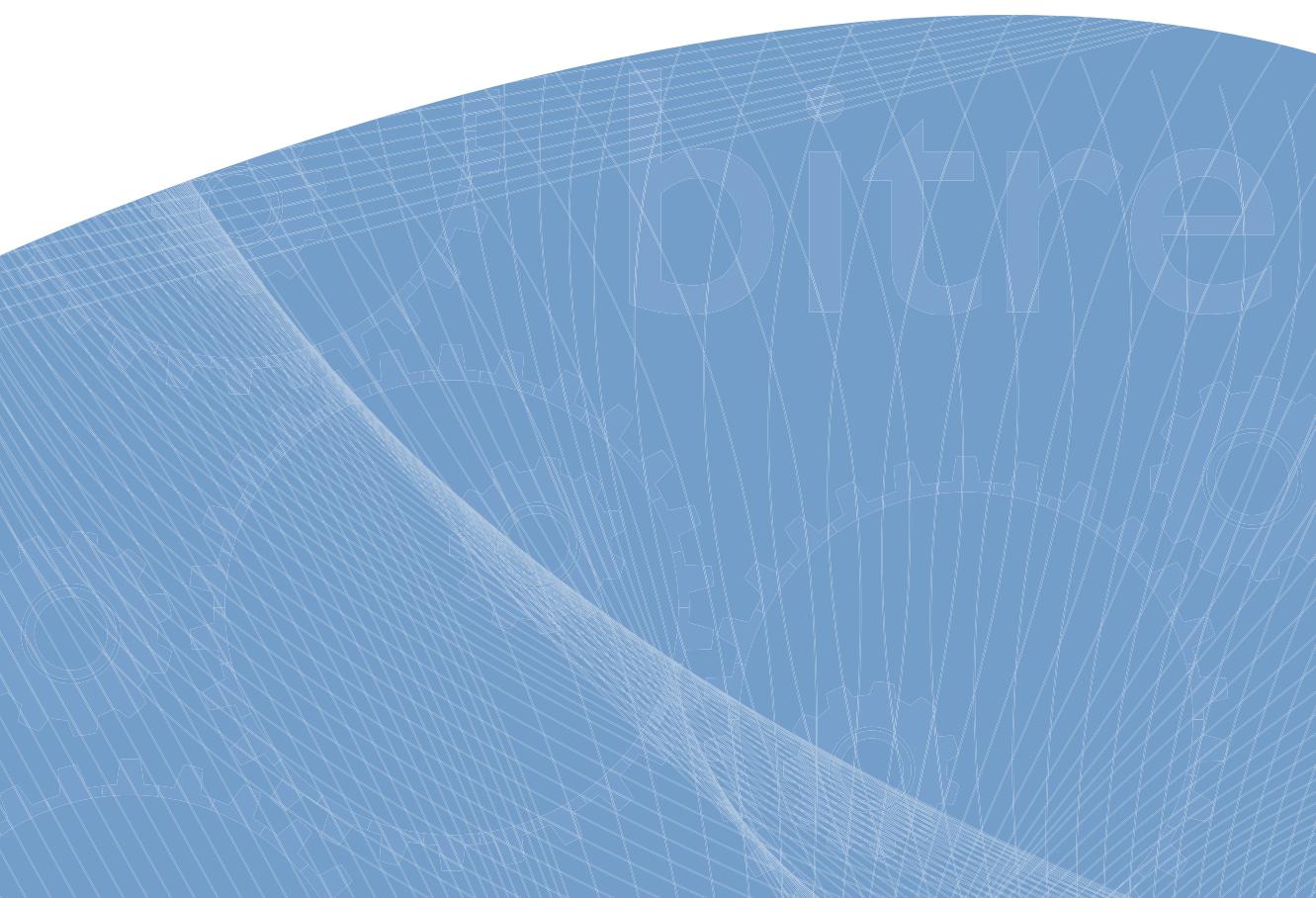
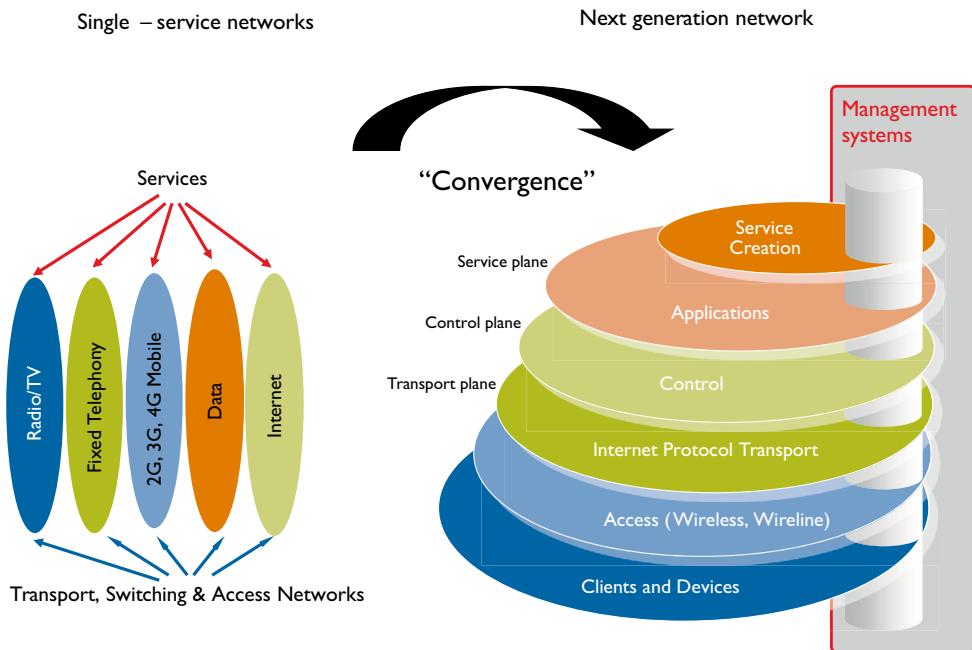


Figure C 1 Telecommunications networks: traditional and next generation



Source: Adapted from "Developments in next generation applications and services" report, *Australian Communications and Media Authority*, 2011.

PART C

Communication

Telecommunications networks are a vital part of Australian infrastructure, with communications networks now in a period of significant transition.

Traditional communications architecture was based on vertically integrated separate networks that delivered separate services over a dedicated network (see Figure C1, facing page). Modern communications networks are moving to the use of a more horizontal, next generation network architecture organised into layers of common functions, which allows the delivery of multiple services to a single user device delivered over a common internet protocol based platform.

The upper layers of the diagram (control, applications and service creation) are associated with the presentation of software-based user-focussed features and services, while the lower layers in the diagram are associated with the more physical elements of the communications process. Management systems provide overall management of network interaction between layers. The horizontal architecture allows for competition amongst industry participants operating within a layer.

The phenomenon of communications ‘convergence’ is not just occurring at the network, service and device level, but also among the previously distinct industries of telecommunications, broadcasting, radio communications and the Internet.

Readers should take these rapid developments in communications technology into account when analysing time series statistics for communications networks.

Where possible, statistics in this section focus on physical infrastructure networks and their usage, rather than the broader communications industry. For Chapter 2, these distinctions are not possible as data are not available with sufficient detail to separately identify physical infrastructure networks.

Traditional measures of infrastructure construction activity only provide a partial picture of the capacity and usage of communications infrastructure as they only measure investment in the physical infrastructure networks. Information technology upgrades that provide additional functionality or new services on existing networks, along with network upgrades that extend geographic coverage, have been major drivers of increased infrastructure capacity in the communications industry. Chapter 2 of Part C: Communication provides estimates of investment in information technology by the information media and telecommunications industry.

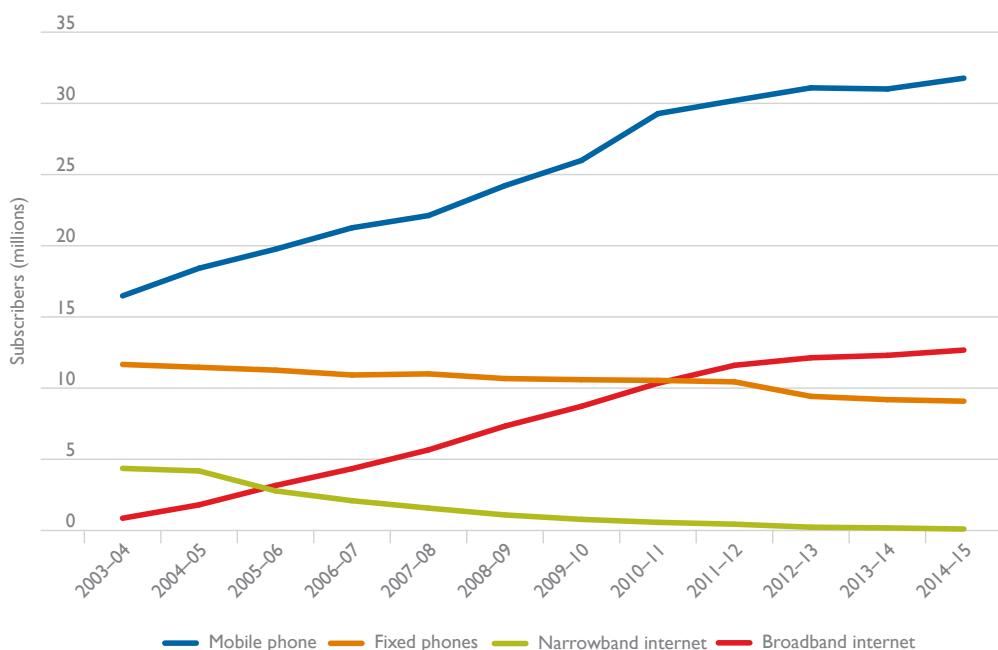
Major drivers of communications infrastructure activity over recent years have been:

- increasing international bandwidth capacity
- growth in domestic backhaul transmission capacity (infrastructure connecting access nodes to the core network)
- a broadening range of internet access technologies available, including digital subscriber line (DSL) and wireless broadband network deployments (with increasing intensity of use and reliance on radio communications spectrum allocations)
- mobile network extensions for 3G and 4G mobile services, and
- the convergence of networks, devices and service

The deployment of the National Broadband Network (NBN) represents a significant investment in a fibre optic network. This investment will be reflected in the statistics over the coming years of the NBN deployment and beyond.

An illustration of the dynamism of the communications sector, Figure C2 demonstrates the take-up of mobile phones and broadband internet over the last ten years, and the decline of the number of subscribers to the older technologies of dial-up internet and fixed phones.

Figure C 2 Communications subscribers—number of subscribers, by communications medium



Source: ABS (2016) and ACMA (2015).

CHAPTER I

Communication infrastructure

Table C 1.1 Flow of new infrastructure—value of telecommunications engineering construction work done by sector of construction and sector of ownership, adjusted by chain volume index

Financial year	Private sector for the private sector	Private sector for the public sector	Public sector	Telecommunications infrastructure engineering construction work done	Telecommunications percentage of total major infrastructure engineering construction work done
\$ million					per cent
1986–87	28.8	78.5	3 756.2	3 863.5	22.05
1987–88	14.5	59.5	3 475.0	3 549.0	22.74
1988–89	15.3	13.6	3 740.4	3 769.3	24.22
1989–90	12.2	20.9	4 104.0	4 137.2	23.76
1990–91	16.1	39.6	4 170.4	4 226.1	23.52
1991–92	12.1	57.2	3 188.3	3 257.7	19.95
1992–93	122.5	42.0	3 158.8	3 323.3	18.93
1993–94	146.0	56.6	2 852.2	3 054.9	16.40
1994–95	125.8	21.6	3 838.0	3 985.4	20.87
1995–96	330.0	45.8	4 446.8	4 822.6	23.87
1996–97	280.6	12.4	4 424.3	4 717.3	23.30
1997–98	111.8	55.0	4 538.5	4 705.3	21.35
1998–99	181.2	37.1	4 807.7	5 025.9	20.85
1999–00	549.5	217.8	5 573.9	6 341.2	24.26
2000–01	955.0	417.4	4 732.1	6 104.5	25.61
2001–02	544.0	504.5	4 322.2	5 370.7	22.99
2002–03	516.2	426.7	3 844.8	4 787.7	18.55
2003–04	1 085.8	65.5	3 226.2	4 377.6	15.06
2004–05	1 237.6	225.6	3 397.9	4 861.1	14.59
2005–06	1 538.0	77.3	4 544.6	6 159.9	16.70
2006–07	3 971.4	47.2	1 687.4	5 706.0	14.50
2007–08	4 730.3	28.2	^a 7.8	4 758.5	10.88
2008–09	4 042.7	54.3	^a 7.8	4 104.7	8.20
2009–10	3 847.2	191.8	^a 10.9	4 049.9	7.87
2010–11	3 790.2	290.3	^a 6.5	4 087.0	7.22
2011–12	4 489.9	547.4	^a 5.0	5 042.4	8.11
2012–13	4 570.5	822.5	^a 9.8	5 402.7	8.25
2013–14	4 856.4	1 095.6	^a 7.9	5 959.9	10.25
2014–15	4 685.2	1 932.1	^a 1.9	6 619.1	13.36
2015–16	4 963.2	3 859.3	^a 11.8	8 834.3	19.43

^a Following the third tranche of privatisation of Telstra, ABS classifies Telstra investment as private sector rather than public sector investment.

Source: ABS (2016a), adjusted by chain volume index.

Table C 1.2a Flow of new infrastructure—capital investment by selected communications industries—gross fixed capital formation^e

Financial year	Broadcasting (except internet)	Internet publishing and broadcasting	Telecommunications services	Internet service providers, web search portals and data processing services	Publishing, motion picture and sound recording, and library and other information services ^{c,d}	TOTAL information media and telecommunications industry
\$ million						
2008–09	464	b 19	np	np	c 872	8 424
2009–10	427	b 26	6 693	b 171	c 591	7 908
2010–11	421	b 34	7 095	b 209	c 610	8 370
2011–12	317	b 21	7 627	b 162	c 699	8 825
2012–13	262	b 32	8 387	b 227	c 618	9 527
2013–14	481	60	8 855	b 467	c 767	10 629
2014–15	584	b 100	9 702	b 469	c 590	11 445

^b Estimate has a relative standard error between 10% and 25%.^c Estimate has a relative standard error of 25% to 50%.^d This series groups several industries into the one measure. Relative standard errors were calculated for component series, but are not available for the new measure.^e Gross fixed capital expenditure represents expenditure on fixed assets that excludes repair and maintenance expenses, but includes all costs associated with own-account capital formation. Fixed assets include all produced assets (physical assets, cultivated assets and intellectual property products) that are used in processes of production for more than one year. Non-produced assets such as spectrum assets are not included in gross fixed capital formation.

np: Not available for publication but included in total where applicable.

Source: ABS (2016k).

Table C 1.2b Flow of new infrastructure—capital investment by selected communications industries—net capital expenditure^f

Financial year	Broadcasting (except internet)	Internet publishing and broadcasting	Telecommunications services	Internet service providers, web search portals and data processing services	Publishing, motion picture and sound recording, and library and other information services ^d	TOTAL information media and telecommunications industry
\$ million						
2008–09	475	np	np	np	760	8 591
2009–10	447	np	6 725	226	725	8 165
2010–11	376	- 137	7 278	b 314	602	8 436
2011–12	np	29	np	np	767	9 263
2012–13	262	np	np	np	680	np
2013–14	532	33	np	659	818	np
2014–15	np	np	np	np	np	11 988

^b Estimate has a relative standard error between 10% and 25%.^d This series groups several industries into the one measure. Relative standard errors were calculated for component series, but are not available for the new measure.^f Net capital expenditure represents expenditure on all forms of capital, net of depreciation of fixed capital. This measure of capital expenditure includes non-produced assets such as spectrum assets.

np: Not available for publication but included in total where applicable.

Source: ABS (2016k).

Table C 1.2c Flow of new infrastructure—capital investment by selected communications industries—depreciation and amortisation

Financial year	Broadcasting (except internet)	Internet publishing and broadcasting	Telecommunications services	Internet service providers, web search portals and data processing services	Publishing, motion picture and sound recording, and library and other information services ^d	TOTAL information media and telecommunications industry
\$ million						
2008–09	821	10	6 107	c 154	740	7 833
2009–10	749	22	6 306	179	783	8 039
2010–11	793	32	6 552	b 207	700	8 283
2011–12	950	34	6 550	b 305	754	8 592
2012–13	1 152	36	6 838	c 300	772	9 098
2013–14	1 240	np	7 268	b 337	778	9 667
2014–15	937	37	7 149	370	639	9 130

^b Estimate has a relative standard error between 10% and 25%.^c Estimate has a relative standard error of 25% to 50%.^d This series groups several industries into the one measure. Relative standard errors were calculated for component series, but are not available for the new measure.

Source: ABS (2016k).

CHAPTER 2

Investment in information technology

Table C 2.1 Investment in information technology—information media and telecommunications industry^g investment in information technology gross fixed capital formation^l, chain volume measures

Financial year	Information media and telecommunications industry investment in IT				Total Australian investment in information technology	Information media and telecommunications industry percentage of total
	Computers and peripherals	Electrical and electronic equipment	Intellectual property products—Computer software	TOTAL investment in IT by the media and telecommunications industry		
	\$ million					
1971–72	0	43	1	44	476	9.24
1972–73	0	64	1	65	514	12.65
1973–74	0	71	1	72	539	13.36
1974–75	0	68	1	69	534	12.92
1975–76	0	43	2	45	568	7.92
1976–77	0	52	2	54	565	9.56
1977–78	0	45	2	47	595	7.90
1978–79	0	49	4	53	668	7.93
1979–80	0	50	5	55	669	8.22
1980–81	0	61	7	68	813	8.36
1981–82	1	68	9	78	928	8.41
1982–83	1	72	13	86	903	9.52
1983–84	1	123	17	141	1 309	10.77
1984–85	1	156	20	177	1 474	12.01
1985–86	2	247	29	278	1 714	16.22
1986–87	2	199	28	229	1 920	11.93
1987–88	2	210	57	269	2 068	13.01
1988–89	3	260	52	315	2 271	13.87
1989–90	4	396	74	474	2 660	17.82
1990–91	5	351	83	439	2 521	17.41
1991–92	6	403	106	515	2 841	18.13
1992–93	10	592	181	783	3 566	21.96
1993–94	5	359	217	581	3 731	15.57
1994–95	11	488	209	708	4 102	17.26
1995–96	18	588	267	873	4 620	18.90
1996–97	25	706	261	992	5 535	17.92
1997–98	24	552	286	862	6 731	12.81
1998–99	39	614	321	974	7 133	13.65
1999–00	65	980	346	1 391	9 250	15.04
2000–01	80	1 272	496	1 848	10 710	17.25
2001–02	68	1 023	531	1 622	11 113	14.60
2002–03	86	1 023	498	1 607	13 679	11.75
2003–04	76	971	405	1 452	15 777	9.20
2004–05	110	1 216	486	1 812	17 760	10.20
2005–06	132	1 099	581	1 812	19 530	9.28
2006–07	164	1 587	452	2 203	21 818	10.10
2007–08	246	1 672	512	2 430	25 179	9.65
2008–09	272	1 784	529	2 585	25 535	10.12
2009–10	408	1 834	611	2 853	26 001	10.97
2010–11	354	1 447	704	2 505	27 491	9.11
2011–12	306	1 498	764	2 568	30 395	8.45
2012–13	110	1 488	1 122	2 720	32 618	8.34
2013–14	324	1 513	1 390	3 227	32 364	9.97
2014–15	350	1 296	1 461	3 107	33 940	9.15

^l See end notes.

^g Investment in information technology statistics are not available with the same level of industry detail as Table C 1.2. Source: ABS (2015e).

Table C 2.2 Consumption of information technology—information media and telecommunications industry^g consumption of information technology fixed capital², chain volume measures

Financial year	Information media and telecommunications industry consumption of IT				TOTAL consumption of IT fixed capital by the information media and telecommunications industry	Total Australian consumption of information technology fixed capital	Information media and telecommunications industry percentage of total
	Computers and peripherals	Electrical and electronic equipment	Intellectual property products—Computer software	\$ million			
1971–72	0	39	0	39	39	303	12.87
1972–73	0	41	0	41	41	318	12.89
1973–74	0	44	0	44	44	336	13.10
1974–75	0	46	1	47	47	356	13.20
1975–76	0	47	1	48	48	373	12.87
1976–77	0	47	1	48	48	391	12.28
1977–78	0	47	1	48	48	410	11.71
1978–79	0	47	1	48	48	428	11.21
1979–80	0	47	2	49	49	450	10.89
1980–81	0	48	2	50	50	474	10.55
1981–82	0	49	3	52	52	502	10.36
1982–83	0	51	4	55	55	542	10.15
1983–84	0	56	6	62	62	583	10.63
1984–85	1	65	8	74	74	633	11.69
1985–86	1	79	11	91	91	707	12.87
1986–87	1	95	14	110	110	798	13.78
1987–88	1	108	18	127	127	909	13.97
1988–89	2	122	24	148	148	1 037	14.27
1989–90	2	145	31	178	178	1 182	15.06
1990–91	3	171	43	217	217	1 379	15.74
1991–92	4	195	56	255	255	1 612	15.82
1992–93	5	229	76	310	310	1 853	16.73
1993–94	6	257	102	365	365	2 146	17.01
1994–95	7	278	130	415	415	2 474	16.77
1995–96	9	308	158	475	475	2 800	16.96
1996–97	12	347	186	545	545	3 134	17.39
1997–98	15	381	211	607	607	3 507	17.31
1998–99	20	408	236	664	664	3 966	16.74
1999–00	29	456	260	745	745	4 489	16.60
2000–01	42	539	292	873	873	5 133	17.01
2001–02	53	619	333	1 005	1 005	5 952	16.89
2002–03	63	678	373	1 114	1 114	6 830	16.31
2003–04	72	729	402	1 203	1 203	7 830	15.36
2004–05	81	786	427	1 294	1 294	9 070	14.27
2005–06	94	844	461	1 399	1 399	10 506	13.32
2006–07	112	919	485	1 516	1 516	12 108	12.52
2007–08	141	1 019	494	1 654	1 654	13 855	11.94
2008–09	179	1 119	503	1 801	1 801	15 860	11.36
2009–10	229	1 213	515	1 957	1 957	17 914	10.92
2010–11	279	1 276	541	2 096	2 096	19 736	10.62
2011–12	308	1 314	578	2 200	2 200	21 400	10.28
2012–13	298	1 347	647	2 292	2 292	23 075	9.93
2013–14	282	1 375	764	2 421	2 421	24 810	9.76
2014–15	290	1 388	903	2 581	2 581	26 377	9.79

² See end notes.

^g Investment in information technology statistics are not available with the same level of industry detail as Table C 1.2.
Source: ABS (2015e).

Table C 2.3 Stock of information technology—information media and telecommunications industry^g net capital stock³ of information technology assets, chain volume measures

Financial year	Information media and telecommunications industry stock of IT assets				Total stock of information technology	Information media and telecommunications industry percentage of total
	Computers and peripherals	Electrical and electronic equipment	Intellectual property products—Computer software	TOTAL stock of IT held by the information media and telecommunications industry		
	\$ million					per cent
1971–72	0	275	2	277	2 976	9.31
1972–73	0	294	2	296	3 125	9.47
1973–74	0	318	3	321	3 278	9.79
1974–75	0	336	4	340	3 410	9.97
1975–76	0	329	5	334	3 556	9.39
1976–77	0	331	6	337	3 683	9.15
1977–78	0	327	7	334	3 823	8.74
1978–79	0	326	10	336	4 006	8.39
1979–80	0	326	13	339	4 170	8.13
1980–81	1	335	18	354	4 443	7.97
1981–82	1	350	25	376	4 788	7.85
1982–83	1	366	34	401	5 070	7.91
1983–84	2	426	46	474	5 691	8.33
1984–85	2	509	59	570	6 401	8.90
1985–86	3	663	78	744	7 254	10.26
1986–87	4	756	94	854	8 206	10.41
1987–88	5	846	136	987	9 182	10.75
1988–89	6	970	166	1 142	10 200	11.20
1989–90	7	1 199	212	1 418	11 416	12.42
1990–91	9	1 360	255	1 624	12 275	13.23
1991–92	12	1 547	309	1 868	13 208	14.14
1992–93	16	1 878	422	2 316	14 561	15.91
1993–94	16	1 959	545	2 520	15 750	16.00
1994–95	20	2 142	631	2 793	16 970	16.46
1995–96	29	2 393	744	3 166	18 300	17.30
1996–97	41	2 723	822	3 586	20 156	17.79
1997–98	49	2 876	900	3 825	22 724	16.83
1998–99	68	3 080	989	4 137	25 270	16.37
1999–00	104	3 610	1 075	4 789	29 228	16.38
2000–01	145	4 376	1 283	5 804	33 915	17.11
2001–02	163	4 818	1 481	6 462	38 156	16.94
2002–03	189	5 207	1 614	7 010	44 134	15.88
2003–04	197	5 495	1 627	7 319	51 145	14.31
2004–05	230	5 981	1 704	7 915	58 766	13.47
2005–06	278	6 307	1 838	8 423	66 928	12.59
2006–07	340	7 063	1 810	9 213	75 517	12.20
2007–08	460	7 803	1 829	10 092	85 432	11.81
2008–09	564	8 526	1 859	10 949	93 485	11.71
2009–10	747	9 150	1 969	11 866	99 917	11.88
2010–11	826	9 326	2 141	12 293	106 039	11.59
2011–12	830	9 527	2 334	12 691	113 482	11.18
2012–13	643	9 670	2 816	13 129	121 299	10.82
2013–14	685	9 808	3 442	13 935	127 285	10.95
2014–15	745	9 715	4 000	14 460	133 382	10.84

^g Investment in information technology statistics are not available with the same level of industry detail as Table C 1.2.

³ See end notes.

Source: ABS (2015e).

CHAPTER 3

Subscribers and providers

Table C 3.1 Number of services, by communications medium

End of financial year	Number of payphones	Terrestrial mobile	Fixed line	Internet (excluding mobile handset subscribers)	
				Dial-up	Broadband
Number of subscribers (millions)					
2003–04 ⁱ	64 803	16.48	11.66	^b 4.36	^b 0.86
2004–05 ^j	61 735	18.42	11.46	^b 4.18	^b 1.80
2005–06 ^j	58 230	19.76	11.26	2.78	3.16
2006–07	49 862	21.26	10.92	^b 2.09	^b 4.34
2007–08	45 114	22.12	11.00	1.57	5.66
<i>ISPs with more than 1 000 active subscribers</i>					
2008–09 ^k	39 328	24.22	10.67	1.09	7.33
2009–10	35 012	25.99	10.59	0.78	8.72
2010–11	33 201	29.28	10.54	0.57	10.34
2011–12	31 032	30.20	10.44	0.44	11.60
2012–13	29 523	31.09	9.42	0.23	12.13
2013–14	28 068	31.01	9.19	0.18	12.30
2014–15	25 876	31.77	9.08	0.10	12.67

^b Internet subscriptions for the end of the March quarter.

ⁱ Internet subscriptions prior to 2005–06 reflect data from all ISPs.

^j From 2005–06 to 2007–08 internet subscriptions reflect data from ISPs with more than 10 000 active subscribers.

^k Internet subscriptions for 2008–13 reflect data from ISPs with more than 1 000 active subscribers.

Source: BITRE (2015c), ABS (2016), ACMA (2015).

Table C 3.2 Total number of terrestrial mobile services

End of financial year	Total number of services (millions)
2003–04	16.48
2004–05	18.42
2005–06	19.76
2006–07	21.26
2007–08	22.12
2008–09	24.22
2009–10	25.99
2010–11	29.28
2011–12	30.20
2012–13	31.09
2013–14	31.01
2014–15	31.77

Source: ACMA (2015).

Table C 3.3a Number of internet subscribers, by download speed—business and government subscribers (excluding mobile handset subscribers)

	Less than 256kbps	256kbps to less than 1.5Mbps	1.5Mbps to less than 8Mbps	Broadband	8Mbps to less than 24Mbps	24Mbps or greater	Total broadband	Total business and government subscribers
	Number of subscribers ('000)							
<i>Census of all ISPs</i>								
September 2000								432
September 2001								559
September 2002								650
September 2003	528	143	np	np	np	168	696	
September 2004	535	224	np	np	np	311	846	
March 2005	447	281	np	np	np	398	845	
September 2006	279	394	np	np	np	547	826	
December 2007	268	362	224	95	17	697	965	
December 2008	234	329	538	175	45	1 087	1 321	
<i>ISPs with more than 1 000 active subscribers</i>								
December 2009	188	273	911	219	37	1 440	1 629	
December 2010	189	175	1 200	697	73	2 144	2 333	
December 2011	96	60	1 818	388	292	2 558	2 654	
December 2012	73	24	np	1 047	np	2 836	2 910	
December 2013	53	15	np	838	np	2 663	2 717	
December 2014	np	np	np	np	np	np	2 602	

Note: Data are not readily available for missing years.

Data on business and government subscribers by download speed are not available for December 2014.

np: not available for publication but included in the totals.

Source: ABS (2016), BITRE (2015c).

Table C 3.3b Number of internet subscribers, by download speed—household subscribers (excluding mobile handset subscribers)

	Less than 256kbps	256kbps to less than 1.5Mbps	1.5Mbps to less than 8Mbps	Broadband	8Mbps to less than 24Mbps	24Mbps or greater	Total broadband	Total household subscribers
	Number of subscribers ('000)							
<i>Census of all ISPs</i>								
September 2000								3 417
September 2001								3 731
September 2002								3 904
September 2003	4 027	346	np	np	np	488	4 516	
September 2004	3 916	612	np	np	np	979	4 895	
March 2005	3 746	906	np	np	np	1 388	5 135	
September 2006	2 478	2 374	np	np	np	3 353	5 831	
December 2007	1 619	2 340	821	1 198	163	4 522	6 141	
December 2008	1 084	2 311	1 474	1 478	329	5 591	6 675	
<i>ISPs with more than 1 000 active subscribers</i>								
December 2009	717	2 109	2 277	1 754	466	6 605	7 322	
December 2010	518	1 066	2 867	2 833	828	7 595	8 112	
December 2011	379	748	3 297	3 597	922	8 563	8 942	
December 2012	215	585	np	4 358	np	9 037	9 251	
December 2013	156	317	np	4 770	np	9 524	9 680	
December 2014	np	np	np	np	np	np	10 089	

Note: Data are not readily available for missing years.

Data on household subscribers by download speed are not available for December 2014.

np: not available for publication but included in the totals.

Source: ABS (2016), BITRE (2015c).

Table C 3.3c Number of internet subscribers, by download speed—total all subscribers (excluding mobile handset subscribers)

	Less than 256kbps	256kbps to less than 1.5Mbps	1.5Mbps to less than 8Mbps	Broadband	Total broadband	Total all subscribers
Number of subscribers ('000)						
Census of all ISPs						
September 2000						3 849
September 2001						4 289
September 2002						4 555
September 2003	4 554	489	np	np	656	5 211
September 2004	4 451	836	np	np	1 290	5 741
March 2005	4 193	1 187	np	np	1 787	5 980
September 2006	2 757	2 768	np	np	3 900	6 657
December 2007	1 887	2 702	1 045	1 293	180	5 218
December 2008	1 319	2 640	2 012	1 653	373	6 678
ISPs with more than 1 000 active subscribers						
December 2009	905	2 381	3 188	1 973	503	8 046
December 2010	707	1 241	4 067	3 530	901	9 739
December 2011	475	808	5 115	3 985	1 213	11 121
December 2012	288	609	4 213	5 406	1 645	11 873
December 2013	210	332	4 159	5 608	2 088	12 187
December 2014	159	175	3 305	6 715	2 337	12 531
8Mbps or greater						
December 2015	75	118	2 183	10 570	np	12 871
						12 946

Note: Data are not readily available for missing years.

ABS changed its reporting in 2016 as reflected in the table.

np: not available for publication but included in the totals.

Source: ABS (2016), BITRE (2015c).

Table C 3.4 Number of internet subscribers, by access connection (excluding mobile handset subscribers)

	Dial-up		Non dial-up			Other	Com-bined conn-nections
	DSL	Cable and fibre	Satellite	Wireless (excluding mobile handset connections)	Fixed	Mobile	
	Number of subscribers ('000)						
<i>Census of all ISPs</i>							
September 2000	3 745	6	np	np			np
September 2001	4 088	30	np	np			np
September 2002	4 204	127	np	np			np
September 2003	4 522	372	np	np	np	3	8
September 2004	4 441	822	np	np	np	9	15
March 2005	4 177	1 256	np	np	np	7	38
September 2006	2 749	2 995	np	np	np	np	186
December 2007	1 887	3 815	np	np	np	np	481
December 2008	1 311	4 208	916	80	np	1 369	1 462
<i>ISPs with more than 1 000 active subscribers</i>							
December 2009	891	4 178	np	107	22	2 838	2 860
December 2010	707	4 458	np	np	24	4 230	4 254
December 2011	473	4 553	900	100	35	5 491	5 526
December 2012	282	4 727	918	92	49	5 995	6 044
December 2013	205	4 898	944	91	48	6 040	6 088
December 2014	159	5 099	966	75	67	5 996	6 063
December 2015	93	5 030	1 649	np	84	6 025	6 109

np: not available for publication but included in the totals.

na: not applicable.

Note: Data in column Cable and fibre has been updated to include fibre. Data has been revised back to 2011.
Data are not readily available for missing years.

Source: ABS (2016).

Table C 3.5 Communications providers—number of internet service providers (ISP), by size

	Very small	Small	Medium	Large	Very large	Total
	I to 100 subscribers	101 to 1 000 subscribers	I 001 to 10 000 subscribers	10 001 to 100 000 subscribers	100 000 + subscribers	
	Number of ISPs					
September 2000	132	377	173	28	8	718
September 2001	112	299	155	30	6	602
September 2002	102	254	172	29	6	563
September 2003	153	316	163	27	8	667
September 2004	171	323	157	26	10	687
March 2005	180	312	162	25	10	689
September 2006	124	199	112	22	10	467
December 2007	108	179	96	28	10	421
December 2008			88	27	11	126
December 2009			66	27	10	103
December 2010			71	21	12	104
December 2011			58	23	10	91
December 2012			46	22	8	76
December 2013			48	19	9	76
December 2014			41	21	9	71
December 2015			31	21	10	62

Note: Data are not readily available for missing years.

Source: ABS (2016).

CHAPTER 4

Price and activity

Table C 4.1 Communications prices—consumer price index, telecommunication services, index numbers by capital city

Average over financial year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Australia
base of each index: 2011–12 = 100									
1980–81	59.1	60.5	57.1	59.8	58.7	59.9	66.7	60.5	59.5
1981–82	62.7	64.2	60.5	63.4	62.2	63.6	70.6	64.1	63.1
1982–83	69.1	70.7	66.7	69.9	68.7	69.9	77.8	70.8	69.5
1983–84	74.9	76.6	71.9	75.7	74.4	75.5	84.6	76.8	75.3
1984–85	78.0	79.9	74.6	78.9	77.5	78.6	88.1	80.0	78.4
1985–86	81.8	83.5	78.0	82.4	81.4	82.2	91.1	83.6	82.0
1986–87	84.0	85.0	81.0	83.9	84.2	84.3	93.7	85.6	84.1
1987–88	90.9	91.9	88.1	90.6	91.1	91.1	101.1	92.7	91.0
1988–89	92.5	93.3	89.1	91.9	93.1	92.0	101.3	94.1	92.4
1989–90	90.9	91.2	87.4	89.9	91.9	89.5	98.1	92.2	90.7
1990–91	93.3	93.6	89.2	92.1	94.2	91.4	100.1	94.7	93.0
1991–92	97.5	97.9	92.9	96.3	98.5	95.0	104.1	99.1	97.1
1992–93	96.9	97.4	92.1	95.8	98.1	93.7	103.3	98.6	96.5
1993–94	96.1	96.6	91.5	95.1	97.5	92.7	102.3	97.7	95.8
1994–95	97.5	97.7	93.7	96.3	98.9	94.5	104.3	99.1	97.1
1995–96	97.1	97.2	93.8	95.9	98.8	94.3	104.2	98.7	96.8
1996–97	96.4	96.4	93.1	94.3	98.1	93.2	103.4	97.8	96.0
1997–98	96.5	96.4	93.4	93.9	97.9	93.3	102.7	97.7	96.0
1998–99	92.6	92.9	90.8	90.4	93.3	90.7	95.1	93.5	92.3
1999–2000	87.5	87.5	86.5	85.8	86.8	86.6	87.6	87.9	87.1
2000–2001	93.7	93.9	92.9	92.1	92.5	93.1	93.4	94.2	93.4
2001–2002	93.8	94.4	93.4	93.1	93.2	93.3	93.6	94.0	93.8
2002–2003	96.6	97.2	96.3	96.5	96.2	96.3	96.2	96.8	96.7
2003–2004	97.8	98.3	97.5	97.7	97.4	97.5	97.4	98.0	97.8
2004–2005	98.7	99.2	98.5	98.7	98.3	98.4	98.2	98.8	98.8
2005–2006	97.1	97.7	96.9	97.2	96.7	96.9	96.7	97.3	97.2
2006–2007	98.3	98.7	98.2	98.3	98.0	98.0	97.9	98.4	98.3
2007–2008	98.6	98.9	98.5	98.6	98.2	98.3	98.1	98.7	98.6
2008–2009	99.1	99.4	99.1	99.2	98.8	98.9	98.7	99.2	99.2
2009–2010	99.4	99.7	99.4	99.4	99.1	99.3	99.1	99.5	99.4
2010–2011	99.0	99.1	99.0	99.0	98.9	99.0	99.0	99.0	99.0
2011–2012	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2012–2013	101.6	101.7	101.7	101.7	101.5	101.6	101.6	101.6	101.6
2013–2014	102.7	102.8	102.9	102.8	102.5	102.8	102.6	102.7	102.7
2014–2015	99.2	99.3	99.4	99.2	98.9	99.2	99.1	99.2	99.2
2015–2016	93.0	93.1	93.2	93.1	92.8	93.0	92.9	93.7	93.0

Source: ABS (2016d).

Table C 4.2 Communication activity—internet domain names registered, excluding “.gov.au”

End of financial year	com.au	net.au	org.au number	asn.au	id.au	Total (.au)
2001–02	255 408	12 794	9 203	2 832	0	280 237
2002–03	308 423	20 149	13 279	3 198	2 527	347 576
2003–04	382 994	34 391	17 480	3 581	4 682	443 128
2004–05	477 376	46 727	18 562	2 800	5 826	551 291
2005–06	612 918	60 000	23 406	3 058	6 746	706 128
2006–07	795 368	79 783	28 363	3 166	8 091	914 771
2007–08	1 009 347	112 555	34 167	3 483	8 954	1 168 506
2008–09	1 221 915	140 364	41 323	3 842	9 853	1 417 297
2009–10	1 513 617	185 029	45 536	4 196	10 917	1 759 295
2010–11	1 818 353	230 437	50 143	4 111	12 086	2 115 130
2011–12	2 102 823	266 511	54 736	4 105	12 798	2 441 240
2012–13	2 309 521	287 603	59 415	4 005	13 156	2 673 939
2013–14	2 439 375	321 673	62 684	3 913	13 331	2 841 217
2014–15	2 570 665	320 910	64 080	3 731	13 143	2 972 751
2015–16	2 660 185	292 743	66 357	3 656	12 775	3 035 915

Source: AusRegistry (2016).

Table C 4.3 Communication activity—internet commerce

Financial year	Proportion of all businesses which:		Internet income \$ billion
	Placed orders via the internet	Received orders via the internet	
	per cent		\$ billion
1999–00	4.0	6.0	5.1
2000–01	20.0	9.0	9.4
2001–02	25.0	6.0	11.3
2002–03	27.8	13.3	24.3
2003–04	31.3	12.0	33.3
2004–05	32.7	12.2	39.6
2005–06	37.3	20.9	56.7
2006–07	39.8	23.3	67.6
2007–08	42.7	23.7	81.0
2008–09	46.0	27.1	122.9
2009–10	46.5	24.8	142.8
2010–11	50.8	28.0	188.7
2011–12	55.3	27.8	237.1
2012–13	53.4	30.2	246.4
2013–14	56.0	33.2	266.8

Source: ABS (2016n).

Table C 4.4 Internet use—volume of data downloaded by subscriber type, for ISPs with more than 1 000 active subscribers (excluding mobile handset subscribers)

Quarter ending	Dial-up	Fixed line broadband	Wireless broadband	Business and government	Household
			Terabytes		
September 2000				437	544
September 2001				466	762
September 2002				690	2 152
September 2003	1 430			1 117	3 204
September 2004	1 667			2 259	8 298
March 2005	1 820			3 252	10 372
September 2006	2 216			6 733	29 415
December 2007	2 693			6 247	53 084
December 2008	1 079			15 180	66 172
December 2009	294	113 410	14 251		
December 2010	183	174 665	16 990		
December 2011	96	322 280	23 142		
December 2012	np	526 472	28 196		
December 2013	73	823 421	37 426		
December 2014	25	1 112 379	34 339		
December 2015	43	1 673 123	41 757		

np: not available for publication but included in totals where applicable.

Note: Data not available for missing years.

Source: ABS (2016), BITRE (2015c).

CHAPTER 5

Communications security

Table C 5.1 Communication security—do not call register

	Telephone numbers listed on register, by prefix							Complaints received relating to potential breaches of the DNCR Act.
	(01) Satellite, (05) VOIP	(02) NSW, ACT	(03) VIC, TAS	(04) Mobile	(07) QLD	(08) WA, SA, NT	Total numbers listed	
Number '000								
May – June 2007							1 370	2.3
2007–08	0.5	459.3	484.0	750.2	411.4	314.6	2 420	28.8
2008–09	0.8	603.7	653.9	1 369.9	509.4	403.4	3 541	10.6
2009–10	1.5	821.2	872.5	2 153.8	663.9	519.4	5 032	11.3
2010–11	2.2	1 057.9	1 095.2	2 862.9	853.2	656.1	6 528	19.7
2011–12							7 730	22.0
2012–13							8 740	19.7
2013–14							9 600	20.5
2014–15							10 260	18.2

Note: Data not available for missing years.

Source: ACMA (2015).

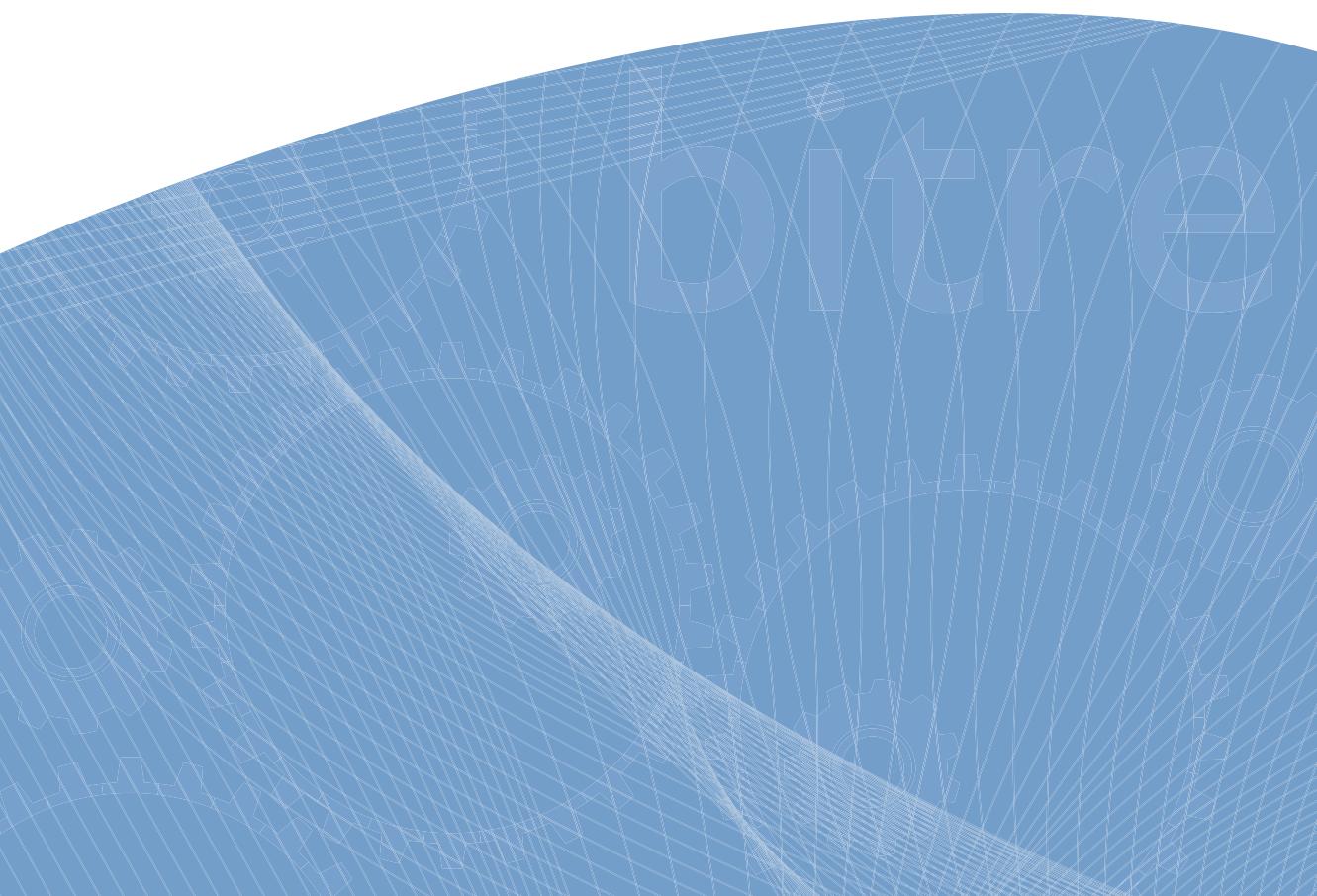
Table C 5.2 Communication security—000 and 112 Emergency call services call handling

	Caller no response (CNR)		Calls aborted by caller before being answered	Calls aborted by caller after being answered (non-CNR)	Calls transferred to emergency service organisations	Total number of 000 and 112 emergency calls
	CNR calls terminated by Interactive Voice Response (IVR)	CNR calls connected to police through IVR				
2001–02					5 727 775	9 709 377
2002–03					3 948 657	11 332 701
2003–04	5 449 511	145 397	835 966	2 294 635	4 015 738	12 741 247
2004–05	4 241 385	163 330	693 745	1 512 737	4 196 430	10 807 627
2005–06	3 706 705	179 409	963 606	2 167 537	4 571 520	11 588 777
2006–07	2 990 652	216 863	1 079 821	2 718 333	5 133 857	12 139 526
2007–08	2 612 893	211 356	1 126 190	2 860 558	5 409 199	12 220 196
2008–09	(l)	(l)	(l)	(l)	5 352 425	10 301 011
2009–10					5 288 836	8 833 683
2010–11					5 354 680	8 867 191
2011–12					5 561 072	9 429 595
2012–13					5 727 411	8 854 728
2013–14					5 738 061	8 481 470
2014–15					5 888 050	8 377 394

^l Data are no longer reported in the ACMA Communications Report.

Source: ACMA (2015).

PART W:Water

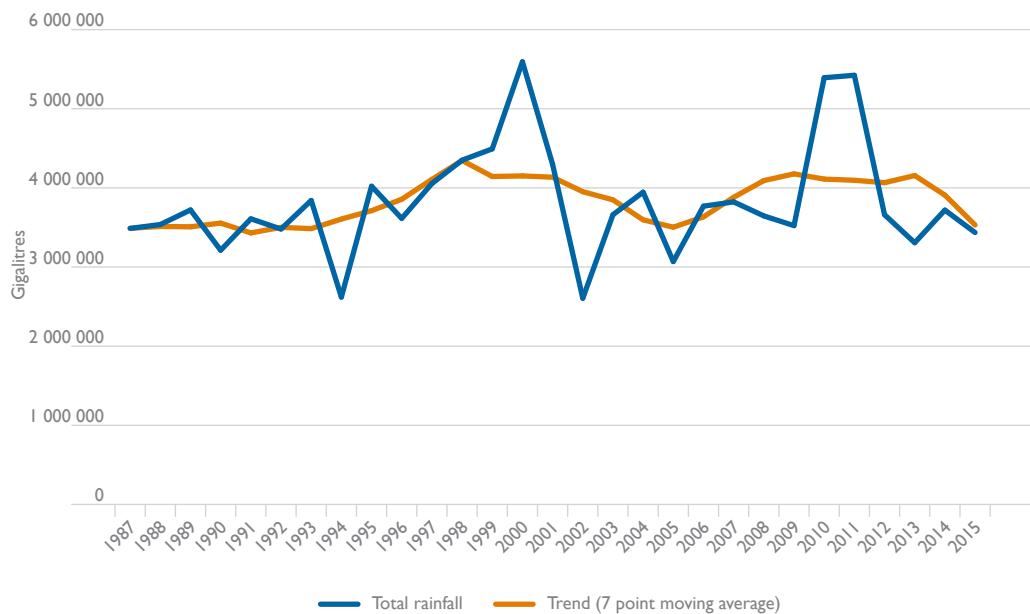


PART W

Water

Australian water utilities use infrastructure networks to provide water to urban and rural areas and to provide wastewater collection and treatment services to large areas of the country. Part W: Water provides statistics on both physical and financial measures of water infrastructure, water supply and wastewater treatment activity, and measures of water health and emissions issues.

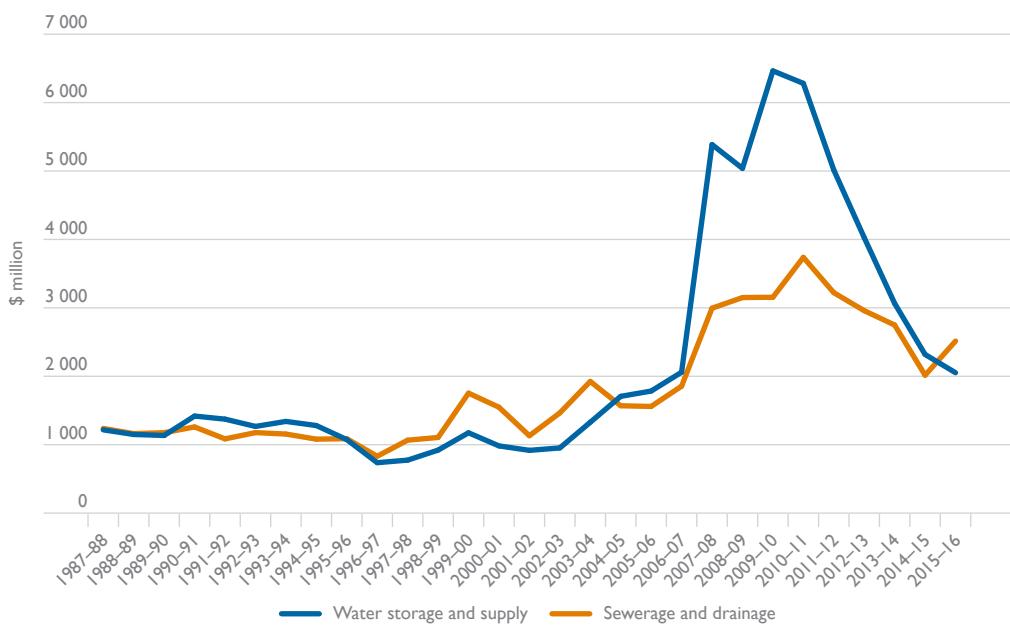
Figure W 1 Total volume of rainfall in Australia



Source: BOM (2016c).

Total rainfall is subject to significant annual variations. Rainfall was considerably higher than average in 2010 and 2011 – the years in which parts of Queensland, Victoria and New South Wales were flooded. In the following four years rainfall decreased sharply to finish just below trend.

Figure W 2 Water infrastructure engineering construction, adjusted by chain volume index



Source: ABS (2016a).

Infrastructure construction activity was relatively constant (in chain volume adjusted terms) until about 2002–03. Since 2003–04, water infrastructure construction expenditure has increased sharply in real terms, particularly for water storage and supply projects, which reflect construction work on the South-East Queensland water grid and the construction of desalination plants in Western Australia, New South Wales, Queensland and Victoria. Expenditure on the construction of water storage and supply decreased with the recent completion of these projects.

CHAPTER I

Water infrastructure

Table W 1.1a Flow of new infrastructure—value of water infrastructure engineering construction work done by the private sector for the private sector, adjusted by chain volume index

Financial year	Water storage and supply	Sewerage and drainage	Water infrastructure engineering construction work done	Water percentage of total major infrastructure engineering construction work done
1986–87	106.0	80.8	186.8	8.58
1987–88	121.1	124.0	245.2	10.19
1988–89	129.6	127.4	257.0	9.79
1989–90	143.7	106.0	249.7	8.75
1990–91	183.7	171.7	355.3	13.22
1991–92	106.0	100.3	206.3	8.11
1992–93	145.0	131.5	276.5	10.29
1993–94	255.0	193.2	448.2	13.43
1994–95	462.2	125.8	587.9	17.70
1995–96	430.2	251.0	681.2	15.81
1996–97	204.1	127.2	331.3	7.34
1997–98	231.4	170.1	401.6	6.98
1998–99	233.5	128.3	361.8	5.44
1999–00	269.7	234.8	504.5	7.16
2000–01	280.6	291.0	571.6	9.02
2001–02	212.1	233.4	445.5	6.66
2002–03	237.9	407.9	645.8	7.13
2003–04	413.3	677.6	1 090.9	8.64
2004–05	472.3	394.7	867.0	6.00
2005–06	569.1	405.2	974.3	6.50
2006–07	554.0	422.6	976.6	5.38
2007–08	806.9	961.4	1 768.3	9.04
2008–09	614.7	1 049.9	1 664.6	7.97
2009–10	1 828.4	544.0	2 372.4	11.94
2010–11	3 077.2	681.2	3 758.4	15.32
2011–12	2 087.8	697.0	2 784.9	9.27
2012–13	1 440.1	647.6	2 087.7	5.99
2013–14	1 193.0	599.6	1 792.6	5.58
2014–15	920.7	422.3	1 343.0	5.08
2015–16	617.1	670.3	1 287.4	6.51

Source: ABS (2016a), adjusted by chain volume index.

Table W 1.1b Flow of new infrastructure—value of water infrastructure engineering construction work done by the private sector for the public sector, adjusted by chain volume index

Financial year	Water storage and supply	Sewerage and drainage	Water infrastructure engineering construction work done	Water percentage of total major infrastructure engineering construction work done
	\$ million			
1986–87	425.5	392.3	817.8	15.92
1987–88	385.1	394.8	779.9	20.58
1988–89	299.5	332.8	632.3	18.57
1989–90	261.0	388.2	649.2	17.77
1990–91	389.4	431.9	821.2	18.34
1991–92	531.5	313.4	844.9	18.53
1992–93	429.5	403.3	832.9	16.88
1993–94	612.0	458.5	1 070.6	18.53
1994–95	388.7	423.6	812.3	16.08
1995–96	301.9	438.5	740.4	15.02
1996–97	296.7	369.3	665.9	12.19
1997–98	256.6	454.1	710.7	11.77
1998–99	301.0	519.6	820.6	12.72
1999–00	380.4	1 033.2	1 413.6	20.50
2000–01	311.0	867.5	1 178.5	18.41
2001–02	332.7	535.3	868.0	15.40
2002–03	276.5	643.4	919.9	15.92
2003–04	512.7	826.7	1 339.4	23.39
2004–05	796.7	718.8	1 515.5	19.72
2005–06	786.0	544.6	1 330.7	16.12
2006–07	868.6	645.0	1 513.6	17.46
2007–08	3 513.2	1 188.0	4 701.2	38.06
2008–09	3 431.0	1 228.9	4 659.9	30.82
2009–10	3 098.3	1 542.3	4 640.5	29.57
2010–11	1 676.2	1 718.4	3 394.6	20.57
2011–12	1 428.5	1 275.0	2 703.5	15.98
2012–13	1 165.6	910.1	2 075.7	12.53
2013–14	710.2	989.2	1 699.4	11.47
2014–15	582.5	616.4	1 198.9	9.21
2015–16	595.8	557.4	1 153.2	7.31

Source: ABS (2016a), adjusted by chain volume index.

Table W 1.1c Flow of new infrastructure—value of water infrastructure engineering construction work done by the public sector, adjusted by chain volume index

Financial year	Water storage and supply	Sewerage and drainage	Water infrastructure engineering construction work done	Water percentage of total major infrastructure engineering construction work done
				\$ million
				per cent
1986–87	779.2	962.7	1 742.0	17.07
1987–88	710.6	718.4	1 429.0	15.18
1988–89	720.2	701.8	1 422.0	14.92
1989–90	730.2	681.3	1 411.5	12.94
1990–91	845.5	656.1	1 501.6	13.90
1991–92	735.9	671.0	1 406.9	15.24
1992–93	692.2	641.9	1 334.2	13.44
1993–94	473.1	503.7	976.8	10.26
1994–95	429.0	531.5	960.5	8.96
1995–96	342.3	398.1	740.4	6.75
1996–97	236.3	334.6	570.9	5.56
1997–98	286.2	441.7	727.9	7.11
1998–99	386.1	457.7	843.8	7.66
1999–00	524.0	485.2	1 009.2	8.27
2000–01	390.5	388.9	779.4	7.02
2001–02	372.5	362.3	734.8	6.66
2002–03	438.0	413.1	851.1	7.76
2003–04	401.6	420.1	821.7	7.67
2004–05	437.7	455.7	893.4	7.99
2005–06	428.7	609.0	1 037.7	7.60
2006–07	636.7	787.9	1 424.6	11.36
2007–08	1 066.2	845.7	1 911.9	15.73
2008–09	993.1	871.5	1 864.6	13.26
2009–10	1 537.3	1 068.6	2 605.8	16.40
2010–11	1 527.8	1 338.3	2 866.1	18.35
2011–12	1 498.7	1 249.9	2 748.6	18.09
2012–13	1 420.7	1 401.0	2 821.7	20.04
2013–14	1 161.2	1 160.1	2 321.2	20.73
2014–15	815.3	976.3	1 791.6	17.70
2015–16	839.0	1 286.4	2 125.5	21.46

Source: ABS (2016a), adjusted by chain volume index.

Table W 1.1d Flow of new infrastructure—total value of water infrastructure engineering construction work done, adjusted by chain volume index

Financial year	Water storage and supply	Sewerage and drainage	Water infrastructure engineering construction work done	Water percentage of total major infrastructure engineering construction work done
\$ million				per cent
1986–87	1 310.7	1 435.8	2 746.5	15.67
1987–88	1 216.8	1 237.3	2 454.1	15.72
1988–89	1 149.3	1 162.0	2 311.2	14.85
1989–90	1 134.9	1 175.5	2 310.4	13.27
1990–91	1 418.5	1 259.7	2 678.1	14.91
1991–92	1 373.4	1 084.7	2 458.1	15.05
1992–93	1 266.8	1 176.7	2 443.5	13.92
1993–94	1 340.2	1 155.4	2 495.6	13.39
1994–95	1 279.9	1 080.9	2 360.8	12.36
1995–96	1 074.4	1 087.6	2 162.0	10.70
1996–97	737.0	831.0	1 568.0	7.74
1997–98	774.3	1 065.9	1 840.2	8.35
1998–99	920.6	1 105.6	2 026.2	8.40
1999–00	1 174.1	1 753.3	2 927.3	11.20
2000–01	982.2	1 547.4	2 529.5	10.61
2001–02	917.3	1 131.1	2 048.3	8.77
2002–03	952.5	1 464.3	2 416.8	9.36
2003–04	1 327.6	1 924.4	3 252.0	11.19
2004–05	1 706.7	1 569.2	3 275.9	9.84
2005–06	1 783.8	1 558.9	3 342.7	9.06
2006–07	2 059.4	1 855.5	3 914.9	9.95
2007–08	5 386.4	2 995.1	8 381.5	19.02
2008–09	5 038.7	3 150.3	8 189.1	16.36
2009–10	6 463.9	3 154.8	9 618.7	18.70
2010–11	6 281.2	3 737.9	10 019.1	17.69
2011–12	5 015.1	3 221.9	8 236.9	13.26
2012–13	4 026.4	2 958.7	6 985.0	10.67
2013–14	3 064.3	2 748.8	5 813.1	10.00
2014–15	2 318.5	2 015.1	4 333.5	8.75
2015–16	2 052.0	2 514.1	4 566.1	10.04

Source: ABS (2016a), adjusted by chain volume index.

Table W 1.2a Stock of infrastructure—current value of Australian Urban Water infrastructure, by state or territory—Urban Water infrastructure assets

End of financial year	NSW	VIC	QLD	SA \$ million	WA	TAS ²	NT	ACT
2005–06	9 374	8 446			4 159			
2006–07	9 566	8 455			4 919		1 290	
2007–08	15 158	8 868			5 232		1 623	
2008–09	17 100	10 459			6 326		1 698	
2009–10	18 774	9 829			6 496		429	1 801
2010–11	19 533	12 127			6 065		481	2 094
2011–12	20 065	11 920			7 324		476	2 243
2012–13	20 999	16 604	18 312		7 466		517	2 321
2013–14	21 395	17 342	19 516	8 955	7 928	1 383	532	2 348
2014–15	21 734	17 352	17 328	9 047	8 048	1 378		2 398

^{1,2,3,4} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 1.2b Stock of infrastructure—current value of Australian Urban Water infrastructure, by state or territory—waste water and sewerage infrastructure assets

End of financial year	NSW	VIC	QLD	SA \$ million	WA	TAS ²	NT	ACT
2005–06	17 318	9 233			4 702		164	
2006–07	18 249	9 617			4 905		165	1 182
2007–08	25 776	10 104			5 003		158	1 269
2008–09	28 826	10 806			6 240		164	1 306
2009–10	29 909	11 261			6 627		233	1 274
2010–11	31 936	12 984			7 059		261	1 245
2011–12	33 200	13 046			7 274		272	1 234
2012–13	40 720	13 693	11 134		7 366		289	1 296
2013–14	42 945	14 182	11 032	3 838	7 412	1 307	324	1 293
2014–15	43 521	13 778	12 535	3 978	7 496	1 316		1 346

^{1,2,3,4} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 1.3 Infrastructure capacity—major Australian water storage dams⁵

End of financial year	Storage capacity gigalitres	Water held in dams at end of year	Percentage of capacity used per cent
1971–72	52 430		
1972–73	52 771		
1973–74	65 644		
1974–75	66 211		
1975–76	68 491		
1976–77	68 700		
1977–78	68 738		
1978–79	72 816		
1979–80	72 966		
1980–81	73 900		
1981–82	74 365		
1982–83	76 153		
1983–84	77 061		
1984–85	78 293		
1985–86	78 615		
1986–87	80 997		
1987–88	81 138		
1988–89	81 210		
1989–90	82 860		
1990–91	82 876		
1991–92	82 972		
1992–93	83 016		
1993–94	83 109		
1994–95	83 111		
1995–96	83 112		
1996–97	83 292		
1997–98	83 296		
1998–99	83 297		
1999–00	83 312		
2000–01	83 312		
2001–02	83 853	48 684	58.1
2002–03	83 853	39 575	47.2
2003–04	83 853	44 164	52.7
2004–05	83 853	39 958	47.7
2005–06			
2006–07			
2007–08			
2008–09		37 144	
2009–10		47 529	
2010–11 ⁶	79 383	61 154	77.0
2011–12	79 532	66 945	84.2
2012–13	80 406	55 194	68.6
2013–14	80 958	51 364	63.4
2014–15	80 962	47 688	58.9
2015–16	80 962	43 078	53.2

^{5,6} See end notes.

Note: Data are not readily available for missing years.

Source: ABS (2006b), BoM (2016c).

Table W 1.4 Infrastructure capacity—water storage in major dams—actual holdings of major water storage dams, by state/territory

End of financial year	NSW	VIC	QLD	SA gigalitres	WA	TAS	NT	ACT
2001–02	12 206	6 083	6 226	115	11 254	12 494	237	69
2002–03	8 629	2 815	5 602	105	10 236	11 886	241	61
2003–04	7 970	4 371	6 287	111	11 352	13 744	251	78
2004–05	8 200	4 729	5 309	116	10 135	11 191	196	82
2005–06								
2006–07								
2007–08								
2008–09	5 636	1 908	7 447	998	10 871	10 044	204	36
2009–10	7 258	3 432	9 372	1 393	8 813	16 990	215	56
2010–11	14 924	9 455	10 014	2 148	10 723	13 541	269	80
2011–12 ³	17 911	10 243	10 121	2 001	10 727	15 594	262	86
2012–13	13 455	8 981	9 679	1 977	8 453	12 377	215	57
2013–14	10 461	9 185	8 624	2 101	10 863	9 772	265	93
2014–15	9 591	7 250	8 265	2 052	9 858	10 321	260	101
2015–16	9 994	5 297	7 634	2 068	7 877	9 866	239	109

³ See end notes.

Source: ABS (2006b), BOM (2016c).

Table W 1.5a Flow of new infrastructure—capital expenditure on Australian Urban Water infrastructure, by state or territory—Urban Water infrastructure assets

End of financial year	NSW	VIC	QLD	SA \$ million	WA	TAS ²	NT	ACT
2006–07	498	420			385		9	24
2007–08	1 514	570	178		263		16	57
2008–09	2 138	1 206	2 016		387		24	104
2009–10	1 394	1 073	353		688		57	180
2010–11	616	680	297		652		35	233
2011–12	593	627	807		528		25	206
2012–13	429	582	373		450		30	115
2013–14	459	409	294	170	253	37	18	43
2014–15	345	396	384	115	192	50		25

^{1,2,3,4} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 1.5b Flow of new infrastructure—capital expenditure on Australian Urban Water infrastructure, by state or territory—waste water and sewerage infrastructure assets

End of financial year	NSW	VIC	QLD	SA \$ million	WA	TAS ³	NT	ACT
2006–07	556	583		236			10	13
2007–08	882	717	275	396			12	24
2008–09	875	800	365	517			16	60
2009–10	929	887	222	393			20	25
2010–11	786	1 115	353	173			27	23
2011–12	834	813	432	152			43	25
2012–13	683	574	548	174			47	28
2013–14	571	526	418	100	181	38	18	17
2014–15	689	559	367	100	259	52		24

^{1,2,3,4} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 1.6 Stock of infrastructure—number of Urban Water treatment plants providing full treatment, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS ²	NT	ACT
2005–06	57	152			11			2
2006–07	58	156			12			2
2007–08	60	163			12			2
2008–09	64	157			18			2
2009–10	80	152			18			2
2010–11	82	150			18			2
2011–12	83	166			22			2
2012–13	83	171			22			2
2013–14	85	174		42	22			2
2014–15	69	176	98	42	22			2

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 1.7 Stock of infrastructure—length of Urban Water mains, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS ²	NT	ACT
	kilometres							
2005–06	43 460	42 739		14 388			1 625	3 004
2006–07	43 706	43 027		14 755			1 651	2 954
2007–08	44 635	43 653		15 057			1 672	2 980
2008–09	44 697	44 193		15 610			1 705	3 059
2009–10	45 129	44 735		15 803			1 712	3 096
2010–11	45 518	45 300		16 072			1 706	3 134
2011–12	46 072	45 997		16 466			1 744	3 179
2012–13	46 842	46 815		16 861			1 786	3 189
2013–14	47 130	47 580		26 984	17 128		1 824	3 188
2014–15	47 415	48 175	37 812	27 078	17 263		1 849	3 202

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 1.8 Urban Water infrastructure—Average number of properties served per kilometre of water main, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS ²	NT	ACT
2005–06	56.9	50.4		52.1			35.1	46.3
2006–07	57.2	50.9		52.1			35.7	47.4
2007–08	56.7	51.2		52.1			36.5	47.3
2008–09	57.1	51.4		52.3			37.0	47.1
2009–10	57.3	51.7		53.0			35.6	47.2
2010–11	57.5	52.2		53.0			36.9	47.9
2011–12	57.4	52.5		53.1			36.7	48.4
2012–13	57.2	52.4		53.0			35.3	49.6
2013–14	57.0	52.7		27.9	53.8		36.2	50.8
2014–15	57.6	53.1	46.1	28.1	54.7		37.9	51.8

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 1.9 Urban Water infrastructure quality—average number of water main breaks per 100 kilometres of water main, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS ²	NT	ACT
2005–06	29.2	22.0		15.8			42.2	
2006–07	25.4	38.8		14.1			44.5	
2007–08	21.5	34.9		14.1			42.8	
2008–09	23.5	33.4		15.6			64.6	29.2
2009–10	20.8	35.1		14.0			58.0	23.6
2010–11	20.5	30.9		12.8			42.2	26.7
2011–12	17.2	30.2		12.1			40.9	24.7
2012–13	21.8	37.1		13.1			17.1	20.0
2013–14	22.0	33.1		11.4	12.9		21.6	11.5
2014–15	19.2	30.2	17.6	13.9	14.6		17.0	14.2

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 1.10 Stock of Urban Water infrastructure—number of sewage treatment plants providing full treatment, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS ²	NT	ACT
2005–06	105	122			14		7	2
2006–07	163	121			14		7	2
2007–08	162	132			15		7	2
2008–09	162	197			15		7	2
2009–10	166	196			15		7	2
2010–11	156	196			19		7	2
2011–12	160	201			20		7	3
2012–13	163	202			22		7	5
2013–14	165	207		25	22		7	5
2014–15	166	210	145	24	22		7	5

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 1.11 Stock of Urban Water infrastructure—length of sewerage mains and channels, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS ²	NT	ACT
kilometres								
2005–06	39 873	33 101			11 653		866	2 985
2006–07	39 976	33 533			11 926		877	2 993
2007–08	40 658	34 135			12 217		884	3 014
2008–09	41 047	34 500			12 443		913	3 059
2009–10	41 790	35 134			12 572		940	3 094
2010–11	42 254	35 623			13 031		954	3 134
2011–12	43 040	36 178			13 356		958	3 174
2012–13	42 949	36 685			13 778		965	3 206
2013–14	43 469	37 127		8 807	14 076		994	3 234
2014–15	43 973	37 734	31 046	8 853	14 581		1 007	3 254

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 1.12 Urban Water infrastructure—average number of properties served per kilometre of sewer main, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS ²	NT	ACT
2005–06	58.9	60.7			55.2		63.5	46.2
2006–07	59.4	60.6			55.8		63.9	46.4
2007–08	59.1	61.0			56.2		65.6	46.8
2008–09	59.3	61.5			57.1		64.6	47.1
2009–10	59.0	61.6			58.2		60.6	46.9
2010–11	59.1	62.1			58.4		59.8	47.5
2011–12	58.6	62.7			58.3		62.6	48.2
2012–13	59.5	63.0			58.4		63.2	49.0
2013–14	59.2	63.8		66.5	58.6		64.4	49.8
2014–15	59.5	64.1	50.8	66.9	58.0		67.5	50.7

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 1.13 Stock of Urban Water infrastructure—number of recycled water treatment plants, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS ²	NT	ACT
2005–06	2	16			1		1	2
2006–07	2	18			1		1	2
2007–08	2	20			1		2	2
2008–09	2	198			1		2	2
2009–10	2	45			1		2	2
2010–11	6	74			2		2	2
2011–12	5	60			2		2	1
2012–13	6	93			2		2	1
2013–14	5	80		9	2	2	2	1

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 1.14 Infrastructure quality—average number of sewer main breaks and chokes per 100 kilometres of sewer main, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS ¹	NT	ACT
2005–06	72.6	30.4	19.2	50.1	19.5		39.6	157.4
2006–07	80.1	33.9	20.6	62.9	23.5		36.5	166.4
2007–08	56.6	31.0	16.6	55.3	22.4		33.8	166.9
2008–09	58.3	31.8	16.3	^a 57.2	20.8		35.0	189.8
2009–10	51.3	30.4	15.9	46.4	22.1		16.3	105.0
2010–11	52.0	24.9	14.0	46.3	19.2		20.3	78.0
2011–12	44.0	18.2	16.5	49.2	18.5		20.6	42.0
2012–13	42.6	19.1	15.5	54.4	16.1		14.4	42.0

^a South Australian data for 2008–09 includes data to conform with NWC definitions. Users should use caution when comparing with previous years.¹ See end notes.

Note: Data are not readily available for missing years.

Source: BITRE estimates based on NWC (2014).

Table W 1.15a Stock of infrastructure—length of rural water supply and drainage networks, by asset type—New South Wales

Financial year	Water supply					Drainage			
	Unlined channel	Lined channel	Regulated river	Natural waterway	Pipe	Unlined channel	Lined channel	Natural waterway	Pipe
	kilometres								
2006–07	4 274	716	7 820	0	96	4 415	20	70	5
2007–08	7 974	736	7 820	0	91	4 293	20	70	5
2008–09	7 972	730	7 920	0	113	4 455	20	70	5
2009–10	7 968	735	7 920	0	113	4 409	20	70	5
2010–11	7 968	732	7 920	0	118	4 515	20	70	111
2011–12	9 347	742	7 920	0	118	4 502	20	70	106
2012–13	9 347	742	7 920	0	118	4 515	20	70	106

Source: BITRE estimates based on NWC (2014).

Table W 1.15b Stock of infrastructure—length of rural water supply and drainage networks, by asset type—Victoria

Financial year	Water supply					Drainage			
	Unlined channel	Lined channel	Regulated river	Natural waterway	Pipe	Unlined channel	Lined channel	Natural waterway	Pipe
kilometres									
2006–07	11 520	343	6 486	521	5 124	3 141	8	27	260
2007–08	11 524	199	4 897	546	9 710	3 153	4	27	267
2008–09	7 383	190	4 897	737	10 278	3 142	4	27	267
2009–10	4 730	194	3 051	1 153	14 179	3 128	4	27	907
2010–11	3 993	246	3 051	3 893	14 840	3 042	2	0	901
2011–12	6 869	310	3 026	1 349	14 244	3 192	4	27	902
2012–13	9 937	336	3 075	3 831	15 044	3 196	4	27	901

Source: BITRE estimates based on NWC (2014).

Table W 1.15c Stock of infrastructure—length of rural water supply and drainage networks, by asset type—Queensland

Financial year	Water supply					Drainage			
	Unlined channel	Lined channel	Regulated river	Natural waterway	Pipe	Unlined channel	Lined channel	Natural waterway	Pipe
kilometres									
2006–07	712	163	3 637	0	1 087	736	0	0	0
2007–08	712	163	3 637	0	1 087	736	0	0	0
2008–09	697	163	3 254	0	1 061	736	0	0	0
2009–10	697	163	3 310	0	1 061	736	0	0	0
2010–11	697	163	3 310	0	1 061	736	0	0	0
2011–12	697	163	3 310	0	1 061	736	0	0	0
2012–13	697	163	3 380	0	1 061	736	0	0	0

Source: BITRE estimates based on NWC (2014).

Table W 1.15d Stock of infrastructure—length of rural water supply and drainage networks, by asset type—South Australia

Financial year	Water supply					Drainage			
	Unlined channel	Lined channel	Regulated river	Natural waterway	Pipe	Unlined channel	Lined channel	Natural waterway	Pipe
kilometres									
2006–07	0	0	0	0	391	0	0	0	335
2007–08	0	0	0	0	391	0	0	0	335
2008–09	0	0	0	0	391	0	0	0	339
2009–10	0	0	0	0	405	0	0	0	339
2010–11	0	0	0	0	405	0	0	0	339
2011–12	0	0	0	0	494	0	0	0	339
2012–13	0	0	0	0	494	0	0	0	339

Source: BITRE estimates based on NWC (2014).

Table W 1.15e Stock of infrastructure—length of rural water supply and drainage networks, by asset type—Western Australia

Financial year	Water supply					Drainage				
	Unlined channel	Lined channel	Regulated river	Natural waterway	Pipe	Unlined channel	Lined channel	Natural waterway	Pipe	
kilometres										
2006–07	501	127	0	50	340	0	0	0	0	0
2007–08	466	83	0	20	410	0	0	0	0	0
2008–09	466	83	0	20	430	0	0	0	0	0
2009–10	297	83	0	20	453	0	0	0	0	0
2010–11	341	85	0	20	469	0	0	0	0	0
2011–12	296	85	0	20	489	0	0	0	0	0
2012–13	296	85	0	20	489	0	0	0	0	0

Source: BITRE estimates based on NWC (2014).

Table W 1.15f Stock of infrastructure—length of rural water supply and drainage networks, by asset type—Australia

Financial year	Water supply					Drainage				
	Unlined channel	Lined channel	Regulated river	Natural waterway	Pipe	Unlined channel	Lined channel	Natural waterway	Pipe	
kilometres										
2006–07	17 007	1 349	17 942	571	7 037	8 291	28	97	600	
2007–08	20 676	1 181	16 354	566	11 688	8 181	24	97	607	
2008–09	16 518	1 166	16 072	757	12 272	8 332	24	97	611	
2009–10	13 693	1 175	14 280	1 173	16 211	8 272	24	97	1 251	
2010–11	12 999	1 226	14 280	3 913	16 999	8 293	22	70	1 245	
2011–12	17 208	1 300	14 256	1 369	16 512	8 430	24	97	1 242	
2012–13	20 276	1 326	14 305	3 851	17 312	8 446	24	97	1 240	

Source: BITRE estimates based on NWC (2014).

Table W 1.16 Stock of infrastructure—value of rural water supply and drainage networks, by state/territory—written down replacement cost of fixed assets

End of financial year	New South Wales	Victoria	Queensland	South Australia	Western Australia	\$ million
2006–07	1 036	2 437	2 951	181		88
2007–08	1 016	2 988	2 951	180		124
2008–09	1 008	3 016	2 738	180		125
2009–10	979	4 220	2 835	181		129
2010–11	1 050	5 770	2 891	177		127
2011–12	1 141	6 273	2 891	185		128
2012–13	1 211	6 358	2 891	182		112

Source: BITRE estimates based on NWC (2014).

CHAPTER 2

Water inputs

Table W 2.1 Inputs to water supply—total rainfall on Australian land⁷, by state/territory

Calendar year	NSW ⁸	VIC	QLD	SA	WA	TAS	NT	Australia
	gigalitres							
1988								3 536 793
1989								3 720 632
1990								3 212 189
1991								3 609 098
1992								3 479 872
1993								3 840 628
1994								2 619 903
1995								4 021 390
1996								3 614 482
1997								4 055 235
1998								4 349 840
1999								4 492 911
2000								5 594 409
2001								4 296 765
2002								2 604 519
2003	388 687	138 951	896 476	255 705	981 592	83 928	925 502	3 661 403
2004	400 733	132 356	1 079 924	212 432	1 173 862	83 860	868 839	3 946 008
2005	399 930	140 088	827 250	202 597	774 142	85 501	643 535	3 069 118
2006	280 272	83 462	1 050 503	150 473	1 226 989	59 988	926 852	3 769 092
2007	436 069	139 179	1 135 305	211 449	966 412	71 274	867 490	3 822 936
2008	420 007	114 618	1 159 534	184 895	974 002	67 717	724 482	3 646 019
2009	399 127	121 440	1 188 955	197 680	832 329	103 628	685 358	3 522 947
2010	654 504	196 487	1 960 824	360 938	855 098	95 077	1 269 530	5 392 109
2011	534 847	182 160	1 436 438	347 169	1 525 515	99 318	1 314 052	5 422 877
2012	456 145	143 045	1 166 457	171 126	938 584	90 289	696 151	3 661 403
2013	372 546	138 451	850 960	193 156	1 030 165	105 550	622 083	3 306 801
2014	375 276	125 056	985 777	204 171	1 026 876	79 756	931 978	3 719 094
2015	434 061	115 345	855 805	201 811	895 070	76 301	861 419	3 432 950

^{7,8} See end notes.

Note: Data are not readily available for missing years.

Source: BOM (2016c), GA (2010).

Table W 2.2 Inputs to Urban Water supply—volume of water sourced from surface water, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS ²	NT	ACT
	megalitres							
2006–07	722 274	611 808			86 019		36 105	51 060
2007–08	677 533	560 386			92 748		35 067	43 694
2008–09	696 465	549 377			94 105		37 815	44 950
2009–10	791 881	539 200			120 212		35 878	45 315
2010–11	941 821	542 386			82 962		32 635	40 945
2011–12	1 075 301	567 298			66 869		36 421	41 790
2012–13	1 072 078	625 961			47 490		37 804	47 838
2013–14	1 051 852	614 513		221 741	49 732		34 396	48 731
2014–15	1 099 458	616 385	513 371	306 877	48 075		40 530	47 114

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Source: BOM (2016b).

Table W 2.3 Inputs to Urban Water supply—volume of water sourced from groundwater, by state/territory

Financial year	NSW	VIC	QLD	SA megalitres	WA	TAS ²	NT	ACT
2006–07	30 648	24 292			170 237		14 221	
2007–08	20 547	25 203			151 081		15 232	
2008–09	24 967	25 513			155 992		15 119	
2009–10	29 969	25 030			130 919		15 606	
2010–11	20 613	10 363			168 788		13 602	
2011–12	22 636	12 200			163 855		14 329	
2012–13	28 686	9 318			167 892		14 114	
2013–14	29 424	8 810		11 968	154 682		15 537	
2014–15	28 553	10 469	24 744	11 907	153 070		13 797	

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 2.4 Inputs to Urban Water supply—volume of water sourced from desalination, by state/territory

Financial year	NSW	VIC	QLD	SA megalitres	WA	TAS ²	NT	ACT
2006–07								
2007–08	0	0	0					
2008–09								
2009–10								
2010–11	77 102	0	0		0			
2011–12	61 290	0	0					
2012–13	0	24 850						
2013–14	0	0		121 926				
2014–15	0	0	1 312	45 555	119 457			

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 2.5 Inputs to Urban Water supply—volume of water sourced from recycling, by state/territory

Financial year	NSW	VIC	QLD	SA megalitres	WA	TAS ²	NT	ACT
2006–07	15 716	26 425			5 248		942	2 104
2007–08	18 526	24 675			6 201		974	3 789
2008–09	17 852	26 223			5 951		1 159	4 207
2009–10	20 792	23 358			5 706		1 030	4 249
2010–11	17 803	24 971			5 939		490	4 305
2011–12	20 089	19 961			7 862		747	4 607
2012–13	50 047	31 147			9 891		1 027	4 416
2013–14	52 252	27 855		12 675	9 967		666	4 372
2014–15	49 347	24 863	29 755	12 344	9 871		883	4 352

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 2.6a Urban Water treatment—volume of residential sewage, non-residential sewage and non-trade waste collected, by state/territory

Financial year	NSW	VIC	QLD	SA megalitres	WA	TAS ²	NT	ACT
2006–07	582 859	220 064			118 501		16 226	30 995
2007–08	700 344	331 660			128 715		17 104	30 712
2008–09	622 780	325 655			128 343		17 105	30 051
2009–10	605 480	351 475			130 177		19 294	31 836
2010–11	676 718	201 180			129 811		22 088	35 441
2011–12	773 241	184 494			137 725		18 813	35 231
2012–13	659 467	406 977			140 225		17 609	32 135
2013–14	620 352	421 043		97 092	145 526		19 810	32 069
2014–15	736 455	405 510	326 259	91 578	144 465		18 894	32 971

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Source: BOM (2016b).

Table W 2.6b Urban Water treatment—volume of trade waste collected, by state/territory

Financial year	NSW	VIC	QLD	SA megalitres	WA	TAS	NT	ACT
2006–07	34 275	47 303			6 300		1 035	
2007–08	35 280	58 422			6 473		1 091	
2008–09	34 645	54 727			6 510		905	
2009–10	32 282	56 375			6 515		1 232	
2010–11	34 008	156 059			6 573		1 410	
2011–12	34 135	153 688			7 292		1 200	
2012–13	33 458	56 683			7 443		1 124	
2013–14	31 809	57 962		8 842	7 479		1 264	
2014–15	32 926	56 536	25 042	12 614	8 392		1 134	

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Source: BOM (2016b).

Table W 2.6c Urban Water treatment—volume of total sewage collected, by state/territory

Financial year	NSW	VIC	QLD	SA megalitres	WA	TAS ¹	NT	ACT
2006–07	673 440	684 909			124 801		17 263	30 995
2007–08	736 940	673 791			135 188		18 195	30 712
2008–09	658 529	664 198			134 853		18 010	30 051
2009–10	637 762	689 766			136 692		20 525	31 836
2010–11	710 726	823 419			136 384		23 498	35 441
2011–12	807 376	804 585			145 017		20 013	35 231
2012–13	692 681	660 600			147 668		18 732	31 850
2013–14	651 875	789 923		105 934	153 005		21 075	32 069
2014–15	769 380	763 216	359 661	104 192	152 858		20 027	32 971

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Source: BOM (2016b).

Table W 2.7 Urban Water prices—consumer price index, water and sewerage services, index numbers by capital city

Average over financial year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Australia
base of each index: 2011–12 = 100									
1998–99	47.4	38.9	38.1	45.9	56.3	53.7	49.0	36.9	43.5
1999–00	49.9	38.9	40.2	47.2	58.8	53.3	49.0	39.5	45.1
2000–01	49.9	38.9	44.1	47.6	60.2	55.9	51.5	41.7	45.9
2001–02	50.8	40.9	46.0	49.6	62.1	57.6	52.8	43.3	47.5
2002–03	52.2	42.4	48.0	52.2	63.9	61.3	54.8	45.0	49.2
2003–04	54.0	44.6	50.0	56.2	66.3	64.1	55.5	48.1	51.5
2004–05	55.4	46.7	51.7	57.9	66.3	67.4	55.5	50.5	53.2
2005–06	59.6	49.1	54.6	59.9	67.8	73.5	55.5	54.7	56.1
2006–07	63.9	51.8	57.9	61.9	70.6	76.9	57.0	65.2	59.5
2007–08	66.8	54.5	64.2	64.1	75.6	81.3	59.6	71.3	63.0
2008–09	77.0	64.1	68.3	69.7	82.6	85.3	61.7	80.3	71.3
2009–10	88.9	75.4	78.4	76.9	87.6	91.9	74.6	85.7	81.4
2010–11	94.7	88.2	94.1	87.7	96.6	95.5	83.2	89.2	91.8
2011–12	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2012–13	101.0	100.4	101.6	110.5	111.0	106.3	114.7	105.7	103.2
2013–14	103.8	124.7	109.1	111.6	119.1	111.6	130.4	101.4	113.6
2014–15	106.2	112.1	120.6	114.9	124.7	117.6	136.6	104.6	113.4
2015–16	107.4	115.8	123.9	116.8	129.2	122.3	140.6	104.7	116.1

Source: ABS (2016d).

Table W 2.8 Inputs to rural water supply—power consumed to provide rural water distribution services, by state/territory

Financial year	NSW	VIC	QLD	SA	WA
kilowatt hours					
2006–07	5 155 535	21 250 309	57 853 728	18 068 925	200
2007–08	4 956 344	18 065 716	36 531 867	15 666 171	683 875
2008–09	5 051 822	18 693 179	35 492 986	14 207 826	422 585
2009–10	6 320 225	18 476 739	56 946 073	16 383 896	2 294 798
2010–11	6 046 386	10 450 180	18 372 912	13 920 949	3 003 941
2011–12	6 971 082	29 042 654	18 372 912	22 416 052	2 919 338

Source: BITRE estimates based on NWC (2014).

Table W 2.9a Inputs to rural water supply—supply network intake volume for surface water source, by state/territory

Financial year	NSW	VIC	QLD	SA	WA
megalitres					
2006–07	3 727 459	295 199	536 032	89 805	405 333
2007–08	1 677 102	372 327	622 979	79 854	298 652
2008–09	2 205 299	368 775	602 148	81 473	266 717
2009–10	2 732 428	354 939	821 479	82 123	239 214
2010–11	4 975 150	227 414	473 234	70 643	245 958
2011–12	7 219 133	335 618	473 234	99 087	231 528
2012–13	6 103 675	339 330	473 234	126 163	205 072

Source: BITRE estimates based on NWC (2014).

Table W 2.9b Inputs to rural water supply—supply network intake volume for groundwater source, by state/territory

Financial year	NSW	VIC	QLD megalitres	SA	WA
2006–07	3 615	70	39 938	0	0
2007–08	5 896	32 093	27 908	0	0
2008–09	4 178	34 841	23 567	0	0
2009–10	3 900	31 290	35 569	0	0
2010–11	1 201	15 349	6 678	0	0
2011–12	2 025	540	6 678	0	0
2012–13	437	0	6 678	0	0

Source: BITRE estimates based on NWC (2014).

Table W 2.9c Inputs to rural water supply—supply network intake volume for treated waste water, by state/territory

Financial year	NSW	VIC	QLD megalitres	SA	WA
2006–07	0	10 944	0	0	0
2007–08	0	12 521	0	0	0
2008–09	0	13 577	0	0	0
2009–10	0	12 729	0	0	0
2010–11	0	1 778	0	0	0
2011–12	0	23	0	0	0
2012–13	0	2 384	0	0	0

Source: BITRE estimates based on NWC (2014).

Table W 2.9d Inputs to rural water supply—supply network intake volume for other sources, by state/territory

Financial year	NSW	VIC	QLD megalitres	SA	WA
2006–07	0	16 000	0	0	0
2007–08	0	12 445	0	0	0
2008–09	0	11 604	0	0	0
2009–10	0	12 887	0	0	0
2010–11	0	586	0	0	0
2011–12	0	0	0	0	0
2012–13	0	0	0	0	0

Source: BITRE estimates based on NWC (2014).

Table W 2.9e Inputs to rural water supply—total supply network intake volume, by state/territory

Financial year	NSW	VIC	QLD megalitres	SA	WA
2006–07	3 731 074	322 213	575 970	89 805	405 333
2007–08	1 682 999	429 386	650 887	79 854	298 652
2008–09	2 209 477	428 797	625 715	81 473	266 717
2009–10	2 736 328	411 845	857 048	82 123	239 214
2010–11	4 976 351	245 126	479 912	70 643	245 958
2011–12	7 233 508	336 181	479 912	99 087	250 021
2012–13	6 104 112	341 714	479 912	126 163	205 072

Source: BITRE estimates based on NWC (2014).

Table W 2.10a Rural water markets—entitlements⁹ on issue, by state/territory

Financial year	NSW	VIC	QLD	SA gigalitres	WA	TAS	NT	ACT
2007–08	11 058	4 295	4 717	1 333	2 515	1 471	117	65
2008–09	10 679	4 530	4 938	1 691	2 561	1 460	188	80
2009–10	11 094	5 701	5 604	1 374	2 437	1 650	258	76
2010–11	11 649	5 990	5 734	1 482	2 722	1 711	323	76
2011–12	13 280	6 664	5 870	1 747	2 634	1 794	311	76
2012–13	13 298	6 712	5 987	1 699	3 126	1 832	314	65

⁹ See end notes.

Source: NWC (2014).

Table W 2.10b Rural water markets—total entitlement⁹ trade, by state/territory

Financial year	NSW	VIC	QLD	SA gigalitres	WA	TAS	NT	ACT
2007–08		218	76	17	2	57	0	<1
2008–09	1 286	252	75	73	8	104	0	<1
2009–10	1 276	402	70	150	24	27	0	<1
2010–11	635	300	136	88	25	20	0	<1
2011–12	768	377	130	93	14	55	0	<1
2012–13	680	231	225	63	100	38	0	<1

⁹ See end notes.

Note: Data are not readily available for missing years.

Source: NWC (2014).

Table W 2.10c Rural water markets—value of market turnover for water entitlements⁹, by state/territory

Financial year	NSW	VIC	QLD	SA ^b \$ million	WA	TAS	NT	ACT
2007–08	470.5	277.4	57.7	38.3	1.0	na	0.0	na
2008–09	1 661.8	370.6	70.4	118.6	1.7	na	0.0	na
2009–10	1 564.2	733.2	91.6	227.1	0.7	na	0.0	na
2010–11	687.0	428.0	104.0	73.3	1.0	na	0.0	na
2011–12	730.0	491.0	142.0	80.4	1.0	na	0.0	na
2012–13	616.0	229.0	58.0	54.4	1.0	na	0.0	na

^b The entitlement turnover value for 2007–08 is based on average prices and total volumes of whole-of-licence transfers, whereas for 2008–09 the entitlement turnover is based on permanent allocation trades, and for 2009–10, 2010–11 and 2011–12 and 2012–13 is based on transfers of water access entitlements. These three approaches may not be directly comparable.

⁹ See end notes.

na: Not available.

Source: NWC (2014).

Table W 2.10d Rural water markets—value of market turnover for water allocations⁹, by state/territory

Financial year	NSW	VIC	QLD	SA ^b \$ million	WA	TAS	NT	ACT
2007–08	384.0	270.5	na	181.3	0.3	na	0.0	0.0
2008–09	448.0	124.6	na	33.2	0.1	na	0.0	0.0
2009–10	217.9	127.7	na	20.4	0.3	na	0.0	0.0
2010–11	85.0	33.0	na	10.5	1.4	0.0	0.0	0.0
2011–12	38.9	28.0	na	11.4	0.0	na	0.0	0.0
2012–13	168.3	102.8	na	15.1	0.6	na	0.0	0.0

^b The entitlement turnover value for 2007–08 is based on average prices and total volumes of whole-of-licence transfers, whereas for 2008–09 the entitlement turnover is based on permanent allocation trades, and for 2009–10, 2010–11 and 2011–12 and 2012–13 is based on transfers of water access entitlements. These three approaches may not be directly comparable.

⁹ See end notes.

na: Not available.

Source: NWC (2014).

CHAPTER 3

Supply and use

Table W 3.1 Urban Water supply—Australian population receiving water supply services, by state/territory

Financial year	NSW	VIC	QLD	SA thousands	WA	TAS ²	NT	ACT ^c
2006–07	6 095	4 680			1 706		134	374
2007–08	6 122	5 087			1 788		136	380
2008–09	6 175	5 196			1 882		138	387
2009–10	6 300	5 351			1 954		140	396
2010–11	6 486	5 438			1 983		142	403
2011–12	6 512	5 601			2 060		146	412
2012–13	6 545	5 686			2 107		149	420
2013–14	6 661	5 749		1 605	2 225	445	152	425
2014–15	6 759	5 867	4 179	1 664	2 260	447	154	428

^{1,2,3} See end notes.

^c ACT population receiving water supply services includes some NSW residents in adjacent areas.

¹ See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.2a Urban Water supply—number of residential properties connected to the urban water supply network, by state/territory

Financial year	NSW	VIC	QLD	SA thousands	WA	TAS ²	NT	ACT
2006–07	2 319	1 881			670		50	133
2007–08	2 340	2 033			695		51	134
2008–09	2 359	2 069			725		51	137
2009–10	2 388	2 109			743		53	139
2010–11	2 413	2 157			759		54	142
2011–12	2 434	2 204			784		53	146
2012–13	2 469	2 246			798		53	149
2013–14	2 504	2 298		1 626	682	819	56	153
2014–15	2 544	2 342		1 626	689	842	179	157

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.2b Urban Water supply—number of non-residential properties connected to the urban water supply network, by state/territory

Financial year	NSW	VIC	QLD	SA thousands	WA	TAS ²	NT	ACT
2006–07	183	179			88		9	7
2007–08	187	203			88		10	7
2008–09	192	203			91		11	7
2009–10	198	207			95		8	7
2010–11	203	206			93		8	8
2011–12	209	209			93		10	8
2012–13	207	211			94		10	9
2013–14	187	214		115	71	100	10	9
2014–15	189	216		115	72	102	22	10

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.2c Urban Water supply—Total number of properties connected to the urban water supply network, by state/territory^d

Financial year	NSW	VIC	QLD	SA thousands	WA	TAS ²	NT	ACT
2006–07	2 501	2 190			769		59	140
2007–08	2 530	2 233			785		61	141
2008–09	2 551	2 273			817		63	144
2009–10	2 584	2 314			838		61	146
2010–11	2 615	2 366			852		63	150
2011–12	2 642	2 413			875		64	154
2012–13	2 677	2 454			893		63	158
2013–14	2 688	2 509		753	921		66	162
2014–15	2 730	2 557	1 744	761	944	201	70	166

^{i,2,3} See end notes.^d Components may not sum to total due to rounding

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.3a Urban Water supply—volume of urban water supplied to residential properties, by state/territory

Financial year	NSW	VIC	QLD	SA megalitres	WA	TAS ²	NT	ACT
2006–07	457 840	333 234			195 776		24 634	31 954
2007–08	422 310	323 974			192 962		25 299	26 079
2008–09	456 008	324 878			202 972		25 642	27 494
2009–10	470 808	321 327			206 237		25 164	27 609
2010–11	449 221	307 864			201 926		21 794	25 204
2011–12	442 535	331 219			198 018		24 756	26 326
2012–13	476 550	366 858			200 560		24 582	29 609
2013–14	498 918	366 439		121 600	209 735		23 494	30 993
2014–15	489 986	372 906	309 378	124 021	207 720	30 726	25 177	29 458

^{i,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.3b Urban Water supply—volume of urban water supplied to commercial, municipal, and industrial properties, by state/territory

Financial year	NSW	VIC	QLD	SA megalitres	WA	TAS ²	NT	ACT
2006–07	172 072	154 122			63 248		19 589	13 642
2007–08	209 545	158 010			64 015		19 435	11 153
2008–09	204 879	156 366			64 026		20 280	11 223
2009–10	208 350	151 046			61 972		16 680	10 185
2010–11	204 835	142 546			62 666		15 034	8 822
2011–12	200 480	149 432			63 465		16 951	10 977
2012–13	211 559	205 445			63 634		16 924	12 738
2013–14	219 035	200 305		65 970	65 187		17 776	12 711
2014–15	207 437	202 161	167 621	68 030	64 665	22 017	20 006	11 387

^{i,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.3c Urban Water supply—volume of urban water supplied for other uses, by state/territory

Financial year	NSW	VIC	QLD	SA megalitres	WA	TAS ²	NT	ACT
2006–07	56 163	60 641			19 765		1 253	2 103
2007–08	83 193	60 848			22 286		1 290	3 517
2008–09	74 405	57 634			23 496		1 061	3 080
2009–10	71 837	54 197			25 968		1 454	3 778
2010–11	126 623	54 901			26 252		2 003	3 345
2011–12	81 716	59 758			32 823		1 432	3 052
2012–13	96 224	64 385			32 731		1 580	3 485
2013–14	95 451	64 866	51 613	34 988	34 505		1 623	2 495
2014–15	86 480	64 324	50 369	37 078	35 874		1 584	3 841

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.3d Urban Water supply—total volume of urban water supplied, by state/territory^d

Financial year	NSW	VIC	QLD	SA megalitres	WA	TAS ²	NT	ACT
2006–07	766 897	591 292			282 267		45 476	47 699
2007–08	715 087	544 542			279 263		46 025	40 749
2008–09	734 608	538 878			290 494		46 730	41 797
2009–10	751 385	887 931			294 177		43 297	41 572
2010–11	1 214 663	857 070			290 844		38 829	37 371
2011–12	1 154 070	905 968			294 304		43 139	40 355
2012–13	1 321 282	1 047 251			296 927		43 084	45 832
2013–14	1 365 089	1 026 756		222 558	309 427		42 892	46 199
2014–15	1 322 350	1 042 584	821 489	229 129	308 258		46 765	44 686

^{1,2,3} See end notes.^d Components may not sum to total due to rounding

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.4 Urban Water supply—Australian population receiving sewerage services, by state/territory

Financial year	NSW	VIC	QLD	SA thousands	WA	TAS ²	NT	ACT
2006–07	5 850	4 407		1 036			129	336
2007–08	5 877	4 746		1 085			131	341
2008–09	5 941	4 923		1 104			133	348
2009–10	6 074	4 919					135	355
2010–11	6 261	5 095		1 125			137	362
2011–12	6 265	5 344		1 136			141	371
2012–13	6 293	5 437		1 149			143	380
2013–14	6 432	5 466		1 281	2 062	409	145	384
2014–15	6 534	5 554	3 841	1 309	2 096	379	148	388

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.5a Urban Water treatment—number of residential properties connected to sewerage services, by state/territory

Financial year	NSW	VIC	QLD	SA thousands	WA	TAS ²	NT	ACT
2006–07	2 213	1 752			598		48	133
2007–08	2 241	1 892			630		49	134
2008–09	2 268	1 929			649		49	137
2009–10	2 296	1 970			668		51	138
2010–11	2 320	2 014			697		52	142
2011–12	2 343	2 065			716		51	146
2012–13	2 378	2 108			740		51	149
2013–14	2 416	2 162		555	755		54	153
2014–15	2 452	2 208	1 478	561	778	158	59	157

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.5b Urban Water treatment—number of non-residential properties connected to sewerage services, by state/territory

Financial year	NSW	VIC	QLD	SA thousands	WA	TAS ²	NT	ACT
2006–07	164	150			54		8	6
2007–08	164	167			58		9	7
2008–09	166	171			60		10	7
2009–10	174	173			61		6	7
2010–11	178	175			64		6	7
2011–12	181	177			63		9	7
2012–13	181	181			64		9	8
2013–14	160	186		31	67		10	8
2014–15	159	194	97	31	67	19	9	8

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.5c Urban Water treatment—total number of properties connected to sewerage services, by state/territory

Financial year	NSW	VIC	QLD	SA thousands	WA	TAS ²	NT	ACT
2006–07	2 376	2 009			665		56	139
2007–08	2 403	2 060			687		58	141
2008–09	2 432	2 099			710		59	144
2009–10	2 467	2 143			731		57	145
2010–11	2 498	2 192			761		57	149
2011–12	2 522	2 247			779		60	153
2012–13	2 557	2 290			805		61	157
2013–14	2 575	2 346		586	825		64	161
2014–15	2 614	2 398	1 578	592	845	176	68	165

¹ See end notes.

Note: Data are not readily available for missing years.

Source: BOM (2015b).

Table W 3.6a Urban Water treatment—volume of recycled water supplied to residential properties¹¹, by state/territory

Financial year	NSW	VIC	QLD	SA megalitres	WA	TAS	NT	ACT
2006–07	1 667	5						
2007–08	1 415	123			0			
2008–09	1 704	213						
2009–10	2 209	1 404						
2010–11	2 373	0			0			
2011–12	1 993	2			0			
2012–13	2 721	8			0			
2013–14	2 188	0		208	0			
2014–15	2 138	853	337	410	0			

^{1,2,3,11} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.6b Urban Water treatment—volume of recycled water supplied to commercial, municipal, and industrial properties^{11,12}, by state/territory

Financial year	NSW	VIC	QLD	SA megalitres	WA	TAS	NT	ACT
2006–07	12 304	3 758			6 390		942	2 009
2007–08	15 414	6 151			7 416		974	3 736
2008–09	14 758	7 621			7 688		1 159	4 204
2009–10	18 505	4 264			6 040		1 030	4 151
2010–11	14 032	3 945			6 534		490	1 789
2011–12	16 248	4 916			6 856		747	1 857
2012–13	17 624	8 143			6 949		1 027	1 844
2013–14	21 409	7 800		4 180	7 106		666	1 711
2014–15	20 640	9 516	21 058	4 867	7 058		883	1 614

^{1,2,3,11,12} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.6c Urban Water treatment—volume of recycled water supplied for agricultural uses¹⁴, by state/territory

Financial year	NSW	VIC	QLD	SA megalitres	WA	TAS	NT	ACT
2006–07	12 890	44 902			1 873			95
2007–08	11 329	51 377			1 900			53
2008–09	15 631	50 547			1 958			
2009–10	19 683	51 041			2 063			96
2010–11	21 953	25 865			1 993			0
2011–12	19 051	37 620			3 156			0
2012–13	19 478	35 180			3 364			0
2013–14	19 848	34 172		19 086	3 451			19
2014–15	18 692	37 370	12 528	21 444	3 431			0

^{1,2,3,14} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.6d Urban Water treatment—volume of recycled water supplied for on-site use¹⁴, by state/territory

Financial year	NSW	VIC	QLD	SA megalitres	WA	TAS	NT	ACT
2006–07	17 537	15 269			2 007		302	0
2007–08	20 208	15 873			2 075		253	0
2008–09	17 306	18 898			2 087		257	3
2009–10	17 569	20 473			2 404		0	2
2010–11	17 886	20 252			3 060		0	2 516
2011–12	16 680	19 806			2 834		0	2 750
2012–13	15 446	23 678			2 869		0	2 572
2013–14	15 973	19 360		610	2 774		0	2 642
2014–15	16 177	14 944	10 254	209	2 718		0	2 738

^{1,2,3,14} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.6e Urban Water treatment—volume of recycled water supplied for other uses, by state/territory

Financial year	NSW	VIC	QLD	SA megalitres	WA	TAS	NT	ACT
2006–07								
2007–08	0	0			0			
2008–09	0	0			0		185	0
2009–10	0	0			1 553		203	0
2010–11	38	0			2 270		294	0
2011–12	0	0			2 980		336	0
2012–13	0	0			2 991		506	0
2013–14	14	0		3 964	2 349		516	0
2014–15	6	9	618	4 736	1 886		520	0

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.6f Urban Water treatment—total volume of recycled water supplied, by state/territory

Financial year	NSW	VIC	QLD	SA megalitres	WA	TAS ²	NT	ACT
2006–07	41 407	96 744			10 282		1 285	2 104
2007–08	44 832	95 968			11 395		1 268	3 789
2008–09	53 415	98 739			11 777		1 645	4 207
2009–10	62 391	98 393			12 060		1 233	4 249
2010–11	79 348	56 240			13 857		785	4 305
2011–12	75 398	70 510			15 826		1 083	4 607
2012–13	80 986	65 631			16 176		1 533	4 416
2013–14	84 331	62 573		53 563	15 680	5 239	1 182	4 372
2014–15	79 161	80 237	44 796	60 843	15 093	4 814	1 402	4 352

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.7 Urban Water treatment—percentage of effluent recycled, by state/territory

Financial year	NSW	VIC	QLD	SA per cent	WA	TAS ²	NT	ACT
2006–07	6.15	14.13			8.24		7.44	6.79
2007–08	6.08	14.24			8.43		6.97	12.34
2008–09	8.11	14.87			8.73		9.13	14.00
2009–10	9.78	14.26			8.82		6.01	13.35
2010–11	11.16	6.83			10.16		3.34	12.15
2011–12	9.34	8.76			10.91		5.41	13.08
2012–13	11.69	9.94			10.95		8.18	13.86
2013–14	12.94	7.92		50.56	10.25		5.61	13.63
2014–15	10.29	10.51	12.46	58.40	9.87		7.00	13.20

^{1,2,3} See end notes.

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 3.8 Rural water use—volume of rural water used at customer service points, by state/territory

Financial year	NSW	VIC	QLD	SA	WA
	megalitres				
2006–07	3 010 908	451 442	1 047 399	89 805	259 646
2007–08	1 405 459	634 991	861 623	76 793	199 853
2008–09	1 851 526	910 787	830 011	80 188	212 771
2009–10	2 329 787	831 463	1 114 916	77 793	183 087
2010–11	4 162 279	460 456	393 399	68 326	177 245
2011–12	6 621 017	226 289	393 399	97 786	164 912
2012–13	5 926 560	204 611	393 399	120 679	142 444

Source: BITRE estimates based on NWC (2014).

Table W 3.9a Rural water use—water consumption by agricultural activity, by State or Territory—irrigation water

Financial year	NSW ^b	VIC	QLD	SA megalitres	WA	TAS	NT	Australia
2004–05	3 716 557	2 363 764	2 613 404	877 818	267 098	231 758	14 198	10 084 596
2005–06	4 534 108	2 448 485	2 325 003	897 197	306 284	203 931	22 356	10 737 364
2006–07	2 605 019	1 648 914	1 840 252	966 057	293 186	263 029	19 737	7 636 194
2007–08	1 677 083	1 332 045	1 842 729	880 268	284 878	252 113	15 683	6 284 799
2008–09	1 910 033	1 194 501	2 058 471	827 230	226 085	262 296	21 962	6 500 577
2009–10	2 002 797	1 504 742	1 823 870	711 992	252 058	281 953	18 629	6 596 040
2010–11	2 746 189	1 134 701	1 693 994	621 308	253 759	172 709	22 713	6 645 375
2011–12	3 527 444	1 646 243	1 884 062	655 898	246 369	192 035	22 271	8 174 320
2012–13	4 975 661	2 449 685	2 359 653	769 097	239 225	248 786	17 892	11 059 999
2013–14	4 295 313	2 519 880	2 702 867	704 621	259 404	231 290	17 509	10 730 882
2014–15	3 196 461	2 305 061	2 232 053	705 406	258 199	225 126	27 992	8 950 298

^b Includes the Australian Capital Territory.

Source: ABS (2016m).

Table W 3.9b Rural water use—water consumption by agricultural activity, by State or Territory—other water use

Financial year	NSW ^e	VIC	QLD	SA	WA	TAS	NT	Australia
	megalitres							
2004–05	259 551	206 456	251 486	127 010	162 274	23 690	31 440	1 061 906
2005–06	262 364	192 653	255 633	78 378	121 241	25 789	15 369	951 428
2006–07	240 062	174 371	243 980	68 723	118 806	24 816	14 477	885 234
2007–08	178 691	138 822	196 442	53 685	85 026	18 795	32 994	704 455
2008–09	198 070	139 351	237 211	74 419	92 310	22 634	21 062	785 056
2009–10	202 053	139 366	213 380	60 291	88 207	23 413	36 006	762 716
2010–11	236 524	165 648	265 908	77 721	93 349	28 490	37 587	905 227
2011–12	223 787	166 683	224 189	65 628	90 221	25 922	35 823	832 253
2012–13	226 652	164 339	263 575	73 786	84 782	23 097	32 503	868 734
2013–14	211 085	157 755	254 978	58 611	84 481	24 391	39 670	830 971
2014–15	229 697	157 344	235 224	65 412	85 652	22 440	33 790	829 559

^e Includes the Australian Capital Territory.

Source: ABS (2016m).

Table W 3.9c Rural water use—water consumption by agricultural activity, by State or Territory—total

Financial year	NSW ^e	VIC	QLD	SA	WA	TAS	NT	Australia
	megalitres							
2004–05	3 976 108	2 570 220	2 864 890	1 004 828	429 372	255 448	45 638	11 146 502
2005–06	4 796 472	2 641 138	2 580 636	975 575	427 525	229 720	37 725	11 688 792
2006–07	2 845 081	1 823 285	2 084 232	1 034 780	411 992	287 845	34 214	8 521 428
2007–08	1 855 774	1 470 867	2 039 171	933 953	369 904	270 908	48 677	6 989 254
2008–09	2 108 103	1 333 852	2 295 682	901 649	318 395	284 930	43 024	7 285 633
2009–10	2 204 850	1 644 108	2 037 251	772 283	340 265	305 366	54 635	7 358 756
2010–11	2 982 713	1 300 349	1 959 902	699 029	347 108	201 199	60 300	7 550 602
2011–12	3 751 231	1 812 926	2 108 251	721 526	336 590	217 957	58 094	9 006 573
2012–13	5 202 313	2 614 024	2 623 228	842 884	324 006	271 884	50 394	11 928 733
2013–14	4 506 398	2 677 634	2 957 845	763 232	343 885	255 680	57 178	11 561 853
2014–15	3 426 159	2 462 405	2 467 277	770 818	343 851	247 566	61 781	9 779 856

^e Includes the Australian Capital Territory.

Source: ABS (2016m).

Table W 3.10a Rural water use—area of irrigated crops and pastures, by agricultural activity—New South Wales^e

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ^f ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
'000 hectares									
2002–03	np	np	173	0	f 29	30	15	4	34
2003–04	np	np	112	0	f 43	25	f 22	5	34
2004–05	590	np	146	np	f 30	26	f 17	4	36
2005–06 ¹⁵	595	101	169	0	29	30	18	5	44
2006–07	445	f 20	99	np	f 20	34	15	f 5	41
2007–08	385.8	2.1	36.7	g 0.9	15.5	29.6	12.3	f 3.2	35.8
2008–09	320.7	f 7.2	70.3	0.0	f 18.3	24.8	13.5	3.8	f 41.2
2009–10	342.7	np	80.1	np	f 21.1	26.5	14.8	f 3.9	f 37.3
2010–11	np	f 75.0	196.2	0.1	21.1	25.1	14.6	3.6	39.2
2011–12	353.7	f 101.9	f 235.6	0.0	f 17.9	23.4	12.8	2.8	33.4
2012–13	431.0	113.04	267.5	g 0.4	34.3	22.2	14.6	3.4	33.3
2013–14	447.9	72.48	212.3	0.6	27.7	20.9	14.5	2.8	30.4
2014–15	443.0	69.31	96.2	f 4.4	f 23.8	20.8	10.4	2.8	29.9

^e Includes the Australian Capital Territory.^f Estimate has a relative standard error of 10% to less than 25% and should be used with caution.^g Estimate has a relative standard error of 25% to 50% and should be used with caution.^{15, 16} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.10b Rural water use—area of irrigated crops and pastures, by agricultural activity—Victoria

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ^f ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
'000 hectares									
2002–03	np	np	0	0	f 8	f 39	26	3	35
2003–04	np	np	0	0	f 7	29	23	3	33
2004–05	np	np	0	0	f 9	30	25	3	36
2005–06 ¹⁵	535	1	0	0	6	36	26	3	37
2006–07	330	0	0	0	g 2	35	22	3	f 44
2007–08	312.3	0.0	0.0	0.0	g 7.0	33.5	27.7	f 3.9	g 39.2
2008–09	267.5	0.0	0.0	0.0	g 2.2	35.0	24.7	2.7	f 36.6
2009–10	322.1	np	0.0	0.0	np	45.6	25.2	3.0	f 38.1
2010–11	np	f 0.2	0.0	0.0	5.6	46.1	25.6	3.1	30.0
2011–12	436.9	g 0.8	0.0	0.0	f 7.0	45.9	24.6	3.0	32.7
2012–13	493.2	g 0.5	0.0	0.0	f 16.8	46.6	25.1	2.7	33.1
2013–14	f 545.1	f 0.7	0.0	0.0	g 13.6	45.4	22.3	2.8	26.5
2014–15	f 528.1	f 0.2	0.0	0.0	f 11.5	38.1	23.8	3.2	27.3

^f Estimate has a relative standard error of 10% to less than 25% and should be used with caution.^g Estimate has a relative standard error of 25% to 50% and should be used with caution.^{15, 16} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.10c Rural water use—area of irrigated crops and pastures, by agricultural activity—Queensland

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
'000 hectares									
2002–03	143	0	61	235	f 11	35	34	3	f 3
2003–04	154	0	73	237	f 24	33	35	3	g 3
2004–05	122	0	f 124	209	f 11	31	31	4	g 4
2005–06 ¹⁵	np	0	101	205	10	37	31	4	3
2006–07	141	0	35	196	f 9	37	31	4	f 1
2007–08	207.3	0.0	21.2	184.0	f 17.0	35.4	33.7	f 4.4	f 1.3
2008–09	185.0	0.0	f 71.6	191.9	f 20.7	34.9	29.4	3.9	g 3.1
2009–10	126.2	np	73.1	np	f 13.9	33.6	29.4	4.0	np
2010–11	np	0.4	163.0	129.4	13.8	35.1	34.9	3.3	2.8
2011–12	f 82.5	g 0.3	160.8	166.1	f 7.5	34.4	28.6	3.8	2.0
2012–13	f 113.7	g 0.1	170.3	169.8	f 13.5	37.1	28.0	2.6	2.5
2013–14	f 126.0	g 1.3	124.9	210.4	f 10.1	41.4	26.9	2.4	2.1
2014–15	f 149.1	g 6.5	66.5	210.7	f 12.6	38.5	25.3	2.4	1.7

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

^{15,16} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.10d Rural water use—area of irrigated crops and pastures, by agricultural activity—South Australia

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
'000 hectares									
2002–03	80	0	0	0	g 3	18	14	1	66
2003–04	87	0	0	0	f 2	17	14	g 2	64
2004–05	82	0	0	0	g 3	19	17	1	61
2005–06 ¹⁵	95	0	0	0	np	19	15	1	85
2006–07	85	0	0	0	g 2	19	14	1	78
2007–08	103.5	0.0	0.0	0.0	f 7.7	16.4	15.5	0.8	77.2
2008–09	np	0.0	0.0	0.0	g 3.0	18.0	14.5	np	77.7
2009–10	75.1	0.0	0.0	0.0	g 1.4	14.9	11.8	f 0.8	f 71.9
2010–11	np	0.0	0.0	0.0	2.5	17.8	13.8	0.9	68.0
2011–12	f 73.8	0.0	0.0	0.0	f 2.6	16.1	14.7	f 0.8	58.6
2012–13	f 79.1	0.0	0.0	0.0	f 1.6	16.7	12.4	f 0.8	59.3
2013–14	g 66.0	0.0	0.0	0.0	g 1.7	14.6	11.2	f 0.7	61.1
2014–15	g 14.7	0.0	0.0	0.0	g 1.8	12.9	13.5	f np	61.4

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

^{15,16} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.10e Rural water use—area of irrigated crops and pastures, by agricultural activity—Western Australia

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
'000 hectares									
2002–03	np	0	0	4	np	f 10	9	2	f 10
2003–04	np	0	0	4	np	f 9	9	f 2	g 14
2004–05	np	0	0	np	np	f 9	7	f 2	f 8
2005–06 ¹⁵	np	0	0	f 5	np	10	8	2	12
2006–07	np	0	0	4	1	9	8	2	f 13
2007–08	np	0.0	0.0	2.2	np	10.2	9.4	np	f 12.7
2008–09	np	0.0	0.0	0.0	1.4	8.5	8.5	1.4	f 12.5
2009–10	np	0.0	0.0	0.0	3.0	7.5	8.0	f 1.2	f 11.2
2010–11	np	g 0.2	0.0	0.0	f 3.8	8.1	9.3	1.5	10.5
2011–12	g 16.8	0.1	f 0.8	np	1.3	f 7.8	9.5	f 1.2	f 9.9
2012–13	g 30.1	0.0	f 0.0	0.0	6.2	7.7	9.6	f 1.2	f 7.9
2013–14	g 11.5	0.0	np	0.0	f 8.9	8.8	8.5	f 0.8	f 9.1
2014–15	g 16.9	0.0	0.0	0.0	f 4.3	9.1	7.6	f 0.9	f 8.5

f Estimate has a relative standard error of 10% to less than 25% and should be used with caution.

g Estimate has a relative standard error of 25% to 50% and should be used with caution.

15, 16 See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.10f Rural water use—area of irrigated crops and pastures, by agricultural activity—Tasmania

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
'000 hectares									
2002–03	48	0	0	0	16	f 4	18	0	f 1
2003–04	49	0	0	0	f 12	f 4	19	0	g 1
2004–05	51	0	0	0	8	f 4	17	0	g 1
2005–06 ¹⁵	56	0	0	0	5	3	15	0	1
2006–07	59	0	0	0	f 3	3	14	0	f 1
2007–08	63.1	0.0	0.0	0.0	7.1	2.6	14.2	0.3	1.1
2008–09	np	0.0	0.0	0.0	6.1	f 3.4	13.0	np	1.1
2009–10	np	0.0	0.0	0.0	17.1	f 3.1	14.6	np	f 1.3
2010–11	np	0.0	0.0	0.0	14.7	3.0	13.3	0.3	1.2
2011–12	f 49.3	0.0	0.0	0.0	12.5	3.3	13.5	0.3	f 1.2
2012–13	f 56.4	0.0	0.0	0.0	15.5	2.2	f 11.7	0.3	f 1.2
2013–14	f 58.5	0.0	0.0	0.0	6.4	2.1	f 10.4	0.2	f 0.6
2014–15	f 61.2	0.0	0.0	0.0	6.0	2.2	f 10.0	g 0.2	f 1.1

f Estimate has a relative standard error of 10% to less than 25% and should be used with caution.

g Estimate has a relative standard error of 25% to 50% and should be used with caution.

15, 16 See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.10g Rural water use—area of irrigated crops and pastures, by agricultural activity—Northern Territory

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
'000 hectares									
2002–03	np	0	0	0	np	2	0	0	0
2003–04	np	0	0	0	np	3	0	0	0
2004–05	np	0	0	0	np	2	0	0	0
2005–06 ¹⁵	np	0	0	0	0	6	np	0	np
2006–07	np	0	0	0	np	5	1	0	0
2007–08	np	0.0	0.0	0.0	np	3.1	f 1.0	np	g 0.3
2008–09	g 1.3	0.0	0.0	0.0	0.0	3.6	0.9	0.1	f 0.3
2009–10	np	0.0	0.0	0.0	np	3.2	0.7	np	np
2010–11	np	0.0	0.0	0.0	0.0	3.9	1.3	0.1	0.2
2011–12	f 0.3	0.0	0.0	0.0	0.0	3.7	1.5	1.5	0.1
2012–13	0.2	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.1
2013–14	0.3	0.1	0.0	0.0	np	3.2	np	np	np
2014–15	0.4	0.1	0.0	0.0	0.0	3.2	1.6	0.0	0.5

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

^{15,16} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Note: 2013–14 estimates are based on information obtained from a new ABS survey called REACS combining two previous surveys called Agricultural Resource Management Survey and the Agricultural Commodity Survey.

Source: ABS (2016m).

Table W 3.10h Rural water use—area of irrigated crops and pastures, by agricultural activity—Australia

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
'000 hectares									
2002–03	I 377	44	234	238	68	138	116	13	150
2003–04	I 411	65	185	241	89	120	121	f 16	149
2004–05	I 387	51	270	213	63	122	114	14	147
2005–06 ¹⁵	I 445	102	270	210	55	139	114	15	183
2006–07	I 077	f 20	134	202	37	141	105	15	178
2007–08	I 095.1	2.1	58.0	187.2	57.7	130.7	113.8	14.2	167.5
2008–09	932.3	f 7.2	141.9	191.9	51.8	128.0	104.6	12.9	172.3
2009–10	952.0	18.9	153.2	212.6	59.1	134.2	104.3	13.1	162.6
2010–11	np	75.8	359.3	129.5	61.5	139.0	112.7	12.8	151.9
2011–12	997.1	103.1	397.2	166.1	48.8	134.5	105.2	11.9	137.9
2012–13	I 203.6	113.6	437.8	170.2	87.9	135.3	102.9	11.0	137.5
2013–14	f I 264.8	74.5	337.4	211.0	68.4	136.4	94.6	9.8	129.9
2014–15	f I 258.6	69.7	162.8	211.2	60.0	124.9	92.2	10.2	130.5

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

^{15,16} See end notes.

Source: ABS (2016m).

Table W 3.11a Rural water use—volume of irrigation water applied, by agricultural activity—New South Wales^e

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ^{f,g}	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
megalitres									
2002–03	np	np	f 1 211 732	0	f 71 683	151 943	68 960	31 404	140 690
2003–04	np	np	f 792 122	g 27	f 154 582	135 723	f 104 528	f 38 594	168 133
2004–05	1 626 289	np	964 306	np	f 94 925	133 561	f 68 290	f 20 712	f 171 629
2005–06 ^{i,j}	1 635 232	1 240 626	1 127 730	1 501	95 887	138 815	74 303	24 776	185 320
2006–07	1 243 753	f 237 214	673 905	np	f 53 879	134 564	62 195	f 26 362	f 171 025
2007–08	1 061 431	26 664	204 646	g 3 569	f 36 704	135 259	48 081	f 16 270	135 294
2008–09	907 517	f 101 474	465 833	0	f 54 100	120 683	61 365	f 21 883	f 166 923
2009–10	876 999	np	468 843	np	g 42 314	116 531	68 552	f 18 629	150 649
2010–11	np	758 998	1 073 849	3	50 026	188 474	54 450	17 723	106 616
2011–12	791 054	1 131 541	1 280 129	0	f 40 288	92 966	46 332	9 106	f 123 311
2012–13	1 281 160	1 428 762	1 798 595	g 91	101 804	117 166	f 56 736	17 241	151 375
2013–14	1 222 520	899 664	1 767 844	3 868	60 236	105 591	f 60 656	14 308	140 298
2014–15	1 167 370	873 528	774 893	3 296	58 733	113 124	f 47 162	11 635	139 876

^e Includes the Australian Capital Territory.^f Estimate has a relative standard error of 10% to less than 25% and should be used with caution.^g Estimate has a relative standard error of 25% to 50% and should be used with caution.^{i,j} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.11b Rural water use—volume of irrigation water applied, by agricultural activity—Victoria

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ^{f,g}	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
megalitres									
2002–03	np	np	0	0	f 17 495	172 755	81 928	10 680	205 451
2003–04	np	np	0	0	f 14 916	173 567	82 777	9 992	179 359
2004–05	np	np	0	0	f 15 367	159 047	78 746	11 262	f 198 234
2005–06 ^{i,j}	1 953 857	12 600	0	0	13 808	172 859	91 054	11 216	185 620
2006–07	1 151 782	np	0	0	g 3 268	190 622	73 213	11 529	f 214 835
2007–08	887 000	0	0	0	g 21 407	162 430	85 970	f 13 289	f 152 661
2008–09	775 214	0	0	0	g 4 621	159 302	84 726	11 376	f 152 588
2009–10	966 519	np	0	0	0	259 716	93 797	11 247	f 155 293
2010–11	np	f 1 660	0	0	10 217	199 189	59 240	8 671	83 520
2011–12	f 1 122 219	np	0	0	f 11 935	281 054	74 789	9 100	123 663
2012–13	1 701 230	5 064	0	0	g 32 072	345 382	74 624	10 185	f 174 220
2013–14	1 732 569	7 006	0	0	g 28 415	509 503	75 428	8 056	f 144 801
2014–15	1 715 886	2 713	0	0	f 21 558	309 571	80 724	11 570	f 148 118

^f Estimate has a relative standard error of 10% to less than 25% and should be used with caution.^g Estimate has a relative standard error of 25% to 50% and should be used with caution.^{i,j} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2014c).

Table W 3.11c Rural water use—volume of irrigation water applied, by agricultural activity—Queensland

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
megalitres									
2002–03	410 463	0	1 313 770	f 1 212 802	f 32 542	125 713	110 904	14 052	f 8 291
2003–04	502 288	0	f 456 802	1 141 173	f 62 444	128 163	97 564	15 030	f 9 599
2004–05	361 713	0	f 855 009	1 109 917	f 30 026	115 003	102 833	16 123	f 7 860
2005–06 ¹⁵	437 840	0	606 761	988 643	29 022	125 564	90 756	23 664	15 107
2006–07	437 901	0	193 757	931 468	f 23 826	133 057	86 940	14 501	f 5 644
2007–08	600 316	0	104 796	834 414	f 44 434	106 655	f 112 980	16 110	f 4 700
2008–09	558 124	0	414 170	761 086	f 50 288	119 060	93 440	15 808	f 15 906
2009–10	383 401	np	383 107	np	32 416	122 668	87 576	18 438	f 16 279
2010–11	np	2 480	808 195	459 334	26 270	92 216	90 995	12 371	6 539
2011–12	186 485	g 1 390	780 650	668 195	f 12 065	113 517	74 937	f 17 776	6 399
2012–13	141 355	g 384	1 052 208	715 650	f 42 968	123 726	91 676	11 479	f 12 792
2013–14	351 298	g 9 124	1 003 692	1 048 228	f 16 904	134 066	91 589	11 213	f 11 359
2014–15	392 140	g 21	437 800	1 118 164	f 33 039	136 579	79 519	11 154	8 074

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

^{15,16} See end notes.

Source: ABS (2016m).

Table W 3.11d Rural water use—volume of irrigation water applied, by agricultural activity—South Australia

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
megalitres									
2002–03	444 602	0	0	0	f 6 848	145 665	76 256	g 6 835	217 496
2003–04	490 300	0	0	0	f 5 575	123 033	89 474	g 20 413	f 228 156
2004–05	435 268	0	0	0	f 9 373	143 808	79 905	g 5 515	f 200 821
2005–06 ¹⁵	445 578	0	0	0	5 743	131 923	79 429	g 5 201	227 885
2006–07	509 119	0	0	0	f 3 202	130 052	85 945	f 3 534	224 606
2007–08	414 272	0	0	0	f 52 980	94 390	88 244	2 450	f 203 349
2008–09	400 783	0	0	0	f 9 094	131 280	88 606	np	f 188 369
2009–10	307 517	0	0	0	f 3 175	103 372	73 272	f 2 880	174 513
2010–11	np	0	0	0	6 287	108 831	79 117	3 057	142 384
2011–12	f 216 835	0	0	0	f 7 079	120 814	80 335	f 2 597	148 512
2012–13	f 302 980	0	0	0	f 6 328	125 739	63 267	f 3 644	179 648
2013–14	f 261 645	0	0	0	f 4 342	123 126	67 444	f 3 173	174 502
2014–15	f 51 965	0	0	0	f 4 478	100 702	70 942	np	189 635

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

^{15,16} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.11e Rural water use—volume of irrigation water applied, by agricultural activity—Western Australia

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
megalitres									
2002–03	np	0	0	80 298	np	46 154	64 369	13 491	f 12 215
2003–04	np	0	0	69 043	np	47 720	61 663	10 320	g 17 284
2004–05	np	0	0	np	np	39 124	51 610	11 427	f 9 982
2005–06 ¹⁵	np	0	0	f 66 455	f 11 685	40 239	50 204	14 556	16 386
2006–07	np	0	0	45 708	16 748	40 838	57 686	14 135	f 17 892
2007–08	np	0	0	25 214	15 218	48 062	47 527	12 541	f 17 239
2008–09	np	0	0	0	10 536	47 936	56 300	12 565	f 16 060
2009–10	np	0	0	0	20 879	36 519	50 315	f 10 783	f 14 019
2010–11	np	g 3 057	g 199	g 69	19 933	40 047	54 850	11 297	13 431
2011–12	g 84 939	1 035	g 8 129	np	12 031	f 39 347	57 671	9 939	f 10 813
2012–13	57 402	0	0	0	g 25 971	32 725	f 65 788	f 10 960	9 842
2013–14	79 399	0	0	0	f 8 885	33 132	53 293	f 7 028	f 12 706
2014–15	95 200	0	0	0	44 062	38 967	54 906	f 10 080	f 12 670

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

^{15, 16} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.11f Rural water use—volume of irrigation water applied, by agricultural activity—Tasmania

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
megalitres									
2002–03	118 275	0	0	0	33 745	f 9 542	44 516	f 1 161	f 1 702
2003–04	137 851	0	0	0	28 678	f 8 273	51 872	775	g 1 575
2004–05	144 546	0	0	0	17 140	f 10 173	51 782	f 1 029	g 1 600
2005–06 ¹⁵	np	0	0	0	10 528	4 950	42 931	1 543	1 167
2006–07	183 371	0	0	0	f 7 942	6 670	45 420	1 455	f 2 492
2007–08	np	0	0	0	np	6 218	43 816	np	f 1 356
2008–09	np	0	0	0	16 044	f 9 448	44 658	np	f 1 177
2009–10	np	0	0	0	34 616	f 7 649	44 322	896	np
2010–11	np	0	0	0	25 189	4 415	28 701	756	1 013
2011–12	112 220	0	0	0	25 794	7 479	35 861	840	f 1 423
2012–13	141 809	0	0	0	38 811	5 567	34 368	766	1 755
2013–14	f 63 031	0	0	0	f 13 650	5 418	30 885	643	f 612
2014–15	f 164 870	0	0	0	14 722	5 142	30 194	926	f 1 584

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

^{15, 16} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.11g Rural water use—volume of irrigation water applied, by agricultural activity—Northern Territory

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
megalitres									
2002–03	np	0	0	0	np	8 121	752	298	2 950
2003–04	np	0	0	0	np	9 333	1 117	259	2 977
2004–05	np	0	0	0	np	7 422	1 226	200	2 819
2005–06 ¹⁵	np	0	0	0	0	15 257	np	531	np
2006–07	np	0	0	0	np	12 639	2 490	583	2 097
2007–08	np	0	0	0	np	6 910	4 031	np	2 191
2008–09	5 513	0	0	0	0	9 825	3 998	397	2 229
2009–10	np	0	0	0	np	8 208	1 395	610	np
2010–11	np	0	0	0	129	11 478	5 119	461	2 218
2011–12	2 267	0	0	0	0	11 451	6 239	735	1 502
2012–13	518	0	0	0	0	10 521	5 952	271	279
2013–14	857	0	0	0	0	11 419	np	np	np
2014–15	1 457	0	0	0	0	11 288	8 389	163	5 150

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

^h Estimate has a relative standard error greater than 50% and is considered too unreliable for general use

^{15, 16} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.11h Rural water use—volume of irrigation water applied, by agricultural activity—Australia

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
megalitres									
2002–03	5 022 631	615 375	f 1 525 502	f 1 293 099	172 184	659 893	447 684	77 920	588 794
2003–04	5 070 729	813 812	1 248 924	1 210 243	f 268 343	625 812	488 994	f 95 384	607 083
2004–05	4 539 687	618 964	1 819 316	1 171 933	177 339	608 138	434 391	66 267	591 945
2005–06 ¹⁵	4 720 613	1 253 227	1 734 951	1 056 598	166 673	629 639	431 417	81 666	633 183
2006–07	3 627 630	f 239 432	867 662	977 611	108 939	648 443	413 889	72 099	638 590
2007–08	3 260 070	26 664	309 442	863 198	185 394	559 924	430 649	62 257	516 790
2008–09	2 915 937	f 101 474	880 003	761 086	144 683	597 535	433 093	65 425	543 252
2009–10	2 840 592	246 909	851 950	756 317	f 139 292	654 663	419 229	63 483	515 484
2010–11	np	286 156	1 882 243	459 405	138 052	550 422	372 472	54 337	355 719
2011–12	f 2 516 018	1 138 287	2 068 908	668 252	109 192	666 627	376 165	50 093	415 622
2012–13	3 083 503	1 434 209	2 850 803	715 741	247 953	760 826	392 411	54 546	529 912
2013–14	3 837 059	916 559	2 773 395	1 052 096	165 947	922 225	383 373	44 752	484 276
2014–15	3 833 380	878 347	1 212 693	1 121 460	176 591	715 372	371 835	49 236	505 106

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

^{15, 16} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.12a Rural water use—application rate for irrigation water, by agricultural activity—New South Wales^e

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ^f	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
megalitres per hectare									
2002–03	np	np	7.0	0.0	2.5	5.1	4.6	7.0	4.2
2003–04	np	np	7.1	0.2	3.6	5.5	4.8	7.3	4.9
2004–05	2.8	np	6.6	np	^f 3.2	5.2	4.0	5.1	4.7
2005–06 ¹⁵	2.7	12.3	6.7	3.4	3.3	4.7	4.1	5.3	4.3
2006–07	2.8	12.2	6.8	np	2.7	4.0	4.1	5.5	4.2
2007–08	2.8	12.9	5.6	^g 3.9	2.4	4.6	3.9	5.2	3.8
2008–09	2.8	14.1	6.6	0.0	3.0	4.9	4.6	5.7	4.1
2009–10	2.6	np	5.9	np	^f 2.0	4.4	4.6	4.8	4.0
2010–11	np	10.1	5.2	3.5	2.2	4.0	3.3	4.2	2.3
2011–12	2.2	11.1	5.4	0.0	2.2	4.0	3.6	3.3	3.7
2012–13	3.1	12.6	7.9	^g 0.2	3.0	5.3	3.9	5.1	4.1
2013–14	2.7	12.4	8.3	^g 6.9	2.2	8.0	4.2	5.2	6.0
2014–15	2.6	12.6	8.1	^f 7.4	2.5	7.2	9.1	4.2	6.0

^e Includes the Australian Capital Territory.^f Estimate has a relative standard error of 10% to less than 25% and should be used with caution.^g Estimate has a relative standard error of 25% to 50% and should be used with caution.^{15, 16} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.12b Rural water use—application rate for irrigation water, by agricultural activity—Victoria

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ^f	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
megalitres per hectare									
2002–03	np	np	0.0	0.0	2.2	4.5	3.2	4.2	5.8
2003–04	np	np	0.0	0.0	2.3	5.9	3.6	3.3	5.5
2004–05	np	np	0.0	0.0	^f 1.7	5.3	3.1	3.6	5.5
2005–06 ¹⁵	3.7	12.6	0.0	0.0	2.4	4.9	3.5	3.7	5.0
2006–07	3.5	np	0.0	0.0	1.6	5.5	3.3	3.8	4.9
2007–08	2.8	0.0	0.0	0.0	3.1	4.9	3.1	3.4	3.9
2008–09	2.9	0.0	0.0	0.0	^f 2.1	4.6	3.4	4.2	4.2
2009–10	4.3	np	0.0	0.0	np	5.7	3.7	3.7	4.1
2010–11	np	6.9	0.0	0.0	1.8	4.3	2.3	2.8	2.8
2011–12	2.6	^f 5.4	0.0	0.0	^f 1.7	6.1	3.0	3.1	3.8
2012–13	3.7	11.0	0.0	0.0	^f 1.9	7.4	3.0	3.7	5.3
2013–14	3.2	10.5	0.0	0.0	^f 2.1	11.2	3.4	2.9	5.5
2014–15	^f 3.2	11.0	0.0	0.0	1.9	8.1	3.4	3.6	2.7

^f Estimate has a relative standard error of 10% to less than 25% and should be used with caution.^{15, 16} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.12c Rural water use—application rate for irrigation water, by agricultural activity—Queensland

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
megalitres per hectare									
2002–03	2.9	0.0	5.1	5.2	2.9	3.6	3.3	4.1	3.1
2003–04	3.3	0.0	6.3	4.8	2.6	3.9	2.8	4.6	2.9
2004–05	3.0	0.0	6.9	5.3	2.6	3.7	3.3	4.3	2.2
2005–06 ¹⁵	np	0.0	6.0	4.8	2.9	3.4	2.9	5.5	4.9
2006–07	3.1	0.0	5.5	4.7	2.5	3.6	2.8	4.0	4.7
2007–08	2.9	0.0	4.9	4.5	2.6	3.0	3.4	3.7	3.7
2008–09	3.0	0.0	5.8	4.0	2.4	3.4	3.2	4.0	5.2
2009–10	2.4	np	5.2	np	2.3	3.7	3.0	4.6	np
2010–11	np	6.7	5.0	3.5	1.9	2.6	2.6	3.7	2.4
2011–12	3.5	4.8	4.9	4.0	1.6	3.3	2.6	4.7	3.3
2012–13	2.3	2.8	7.7	4.2	3.2	3.3	3.3	4.4	5.2
2013–14	2.8	7.0	8.0	5.0	1.7	3.2	3.4	4.6	5.5
2014–15	2.6	3.3	6.6	5.3	2.6	3.6	3.2	4.7	4.6

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

^{15,16} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.12d Rural water use—application rate for irrigation water, by agricultural activity—South Australia

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
megalitres per hectare									
2002–03	5.6	0.0	0.0	0.0	2.5	8.1	5.4	6.5	3.3
2003–04	5.6	0.0	0.0	0.0	2.5	7.1	6.4	9.4	3.6
2004–05	5.3	0.0	0.0	0.0	3.0	7.7	4.7	5.4	3.3
2005–06 ¹⁵	4.7	0.0	0.0	0.0	np	7.0	5.3	5.0	2.7
2006–07	6.0	0.0	0.0	0.0	1.6	6.9	6.1	4.3	2.9
2007–08	4.0	0.0	0.0	0.0	6.9	5.7	5.7	3.2	2.6
2008–09	np	0.0	0.0	0.0	3.0	7.3	6.1	np	2.4
2009–10	6.0	0.0	0.0	0.0	2.2	6.9	6.2	3.7	2.4
2010–11	np	0.0	0.0	0.0	2.5	6.1	5.7	3.6	2.1
2011–12	2.9	0.0	0.0	0.0	2.7	7.5	5.4	3.3	2.5
2012–13	4.0	0.0	0.0	0.0	3.9	7.5	5.1	4.4	3.0
2013–14	4.0	0.0	0.0	0.0	2.5	8.5	6.0	4.8	2.9
2014–15	3.5	0.0	0.0	0.0	2.5	7.8	5.3	np	3.1

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

^{15,16} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.12e Rural water use—application rate for irrigation water, by agricultural activity—Western Australia

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
megalitres per hectare									
2002–03	np	0.0	0.0	20.3	np	4.9	7.2	8.3	1.2
2003–04	np	0.0	0.0	16.0	np	5.2	6.9	6.4	1.3
2004–05	np	0.0	0.0	np	np	4.1	7.4	6.7	f 1.2
2005–06 ¹⁵	np	0.0	0.0	f 13.9	np	4.2	6.3	7.5	1.3
2006–07	np	0.0	0.0	13.1	14.0	4.7	7.2	7.9	f 1.4
2007–08	np	0.0	0.0	11.3	np	4.7	5.1	np	f 1.4
2008–09	np	0.0	0.0	0.0	7.4	5.7	6.7	8.7	1.3
2009–10	np	0.0	0.0	0.0	6.9	4.9	6.3	9.3	1.3
2010–11	np	13.9	7.7	12.3	5.3	4.9	5.9	7.5	1.3
2011–12	g 5.1	12.4	f 9.9	10.0	9.3	5.0	6.1	f 8.0	1.1
2012–13	g 3.4	0.0	f 0.0	0.0	g 4.2	4.3	f 6.9	9.3	1.2
2013–14	g 6.9	0.0	11.4	0.0	g 4.8	3.8	f 6.3	8.5	1.4
2014–15	g 5.6	24.8	0.0	0.0	10.2	4.3	7.2	10.9	1.5

f Estimate has a relative standard error of 10% to less than 25% and should be used with caution.

g Estimate has a relative standard error of 25% to 50% and should be used with caution.

15, 16 See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.12f Rural water use—application rate for irrigation water, by agricultural activity—Tasmania

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
megalitres per hectare									
2002–03	2.5	0.0	0.0	0.0	2.1	2.4	2.5	3.6	2.0
2003–04	2.8	0.0	0.0	0.0	2.4	2.1	2.7	2.5	1.6
2004–05	2.8	0.0	0.0	0.0	2.2	f 2.3	3.0	3.6	1.3
2005–06 ¹⁵	np	0.0	0.0	0.0	2.1	1.7	2.9	3.9	1.1
2006–07	3.1	0.0	0.0	0.0	f 2.7	2.4	3.2	4.2	f 2.1
2007–08	np	0.0	0.0	0.0	np	2.4	3.1	np	1.3
2008–09	np	0.0	0.0	0.0	2.6	2.8	3.4	np	1.1
2009–10	np	0.0	0.0	0.0	2.0	2.5	3.0	np	np
2010–11	np	0.0	0.0	0.0	1.7	1.5	2.2	2.3	0.9
2011–12	f 0.0	0.0	0.0	0.0	2.1	2.3	2.7	3.3	f 1.2
2012–13	f 2.7	0.0	0.0	0.0	2.5	2.5	2.9	3.0	1.4
2013–14	f 1.1	0.0	0.0	0.0	2.1	2.6	3.0	2.7	1.1
2014–15	f 2.7	0.0	0.0	0.0	1.5	1.6	2.9	2.4	1.0

f Estimate has a relative standard error of 10% to less than 25% and should be used with caution.

15, 16 See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.12g Rural water use—application rate for irrigation water, by agricultural activity—Northern Territory

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
megalitres per hectare									
2002–03	np	0.0	0.0	0.0	np	3.5	3.3	6.5	9.3
2003–04	np	0.0	0.0	0.0	np	3.5	2.6	4.1	7.9
2004–05	np	0.0	0.0	0.0	np	3.0	3.7	2.9	7.7
2005–06 ¹⁵	np	0.0	0.0	0.0	0.0	2.6	np	5.7	np
2006–07	np	0.0	0.0	0.0	np	2.8	3.6	6.5	8.2
2007–08	np	0.0	0.0	0.0	np	2.2	4.0	np	7.0
2008–09	4.3	0.0	0.0	0.0	0.0	2.7	4.2	4.4	8.4
2009–10	np	0.0	0.0	0.0	np	2.6	2.1	np	np
2010–11	np	0.0	0.0	0.0	1.7	1.5	2.2	2.3	0.9
2011–12	8.3	0.0	0.0	0.0	0.0	3.1	4.1	9.5	10.8
2012–13	2.5	0.0	0.0	0.0	0.0	3.8	np	np	3.1
2013–14	3.1	10.0	0.0	0.0	0.0	3.6	np	np	np
2014–15	3.7	18.3	0.0	0.0	0.0	3.5	5.1	6.6	10.0

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

^{15, 16} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.12h Rural water use—application rate for irrigation water, by agricultural activity—Australia

Financial year	Pasture, cereal and other crops for grazing, hay, silage, grain or seed ¹⁶	Rice	Cotton	Sugar cane	Other broadacre crops	Fruit trees, nut trees, plantation or berry fruits	Vegetables for human consumption or seed	Nurseries, cut flowers and cultivated turf	Grapevines
megalitres per hectare									
2002–03	3.6	14.1	6.5	5.4	2.5	4.8	3.9	5.8	3.9
2003–04	3.6	12.4	6.7	5.0	3.0	5.2	4.0	6.1	4.1
2004–05	3.3	12.1	6.7	5.5	2.8	5.0	3.8	4.7	4.0
2005–06 ¹⁵	3.3	12.3	6.4	5.0	3.0	4.5	3.8	5.4	3.5
2006–07	3.4	12.2	6.5	4.9	2.9	4.6	3.9	5.0	3.6
2007–08	3.0	12.9	5.3	4.6	3.2	4.3	3.8	4.4	3.1
2008–09	3.1	14.1	6.2	4.0	2.8	4.7	4.1	5.1	3.2
2009–10	0.0	13.0	5.6	3.6	2.4	4.9	4.0	4.8	3.2
2010–11	np	10.1	5.2	3.5	2.2	4.0	3.3	4.2	2.3
2011–12	2.6	11.0	5.2	4.0	2.2	5.0	3.6	4.2	3.0
2012–13	3.4	12.6	7.8	4.2	2.8	5.6	3.8	4.9	3.9
2013–14	^f 2.4	12.3	8.2	5.0	2.4	6.8	4.1	4.6	3.7
2014–15	^f 3.0	12.6	7.5	5.3	2.9	5.7	4.0	4.8	3.9

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

^{15, 16} See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2016m).

Table W 3.13a Rural water use—area irrigated, by irrigation method—
New South Wales^e

Financial year	Surface	Drip or trickle		Sprinkler				Other
		Above ground	Sub-surface	Micro-spray	Portable irrigators	Hose irrigators	Large mobile machines	
'000 hectares								
2002–03	691	31	5	15	45	54	55	15
2003–04	659	48	5	13	31	51	58	10
2004–05	678	43	11	10	32	31	63	12
2005–06 ^f								
2006–07	421	42	8	13	25	34	68	8
2007–08								
2008–09	308	45	5	11	23	37	52	4
								29

^e Includes the Australian Capital Territory.

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

¹⁵ See end notes.

Note: Data are not readily available for missing years.

Source: ABS (2014d).

Table W 3.13b Rural water use—area irrigated, by irrigation method—Victoria

Financial year	Surface	Drip or trickle		Sprinkler				Other
		Above ground	Sub-surface	Micro-spray	Portable irrigators	Hose irrigators	Large mobile machines	
'000 hectares								
2002–03	386	42	3	18	28	32	40	32
2003–04	433	32	7	18	21	26	41	24
2004–05	442	46	6	18	16	23	36	26
2005–06 ^f								
2006–07	250	50	7	20	14	22	28	21
2007–08								
2008–09	197	49	6	22	15	20	43	17
								20

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

¹⁵ See end notes.

Note: Data are not readily available for missing years.

Source: ABS (2014d).

Table W 3.13c Rural water use—area irrigated, by irrigation method—Queensland

Financial year	Surface	Drip or trickle		Sprinkler				Other
		Above ground	Sub-surface	Micro-spray	Portable irrigators	Hose irrigators	Large mobile machines	
'000 hectares								
2002–03	208	f 29	f 13	24	f 35	154	f 50	f 18
2003–04	245	28	f 16	24	f 39	158	f 51	f 13
2004–05	274	f 29	f 11	20	f 25	122	f 48	f 14
2005–06 ¹⁵								f 2
2006–07	193	25	f 10	24	f 19	110	f 43	f 12
2007–08								f 2
2008–09	263	22	11	28	f 25	f 119	f 62	f 16
								f 22

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

¹⁵ See end notes.

Note: Data are not readily available for missing years.

Source: ABS (2014d).

Table W 3.13d Rural water use—area irrigated, by irrigation method—South Australia

Financial year	Surface	Drip or trickle		Sprinkler				Other
		Above ground	Sub-surface	Micro-spray	Portable irrigators	Hose irrigators	Large mobile machines	
'000 hectares								
2002–03	f 35	55	0	17	f 4	f 5	44	f 20
2003–04	f 34	56	^g 1	17	f 3	f 4	50	15
2004–05	f 33	56	^g 1	17	f 4	f 5	45	f 14
2005–06 ¹⁵								0
2006–07	f 28	75	f 2	15	f 2	f 5	57	f 13
2007–08								0
2008–09	f 17	80	^g 2	f 14	f 1	^g 7	f 60	f 7
								f 12

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

¹⁵ See end notes.

Note: Data are not readily available for missing years.

Source: ABS (2014d).

Table W 3.13e Rural water use—area irrigated, by irrigation method—Western Australia

Financial year	Surface	Drip or trickle		Sprinkler				Large mobile machines	Solid set	Other
		Above ground	Sub-surface	Micro-spray	Portable irrigators	Hose irrigators				
'000 hectares										
2002–03	f 17	f 17	f 1	f 5	f 1	np	1	4	np	
2003–04	16	f 20	f 1	4	np	np	f 4	5	0	
2004–05	14	f 14	f 1	f 4	np	g 3	np	3	0	
2005–06 ¹⁵										
2006–07	f 17	18	1	4	np	g 1	f 4	4	np	
2007–08										
2008–09	f 14	f 17	f 1	5	f 1	0	f 6	4	f 4	

f Estimate has a relative standard error of 10% to less than 25% and should be used with caution.

g Estimate has a relative standard error of 25% to 50% and should be used with caution.

15 See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Note: Data are not readily available for missing years.

Source: ABS (2014d).

Table W 3.13f Rural water use—area irrigated, by irrigation method—Tasmania

Financial year	Surface	Drip or trickle		Sprinkler				Large mobile machines	Solid set	Other
		Above ground	Sub-surface	Micro-spray	Portable irrigators	Hose irrigators				
'000 hectares										
2002–03	f 6	f 5	0	f 1	f 10	44	19	f 2	g 1	
2003–04	np	f 4	0	f 1	13	41	24	f 2	np	
2004–05	np	f 4	0	f 1	12	34	27	f 2	np	
2005–06 ¹⁵										
2006–07	np	f 4	0	f 1	f 13	30	28	1	0	
2007–08										
2008–09	g 4	3	0	f 2	f 16	30	29	g 2	f 8	

f Estimate has a relative standard error of 10% to less than 25% and should be used with caution.

g Estimate has a relative standard error of 25% to 50% and should be used with caution.

15 See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Note: Data are not readily available for missing years.

Source: ABS (2014d).

Table W 3.13g Rural water use—area irrigated, by irrigation method—Northern Territory

Financial year	Surface	Drip or trickle		Sprinkler				Other
		Above ground	Sub-surface	Micro-spray	Portable irrigators	Hose irrigators	Large mobile machines	
'000 hectares								
2002–03	0	1	0	2	0	np	1	0
2003–04	np	1	1	2	np	np	0	0
2004–05	np	1	0	2	np	0	np	0
2005–06 ¹⁵	np	1	f 1	3	np	0	0	0
2006–07	np	1	f 1	3	0	0	f 1	0
2007–08								
2008–09	g 1	1	0	3	0	0	f 1	0

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

¹⁵ See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Note: Data are not readily available for missing years.

Source: ABS (2014d).

Table W 3.13h Rural water use—area irrigated, by irrigation method—Australia

Financial year	Surface	Drip or trickle		Sprinkler				Other
		Above ground	Sub-surface	Micro-spray	Portable irrigators	Hose irrigators	Large mobile machines	
'000 hectares								
2002–03	1 344	180	23	80	123	289	209	91 f 14
2003–04	1 393	189	31	80	109	281	229	68 f 7
2004–05	1 147	194	f 31	71	90	219	220	71 f 5
2005–06 ¹⁵	915	214	29	81	74	202	229	59 g 4
2006–07	804	217	26	85	81	214	253	51 95

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

¹⁵ See end notes.

Note: Data are not readily available for missing years.

Source: ABS (2014d).

Table W 3.14a Gross value of irrigated agricultural production, by agricultural activity, experimental estimates—New South Wales^e

Financial year	Dairy Farming	Livestock, pasture, grains & other ^f	Rice	Cotton	Sugar	Fruit	Vegetables	Nurseries, cut flowers & turf	Grapes
\$ million									
2000–01	218.8	402.4	346.4	848.0	0.3	251.3	180.8	109.5	222.0
2001–02	287.2	569.7	323.1	0.918.1	0.0	281.0	175.7	116.3	271.3
2002–03	263.6	np	np	658.7	0.0	329.8	156.4	107.1	196.9
2003–04	249.1	np	np	383.7	np	301.7	227.3	133.2	287.8
2004–05	268.0	np	np	514.4	np	328.3	215.7	142.5	255.2
2005–06	276.0	np	270.9	548.0	1.1	350.0	310.3	291.3	246.9
2006–07	264.0	np	54.3	371.9	np	417.4	350.4	303.8	217.7
2007–08	298.7	np	7.3	142.8	np	368.8	346.2	220.0	324.0
2008–09	386.5	399.4	34.5	309.6	0.0	333.9	252.1	241.8	223.2
2009–10	340.9	np	88.9	393.8	np	288.6	286.1	240.8	163.5
2010–11	292.5	452.8	171.9	927.6	0.1	313.8	348.7	233.2	162.8
2011–12	240.8	436.5	246.3	1237.5	0.0	315.4	268.4	191.5	167.8

^e Includes the Australian Capital Territory.^f Estimate has a relative standard error of 10% to less than 25% and should be used with caution.¹⁶ See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2014c).

Table W 3.14b Gross value of irrigated agricultural production, by agricultural activity, experimental estimates—Victoria

Financial year	Dairy Farming	Livestock, pasture, grains & other ^f	Rice	Cotton	Sugar	Fruit	Vegetables	Nurseries, cut flowers & turf	Grapes
\$ million									
2000–01	945.7	409.9	3.8	0.0	0.0	381.0	398.8	142.6	319.6
2001–02	143.3	460.8	3.7	0.0	0.0	419.2	376.1	164.4	368.1
2002–03	844.8	np	np	0.0	0.0	475.2	330.7	144.7	306.2
2003–04	932.8	np	np	0.0	0.0	514.4	350.0	188.5	346.4
2004–05	115.5	np	np	0.0	0.0	577.8	375.6	208.1	356.3
2005–06	134.7	np	2.8	0.0	0.0	611.3	505.8	315.1	320.5
2006–07	938.8	np	np	0.0	0.0	741.9	570.9	369.8	272.6
2007–08	1363.8	np	0.0	0.0	0.0	636.6	662.2	396.9	374.3
2008–09	159.1	np	0.0	0.0	0.0	719.2	543.4	250.1	355.4
2009–10	906.5	412.5	0.1	0.0	0.0	732.0	511.2	323.8	367.4
2010–11	266.8	465.4	0.6	0.0	0.0	1025.8	573.1	272.1	277.0
2011–12	238.0	432.3	1.7	0.0	0.0	884.1	623.2	309.5	317.6

^f Estimate has a relative standard error of 10% to less than 25% and should be used with caution.^g Estimate has a relative standard error of 25% to 50% and should be used with caution.¹⁶ See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2014c).

Table W 3.14c Gross value of irrigated agricultural production, by agricultural activity, experimental estimates—Queensland

Financial year	Dairy Farming	Livestock, pasture, grains & other ¹⁶	Rice	Cotton	Sugar	Fruit	Vegetables	Nurseries, cut flowers & turf	Grapes
\$ million									
2000–01	138.3	292.5	np	np	301.5	411.6	486.7	156.4	13.0
2001–02	147.6	321.1	0.0	f 364.4	465.6	528.7	475.8	109.6	f 20.1
2002–03	f 125.7	334.4	0.0	f 175.6	398.6	481.8	502.4	105.6	f 13.3
2003–04	f 141.1	492.9	0.0	f 274.4	398.0	530.3	695.6	137.2	f 16.0
2004–05	f 110.4	358.0	0.0	f 393.7	455.0	548.9	554.3	153.8	f 18.4
2005–06	131.2	np	0.0	321.8	490.3	643.7	815.0	265.5	29.6
2006–07	130.5	np	0.0	114.0	570.9	1 129.7	935.3	247.6	f 44.7
2007–08	f 143.6	np	0.0	65.4	446.7	f 802.1	904.3	f 308.0	30.9
2008–09	f 193.9	370.3	0.0	310.7	537.1	734.8	831.1	254.1	f 23.3
2009–10	f 177.6	299.9	f 0.9	270.5	np	699.8	721.2	261.2	f 31.0
2010–11	134.5	f 191.7	0.6	638.5	374.1	636.2	981.9	216.2	31.6
2011–12	f 131.4	212.1	f 0.1	915.3	645.9	650.6	726.4	237.0	16.7

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

¹⁶ See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2014c).

Table W 3.14d Gross value of irrigated agricultural production, by agricultural activity, experimental estimates—Western Australia

Financial year	Dairy Farming	Livestock, pasture, grains & other ¹⁶	Rice	Cotton	Sugar	Fruit	Vegetables	Nurseries, cut flowers & turf	Grapes
\$ million									
2000–01	36.3	np	np	np	6.6	100.0	169.4	73.8	81.2
2001–02	f 35.4	np	0.0	np	5.9	101.1	160.0	65.6	f 61.5
2002–03	np	np	0.0	0.0	8.3	105.2	159.8	62.2	f 81.9
2003–04	np	np	0.0	0.0	7.2	119.6	177.2	72.8	f 114.8
2004–05	np	np	0.0	0.0	np	f 128.6	155.8	f 86.1	f 95.5
2005–06	48.7	np	0.0	0.0	f 5.6	150.3	244.5	172.4	79.1
2006–07	np	np	np	np	np	153.8	234.6	166.4	f 90.8
2007–08	64.4	np	0.0	0.0	3.6	161.5	315.0	np	110.7
2008–09	0.0	np	0.0	0.0	0.0	194.3	297.3	155.1	78.6
2009–10	f 64.6	np	0.0	0.0	0.0	150.0	253.4	132.9	f 109.3
2010–11	100.1	f 56.3	f 0.5	f 0.1	f 0.0	165.9	286.3	103.8	92.1
2011–12	71.5	52.2	0.0	0.0	0.0	f 158.2	304.0	f 90.1	f 106.6

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

¹⁶ See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2014c).

Table W 3.14e Gross value of irrigated agricultural production, by agricultural activity, experimental estimates—South Australia

Financial year	Dairy Farming	Livestock, pasture, grains & other ¹⁶	Rice	Cotton	Sugar	Fruit	Vegetables	Nurseries, cut flowers & turf	Grapes
\$ million									
2000–01	137.4	90.2	0.0	0.0	0.0	236.2	251.2	35.9	663.9
2001–02	138.8	119.4	0.0	0.0	0.0	240.1	251.7	35.7	639.8
2002–03	^f 139.4	129.6	0.0	0.0	0.0	216.5	232.3	^f 34.4	527.1
2003–04	144.4	143.9	0.0	0.0	0.0	238.8	246.4	37.5	696.1
2004–05	^f 140.6	121.3	0.0	0.0	0.0	277.5	280.8	40.4	614.5
2005–06	154.5	np	0.0	0.0	0.0	304.7	374.9	70.9	556.3
2006–07	^f 152.6	np	0.0	0.0	0.0	361.8	404.7	58.0	398.3
2007–08	^f 195.0	np	0.0	0.0	0.0	224.3	519.1	60.1	728.8
2008–09	^f 184.9	np	0.0	0.0	0.0	307.3	455.9	^f 40.5	502.9
2009–10	^f 140.8	141.8	0.0	0.0	0.0	260.0	392.9	48.6	376.0
2010–11	135.5	160.6	0.0	0.0	0.0	263.9	476.6	46.2	346.5
2011–12	^f 152.7	115.8	0.0	0.0	0.0	304.4	490.6	32.6	343.0

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

¹⁶ See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2014c).

Table W 3.14f Gross value of irrigated agricultural production, by agricultural activity, experimental estimates—Tasmania

Financial year	Dairy Farming	Livestock, pasture, grains & other ¹⁶	Rice	Cotton	Sugar	Fruit	Vegetables	Nurseries, cut flowers & turf	Grapes
\$ million									
2000–01	77.0	74.0	0.0	0.0	0.0	44.5	137.3	11.5	7.2
2001–02	135.6	89.9	0.0	0.0	0.0	^f 48.8	152.8	9.5	^f 5.5
2002–03	81.7	109.5	0.0	0.0	0.0	^f 54.0	149.9	10.4	8.3
2003–04	109.2	105.9	0.0	0.0	0.0	^f 51.4	158.0	12.3	^g 15.0
2004–05	126.8	108.2	0.0	0.0	0.0	^f 56.3	155.0	13.1	^g 13.3
2005–06	132.7	np	0.0	0.0	0.0	41.4	188.9	39.3	10.2
2006–07	162.5	np	0.0	0.0	0.0	56.5	167.6	33.3	10.5
2007–08	^f 223.3	np	0.0	0.0	0.0	64.1	210.6	np	22.5
2008–09	254.2	np	0.0	0.0	0.0	^f 74.5	217.3	^f 27.3	^f 13.7
2009–10	195.2	161.8	0.0	0.0	0.0	72.8	201.8	21.0	^f 18.1
2010–11	213.9	120.0	0.0	0.0	0.0	79.6	170.4	27.3	14.8
2011–12	221.1	110.8	0.0	0.0	0.0	73.4	178.1	23.0	17.4

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

^g Estimate has a relative standard error of 25% to 50% and should be used with caution.

¹⁶ See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2014c).

Table W 3.14g Gross value of irrigated agricultural production, by agricultural activity, experimental estimates—Northern Territory

Financial year	Dairy Farming	Livestock, pasture, grains & other ¹⁶	Rice	Cotton	Sugar	Fruit	Vegetables	Nurseries, cut flowers & turf	Grapes
\$ million									
2000–01	np	np	0.0	0.0	np	1.4	3.3	np	
2001–02	np	np	0.0	0.0	np	1.2	np	np	
2002–03	np	np	0.0	0.0	np	1.1	np	np	
2003–04	np	np	0.0	0.0	np	2.2	3.5	5.7	
2004–05	np	np	0.0	0.0	np	np	4.0	8.1	
2005–06	np	np	0.0	0.0	35.7	np	18.5	np	
2006–07	np	np	0.0	0.0	52.0	np	6.1	np	
2007–08	0.0	np	0.0	0.0	f 34.4	14.3	np	5.4	
2008–09	np	np	0.0	0.0	np	np	f 10.3	f 3.2	
2009–10	0.0	np	0.0	0.0	39.1	np	5.8	np	
2010–11	0.0	f 3.7	0.0	0.0	37.6	40.6	6.6	3.8	
2011–12	0.0	8.4	0.0	0.0	42.4	39.8	np	2.5	

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

¹⁶ See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2014c).

Table W 3.14h Gross value of irrigated agricultural production, by agricultural activity, experimental estimates—Australia

Financial year	Dairy Farming	Livestock, pasture, grains & other ¹⁶	Rice	Cotton	Sugar	Fruit	Vegetables	Nurseries, cut flowers & turf	Grapes
\$ million									
2000–01	I 553.9	I 300.0	350.3	I 220.5	308.3	I 454.6	I 625.5	536.5	I 319.6
2001–02	I 891.2	I 591.1	326.8	I 283.1	471.5	I 644.1	I 593.2	505.3	I 384.1
2002–03	I 505.5	I 598.1	152.5	f 834.3	406.9	I 682.6	I 532.7	467.9	I 142.7
2003–04	I 627.4	I 858.6	179.8	658.1	405.5	I 779.2	I 856.8	588.0	I 482.2
2004–05	I 802.5	I 596.2	100.6	f 908.1	459.9	I 948.8	I 741.3	651.0	I 361.9
2005–06	I 877.7	np	273.7	869.8	496.9	2 137.2	2 453.2	I 165.9	I 251.5
2006–07	I 697.1	np	f 55.0	485.8	583.1	2 913.2	2 677.9	I 187.4	I 040.5
2007–08	2 288.8	np	7.3	208.1	451.6	2 291.9	2 971.9	I 171.8	I 597.2
2008–09	2 273.8	I 289.3	f 34.5	620.3	537.1	2 389.6	2 624.9	982.8	I 200.4
2009–10	I 825.6	I 420.4	89.9	664.3	750.4	2 242.3	2 385.8	I 036.5	I 069.5
2010–11	2 143.3	I 450.6	173.6	I 566.2	374.2	2 522.9	2 878.1	908.6	928.6
2011–12	2 055.4	I 368.2	f 248.1	2 155.3	645.9	2 428.6	2 630.5	893.7	971.5
2012–13	I 908.2	I 235.3	f 301.9	I 789.1	599.3	2 800.8	2 745.5	824.6	I 073.9

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

¹⁶ See end notes.

np: Not available for publication, but included in totals where applicable, unless otherwise indicated.

Source: ABS (2014c).

CHAPTER 4

Health and emissions

Table W 4.1 Urban Water quality—percentage of population in zones where compliance with microbiological standards was achieved, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
2005–06	99.96	99.80			100.00		100.00	100.00
2006–07	99.92	99.80			100.00		100.00	100.00
2007–08	99.59	99.97			100.00		100.00	100.00
2008–09	99.98	99.97			100.00		100.00	100.00
2009–10	99.99	100.00			100.00		100.00	100.00
2010–11	99.97	99.92			100.00		100.00	100.00
2011–12	99.99	99.98			100.00		100.00	100.00
2012–13	99.80	100.00			100.00		100.00	100.00
2013–14	100.00	99.99		100.00	100.00	99.00	100.00	100.00
2014–15	100.00	100.00	100.00	100.00	100.00	98.60	100.00	100.00

^{1,2,3} See end notes

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 4.2a Urban Water quality—number of urban zones where chemical compliance was achieved, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS ²	NT	ACT
2005–06	82	334			35		4	4
2006–07	79	395			35		4	4
2007–08	86	398			35		2	4
2008–09	95	422			41		1	4
2009–10	91	433			36		3	3
2010–11	97	426			36		3	4
2011–12	102	418			37		3	4
2012–13	110	455			37		3	4
2013–14	112	437		64	37	75	3	4
2014–15	111	461		63	37	70	3	4

^{1,2,3} See end notes

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 4.2b Urban Water quality—number of urban zones where chemical compliance was measured, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS ²	NT	ACT
2005–06	98	370			35		4	4
2006–07	97	431			35		7	4
2007–08	97	434			35		9	4
2008–09	103	463			41		3	4
2009–10	104	461			36		3	4
2010–11	102	475			36		3	4
2011–12	104	427			37		3	4
2012–13	113	465			37		3	4
2013–14	113	439		70	37	88	3	4
2014–15	111	470			68	37	88	3

^{1,2,3} See end notes

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 4.2c Urban Water quality—percentage of urban zones where chemical compliance achieved, by state/territory

Financial year	NSW	VIC	QLD	SA (per cent)	WA	TAS ²	NT	ACT
2005–06	83.7	90.3			100.0		100.0	100.0
2006–07	81.4	91.6			100.0		57.1	100.0
2007–08	88.7	91.7			100.0		22.2	100.0
2008–09	92.2	91.1			100.0		33.3	100.0
2009–10	87.5	93.9			100.0		100.0	75.0
2010–11	95.1	89.7			100.0		100.0	100.0
2011–12	98.1	97.9			100.0		100.0	100.0
2012–13	97.3	97.8			100.0		100.0	100.0
2013–14	99.1	99.5		91.4	100.0	85.2	100.0	100.0
2014–15	100.0	98.1		92.6	100.0	79.5	100.0	100.0

^{1,2,3} See end notes

Note: Data are not readily available for missing years.

Urban Water utilities refer to water utilities with over 10 000 connections.

Source: BOM (2016b).

Table W 4.3a Energy emissions—wastewater handling greenhouse gas (carbon dioxide equivalent) net emissions, by state or territory—from industrial wastewater

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT
gigagrams of CO ₂ equivalent							
1990	636.5	685.1	546.9	234.8	168.8	73.7	3.7
1991	623.3	673.9	530.7	228.2	164.7	71.1	3.7
1992	603.5	656.5	509.5	219.9	159.1	68.2	3.6
1993	576.6	633.2	488.0	209.7	151.8	64.9	3.5
1994	556.9	618.7	469.1	201.2	146.0	61.8	3.4
1995	518.2	580.5	438.5	186.4	135.5	57.0	3.1
1996	474.5	539.4	403.0	169.8	123.6	51.6	2.9
1997	449.4	518.6	375.4	157.1	115.8	46.6	2.8
1998	420.3	491.1	354.0	146.7	108.0	43.4	2.6
1999	400.1	475.7	335.9	138.7	102.5	40.7	2.5
2000	382.8	461.7	325.2	133.1	98.0	39.1	2.4
2001	422.9	499.1	359.3	152.8	109.2	44.8	2.6
2002	400.9	481.7	340.2	152.7	102.9	41.6	2.5
2003	361.9	436.1	310.1	139.5	92.2	36.6	2.3
2004	367.8	440.4	314.6	142.8	93.7	37.2	2.3
2005	368.5	441.3	313.9	144.6	93.8	37.3	2.3
2006	370.0	443.0	308.7	144.5	94.1	37.2	2.3
2007	376.9	446.8	314.3	142.6	95.9	37.9	2.4
2008	375.4	442.9	313.4	145.9	95.5	37.7	2.4
2009	370.2	451.9	343.0	119.2	88.0	36.6	2.0
2010	349.2	399.2	347.3	104.3	80.6	32.6	1.8
2011	402.3	349.4	312.5	92.3	71.5	27.3	1.5
2012	337.5	312.0	361.2	84.7	70.3	25.3	1.4
2013	380.3	336.7	456.1	124.1	84.4	29.2	1.6
2014	354.0	331.3	396.7	119.7	91.9	30.4	1.6

Source: Environment (2016).

Table W 4.3b Water emissions—wastewater treatment and discharge greenhouse gas (carbon dioxide equivalent) net emissions, by state or territory—from domestic wastewater, seweraged population

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT
<i>gigagrams of CO₂ equivalent</i>							
1990	507.3	724.9	223.9	77.1	152.7	73.3	18.6
1991	532.4	688.6	243.3	83.6	224.9	73.9	18.6
1992	537.0	703.9	247.2	82.4	221.3	74.6	18.3
1993	540.4	717.9	251.8	80.9	217.2	75.0	18.7
1994	540.7	727.8	255.6	78.6	212.3	75.0	18.4
1995	542.1	739.3	259.0	76.4	208.1	75.0	18.3
1996	548.9	756.5	264.6	75.0	205.2	75.2	18.2
1997	559.2	776.8	271.0	74.6	203.0	75.6	18.2
1998	564.1	793.5	274.1	73.2	198.9	75.5	17.9
1999	574.2	801.5	277.9	74.1	201.9	75.3	18.6
2000	581.3	431.1	282.0	74.5	204.7	75.2	18.7
2001	588.7	436.5	286.5	74.6	207.3	75.1	19.0
2002	596.5	442.0	292.7	75.4	184.5	75.1	19.1
2003	601.0	447.3	300.4	75.9	172.8	75.5	19.2
2004	605.2	452.6	307.2	76.4	176.0	76.3	19.1
2005	609.3	457.2	313.0	76.6	178.4	76.9	19.3
2006	631.5	466.9	324.8	77.5	183.3	77.7	20.1
2007	639.6	475.0	332.8	78.2	187.9	78.2	20.5
2008	670.0	494.8	335.5	80.1	189.1	78.9	21.0
2009	686.5	486.9	364.6	52.7	173.7	78.6	20.9
2010	713.7	538.4	329.4	66.9	250.9	77.7	19.3
2011	742.9	436.9	321.5	86.9	172.2	78.1	21.1
2012	612.8	229.3	325.7	88.0	197.9	79.0	19.8
2013	500.6	258.0	298.5	59.9	135.2	58.4	15.3
2014	710.3	270.2	316.1	75.0	86.0	54.2	16.7

Source: Environment (2016).

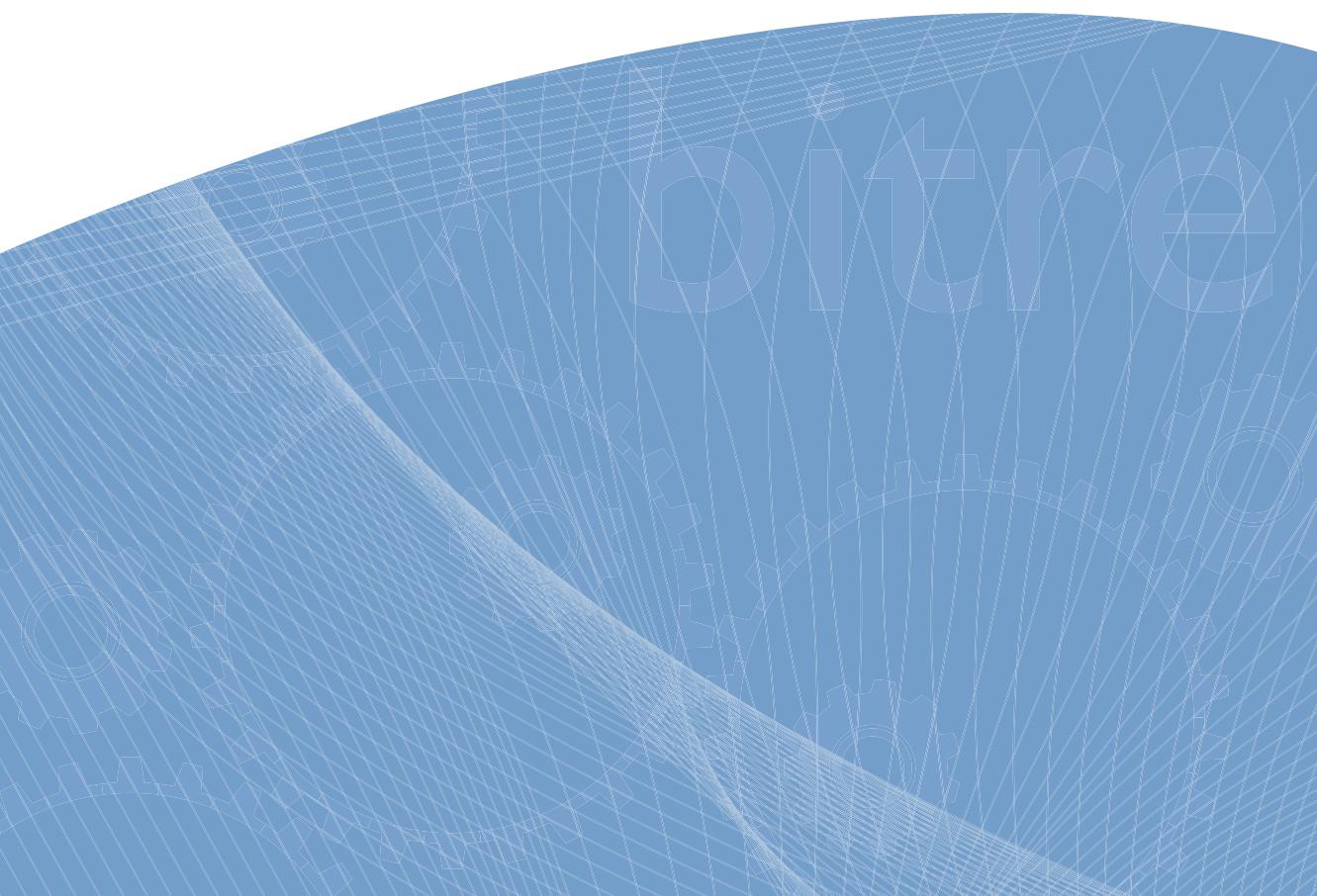
Table W 4.3c Water emissions—wastewater treatment and discharge greenhouse gas (carbon dioxide equivalent) net emissions, by state or territory—from domestic wastewater, unsewered population

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT
gigagrams of CO ₂ equivalent							
1990	16.0	59.2	59.2	14.4	31.7	31.7	3.0
1991	15.4	54.8	54.8	12.9	28.9	28.9	2.7
1992	14.8	50.1	50.1	11.3	26.0	26.0	2.3
1993	14.1	45.2	45.2	9.6	22.8	22.8	2.1
1994	13.4	40.1	40.1	7.9	19.7	19.7	1.7
1995	12.7	35.0	35.0	6.2	16.4	16.4	1.3
1996	12.1	30.0	30.0	4.4	13.2	13.2	0.9
1997	11.4	24.9	24.9	2.7	9.7	9.7	0.5
1998	10.7	19.7	19.7	1.0	6.2	6.2	
1999	10.6	19.6	19.6	1.6	6.2	6.2	0.4
2000	10.9	19.4	19.4	1.7	6.4	6.4	0.4
2001	11.2	16.4	16.4	1.7	6.4	6.4	0.5
2002	11.7	14.9	14.9	2.3	6.5	6.5	0.6
2003	11.7	15.0	15.0	2.3	6.6	6.6	0.7
2004	11.5	15.0	15.0	2.5	6.8	6.8	0.7
2005	11.6	15.1	15.1	2.6	6.9	6.9	0.7
2006	11.7	15.5	15.5	2.6	7.2	7.2	0.7
2007	11.8	15.8	15.8	2.6	7.3	7.3	0.7
2008	12.0	16.1	16.1	2.7	7.6	7.6	0.7
2009	12.2	16.5	16.5	2.7	7.8	7.8	0.7
2010	12.4	16.8	16.8	2.7	8.0	8.0	0.8
2011	12.3	16.8	16.8	2.7	8.2	8.2	0.8
2012	12.5	17.8	17.8	2.8	8.5	8.5	0.8
2013	12.1	15.4	15.4	2.7	7.9	7.9	0.7
2014	12.5	16.4	16.4	2.7	8.3	8.3	0.8

Note: For years where data are missing, emissions are either not estimated, included elsewhere or are not occurring.

Source: Environment (2016).

End notes and definitions



End notes and definitions

This publication presents annual estimates of activity related to major Australian economic infrastructure (transport, energy, communication and water infrastructure). These estimates were compiled from a range of sources. Where possible, statistics are presented on a financial year basis (year ended 30 June). Throughout this publication, end notes are numbered consecutively within each part. To avoid duplication, an end note is explained under the heading of the table in which it first occurs.

Part I Infrastructure and the economy

Industry statistics provided in this publication are based on the Australian and New Zealand Standard Industrial Classification (ANZSIC) (Australian Bureau of Statistics 2008). Industry classification is allocated to businesses based on each business' predominant activity. As such, there is a distinct difference between industry statistics and activity statistics. For example, road transport gross value added is a measure of the economic production of Australian businesses for which the provision of road transport services is the major activity. Road transportation services provided by businesses classified to other industries (e.g. delivery services provided by the retail industry) are not included in these estimates and conversely, non-transportation activities undertaken by businesses classified to the road transport industry are included in these estimates.

Table I I.1

Gross value added is the value of output at basic prices minus the value of intermediate consumption at purchasers' prices. Gross value added is a measure of the contribution to gross domestic product by industry and by sector.

1. Chain volume measures are an application of the Consumer Price Index based on a reference year. Changes to current price production measures may be due to either price or volume changes. Chain volume measures are provided to allow analysis of variations in production volumes; however, component chain volume measures do not sum to a total in the way original current price components do.
2. Gross value added at basic values represents the amounts received by producers (including the value of any subsidies on products) but before any taxes on products. The difference between the sum over all industries of gross value added at basic prices and Gross Domestic Product at market (or purchasers') prices is the value of taxes less subsidies on products.
3. Water transport is included in the estimate under rail, pipeline and other transport industry.

Table I I.2

Table I I.2 provides estimates for total employment by major infrastructure industries in August each year, including both full-time and part-time employment. Total Transport and Storage employment includes some employees with no industry subdivision defined.

4. From 1986, the definition of employed persons was changed to include persons who worked without pay between 1 and 14 hours per week in a family business or on a farm (i.e. contributing family workers).

Table I 1.3

Average weekly earnings statistics provide an estimate of the average weekly income of wage and salary earners in key infrastructure industries. The estimates reflect the overall level of earnings of employees and the changes in the composition of the infrastructure industries' workforce (e.g. changes to the proportions of full-time, part-time and casual employees and changes to the proportions of occupations over time).

The Australian Bureau of Statistics (ABS) compiles average weekly earnings statistics on a quarterly basis in the Survey of Average Weekly Earnings and on a biennial basis in more detail in the Survey of Employee Earnings and Hours. The Australian Infrastructure Statistics Yearbook provides data sourced from the Survey of Employee Earnings and Hours as the Survey of Average Weekly Earnings does not provide adequate industry detail.

5. Estimates of average weekly earnings in Table I 1.3 exclude amounts salary sacrificed (the collection of salary sacrifice amounts are a relatively recent addition to the survey). Average weekly earnings represent gross earnings (before tax, superannuation and other items are deducted).
6. Caution should be exercised when comparing data across years. The Survey of Employee Earnings and Hours is not designed as a time series. In addition, the industry classification used in compiling average weekly earnings statistics changed in 2008. Earlier industry estimates were based on the 1993 version of ANZSIC, while the 2008 estimate was compiled based on an updated (2006) version of ANZSIC.

Estimates are compiled from a sample survey of employers and are subject to sampling variability. That is, they may differ from the estimates that would have been produced if the information had been obtained from all employers. A measure of sampling error is calculated (standard error), which indicates the degree to which an estimate may vary from the value which would have been obtained from a census of all employers. There are about two chances in three that a sample estimate differs from the true value by less than one standard error and about nineteen chances in twenty that the difference will be less than two standard errors.

An example of the use of a relative standard error (standard error expressed as a percentage of the estimate) is as follows. If the estimate for average earnings is \$500 with a relative standard error of 1 per cent then there would be about two chances in three that a full enumeration would have given an estimate in the range \$495 to \$505 and about nineteen chances in twenty that it would be in the range \$490 to \$510.

Table I 1.3 includes a number of estimates that are subject to high relative standard errors (greater than 25 per cent).

Table I 1.4

The indexes provided in Table I 1.4 relate to the prices received by businesses classified to major infrastructure industries. For the transport industry, indexes are only available for freight

transport and storage services. Indexes for prices received by businesses providing passenger transport services are not currently available from the ABS.

Index numbers for financial years are simple averages of the four relevant quarterly index numbers.

Table I 1.5

State and territory population estimates are classified by capital city and rest of state on the last day of the financial year (30 June). Population estimates are based on census counts for census years. The estimates are derived and updated by adding estimates of natural increase and net overseas migration. After each census, population estimates are revised to remove discrepancies between census outcomes. In 2013, the ABS conducted a one-off exercise to revise (recast) population estimates for a longer time period back to 1991.

7. ACT capital city data include Queanbeyan (NSW) for the period 1971 to 1990.
8. Excludes Jervis Bay Territory from June 1994.
9. Data for 1991 to 1995 are based on 2001 Australian Standard Geographical Classification (ASGC) boundaries.
10. Data for 1995–96 onwards are based on 2006 Australian Standard Geographical Classification boundaries.
11. In June 2011 the ABS replaced the nation's official statistical geography, the ASGC with the new Australian Statistical Geography Standard (ASGS).
12. Rest of state estimates are calculated by subtracting the capital city population from the corresponding state/territory total population.

Table I 1.6

Table I 1.6 provides a number of measures of economic activity that may influence Australian infrastructure activity. Goods exports and goods imports figures provide measures of the flow of physical goods into and out of Australia, over the full financial year. The Consumer Price Index provides a measure of annual changes in the price of consumer goods for the June quarter of each financial year; while exchange rate and interest rate data were measured in respect of the last day of the financial year (30 June).

13. The exchange rate data provided represent the \$US value of one Australian dollar.
14. The interest rate provided is the 90 day bank accepted bill rate at the close of trading at the end of the financial year (30 June).

Table I 2.1

Table I 2.1 provides estimates of engineering construction work done on major economic infrastructure by both private and public sector organisations. Estimates exclude the cost of land; the cost of repair and maintenance activity; the construction of buildings; the value of transfers of existing assets; the value of installed machinery and equipment not integral to the structure; and expenses for relocation of utility services.

Statistics are provided for the sector providing engineering construction services and the sector that is expected to own the project at the time of completion. Thus, statistics for work done by the private sector for the public sector summarise the work done by private sector engineering construction companies on projects that are owned by the public sector at the time of completion. When a project is undertaken as a Private Public Partnership (PPP) or similar arrangement, it is classified according to the expected ownership of the project at completion. PPPs may be classified as private sector even if ownership eventually resides with the public sector.

ABS provides both current price and chain volume measures for the value of engineering construction work done by the private sector for the private sector; by the private sector for the public sector; and by the public sector. Deflators for these chain volume measures were calculated by BITRE and applied to estimates for transport construction to create approximate volume adjusted estimates for transport engineering construction.

Part T Transport infrastructure

Table T 1.1

Table T 1.1 provides estimates of engineering construction work done on transport infrastructure, providing transport detail to the data provided in Table I 2.1. Estimates for the construction of airport runways are included in the roads and bridges measure.

Table T 1.2

BITRE prepares estimates of road expenditure based on unpublished ABS Government Finance Statistics (GFS) data and internal Department of Infrastructure and Regional Development data. There have been a number of methodological changes in the compilation of estimates over time, with the most significant being the ABS adoption of accrual-based accounting for GFS in 1998–99. Tables T 1.2a to T 1.2e aims to provide estimates of construction and maintenance expenditure by each jurisdiction on road infrastructure by:

- each level of government, net of identified road-specific contributions from other levels of Government;
- the non-public sector; and
- national aggregates for the Non-financial Public Sector which includes expenditure by Public Non-Financial Corporations (PNFC).

The total public sector includes government expenditure and PNFC. Total government includes expenditure by departments of the Commonwealth Government, State governments and Local Government. It also includes agencies and government authorities under the departmental administration which are engaged in the provision of public administration, defence, law enforcement, welfare, public education and health. Also included are non-departmental bodies which independently perform the government functions of regulation (e.g. Nurses Registration Boards and the Maritime Safety Authority), provision of non-market services (e.g. the Australian Broadcasting Corporation) and redistribution of income. Some of these bodies may be called ‘corporations’, but they are still considered part of the government sector if they perform general government functions. Public universities are also considered part of the government sector.

Enterprises in the PNFC sector differ from those in the government sector in that their production costs are more likely to be recovered from consumers, rather than being financed from the general taxation revenue of government. Some enterprises, however, do receive subsidies to make up for shortfalls incurred as a result of government policy, for example, in the provision of 'community service obligations' at concessional rates.

All the categories identified below relate to road construction and maintenance expenditure. The GFS Government Purpose Classification (GPC) code 121, employee expenses, is used for state government road expenditure. From the 2014 issue of the Yearbook onwards, GPC 1219, Other employee expenses [Road transport n.e.c. (not elsewhere classified)] is included in the calculation. Economic Type Framework (ETF) category 2221, Purchase of new non-financial assets, is included (ABS 2016h). GPC 1211, Aboriginal community road transport services is excluded from the calculation. The excluded GFS expenses categories are 123, Depreciation and amortisation, and 126, Property expenses.

Transfers of funding from State/Territory to Local governments are netted out using data on Commonwealth road programs, however, there is no suitable source of information on the transfer of funding from State/Territory to Local government through state based programs. For this reason, BITRE is likely to be double counting some road funding both in the State/Territory Government total and the Local Government total.

The schematic diagram below represents the flows of road funding expenditure diagrammatically, with figures for Tasmania in 2014–15. It highlights the unknown flow of funds from State to Local Government, and how it relates to the figures in our Yearbook.

Figure A | Schematic representation of flow of road expenditure funds for 2014–15 (Tasmania)

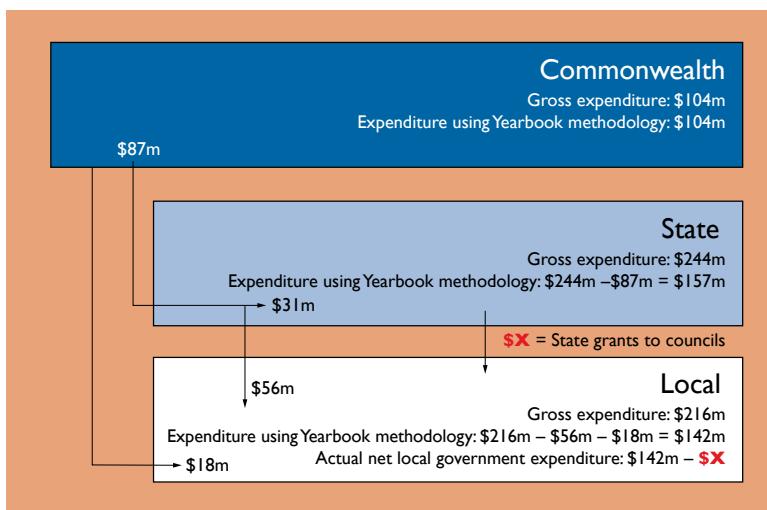


Table T-1.3

Table T 1.3 provides estimates of road expenditure adjusted by BITRE Road Construction and Maintenance Price Index 2016. It shows road expenditure in real terms as experienced by suppliers of road construction and maintenance services in Australia. The 2014–15 index value was based on final values for seven of the eight RCMPI inputs. The bituminous materials component was estimated by taking an average of the previous three quarters for this input in 2014–15.

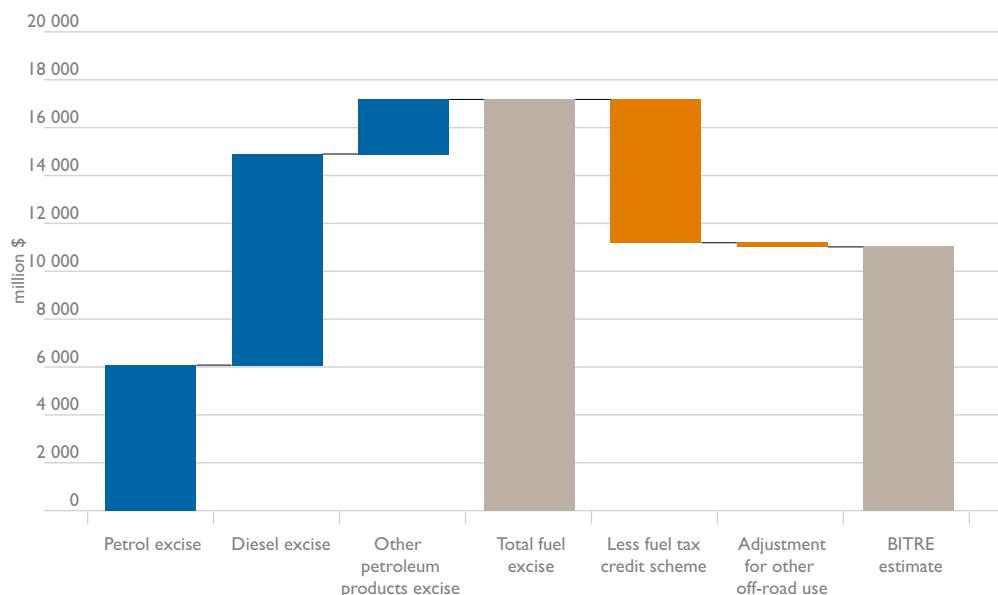
Table T 1.4

This table provides estimates of selected road-related taxes and charges in constant 2014–15 prices, adjusted by ABS Consumer Price Index (ABS 2016e). The following Commonwealth taxes and charges are included in the table:

- Net road-related petroleum products excise
- Road-related Goods and Service Tax (GST)
- Road-related Fringe Benefits Tax (FBT)
- Luxury car tax
- Passenger motor vehicles customs duty

Estimates of the road-related component of petroleum products excise are based on a combination of sources including Australian Taxation Office's (ATO) Taxation Statistics (ATO 2016b) and Commonwealth budget papers. The figures are net of rebates to industry through the Fuel Tax Credit Scheme and are modified using ABS survey of motor vehicle usage to net out excise on products for other off-road fuel use (including non-business use which is not eligible for rebates). Figure X shows how the estimates of the road-related component relate to the total petrol and diesel excise revenue, as published by the ATO. Note that other components' excise, including on crude and condensate production, are not included.

Figure A 2 Composition of BITRE estimate of net road-related petroleum products excise, 2014–15



Source: ATO 2016b, BITRE estimates.

Federal Interstate Registration Scheme revenues are sourced from Department of Infrastructure and Regional Development's internal records.

Total road-related GST figures are sourced directly from the ATO, and are calculated as the sum of net GST for the relevant Business Industry Codes. Items included are Motor vehicle retailing, Motor vehicle parts retailing, Fuel retailing, Road freight transport, Road passenger transport, Other transport support services, Motor vehicle and transport equipment rental and hiring, Automotive repair and maintenance and Car park operations. Net GST for Motor vehicle insurance, Toll road operation and Driver training are excluded. It is not possible to extract the GST from their Business Industry Codes which include other non road-related items.

The total road-related FBT estimates are based on available data in ATO's Taxation Statistics publication. It is calculated as the difference between FBT payable for motor vehicles and the associated FBT rebates.

Luxury car tax (LCT) is a tax imposed on luxury cars, which is a car with a GST-inclusive value above the LCT threshold. Luxury car tax is collected when a luxury car is sold or imported, and the data series is sourced from ATO's Taxation Statistics publication. Customs duty are payable when passenger motor vehicles are imported into Australia, and data series is sourced from Australian Government's budgets and Treasury's internal records.

State and Territory Government road-related revenues include vehicle registration fees, driver license fees and stamp duty on vehicles. They are based on data supplied by relevant state and territory road agencies.

The time series on tolls is constructed from annual reports of various toll road operators such as Transurban. Where possible, information on total toll revenue collected is used, exclusive of GST. However, in many cases it is not possible to conclusively determine whether the figures presented in different companies' annual reports are comparable or not. This is an inherent limitation of this data. The table covers the following toll roads: Sydney Harbour Tunnel (M1), Eastern Distributor (M1), Sydney Harbour Bridge (M2), Lane Cove Tunnel (M2), Hills Motorway (M2), South Western Motorway (M5), Westlink (M7), Cross-City Tunnel, M4/M5 cashback scheme, CityLink, EastLink, Logan and Gateway Motorways, Clem Jones Tunnel, Go Between Bridge. Legacy Way, opened on 25 June 2015, is not included.

Table T 1.5

The National Transport Commission (NTC) obtains arterial road construction and maintenance expenditure estimates from states and territories for the most recent financial year. This data is used in the annual adjustment procedure for heavy vehicle charges. The figures presented in Table T 1.5 are the arterial road and bridge maintenance expenditure estimates provided by each state and territory for the 2014–15 financial year, excluding Commonwealth-funded National Disaster Relief and Recovery Arrangements road expenditure and insurance-related expenditure as approved by transport ministers.

The definition of arterial roads used by the NTC differs from that used in Table T 1.6. The following table, provided by the NTC, lists the road classification types used in each state and territory for arterial roads:

Table A 3 Road classification types included in NTC definition of Arterial Roads.

NSW	State roads and regional roads.
Victoria	All State declared roads, i.e. Freeways, State Highways, Tourists' Roads, Forest Roads and Main Roads.
Queensland	National Network, State Strategic Roads, Regional Roads and some District Roads.
South Australia	NAASRA (Austroads) Classes 1 to 3 and 6 and 7 are considered arterials.
Western Australia	NAASRA (Austroads) Classes 1 to 3 and 6 and 7 are considered arterials.
	In applying the NAASRA classifications, a Key Town is defined as having a dominating influence over the surrounding region, with a population greater than 5 000 in agricultural areas or 3 000 in pastoral or arid areas.
	An Important Centre is defined as a town with a population greater than 500, or other significant traffic generator (e.g. mining development).
Tasmania	Category 1, Category 2 and Category 3 roads. (These are equivalent to NAASRA Functional Classes 1, 2 and 3 roads, but with definitions specific for Tasmania based on traffic levels and freight values).
Northern Territory	NAASRA (Austroads) Classes 1, 2, 3 and 7. * Note currently the NT has no class 2 roads.
ACT	NAASRA (Austroads) Functional Classes 1 to 3, 6 and 7 (including sub-arterial roads).

Source: NTC (2016b).

Road and bridge maintenance expenditure is calculated as the sum of the relevant road expenditure categories:

Road and bridge maintenance expenditure =
 B1 Routine maintenance +
 B2 Periodic surface maintenance of sealed roads +
 C Bridge maintenance & rehabilitation +
 D Road rehabilitation

Estimates are adjusted for inflation and presented at constant 2014–15 prices calculated using the BITRE Road Construction and Maintenance Price Index—Road maintenance sub-index. The 2015–16 index value was based on final values for seven of the eight RCMPI inputs. The bituminous materials component was estimated based on changes to petroleum prices over the same period.

Table T 1.6

- Lengths are derived from the digital PSMA road layer centrelines and are estimates only. Changes to PSMA data from year to year, including but not limited to resolution and classification schema, may cause discontinuities in the series.
- State boundaries are derived from the 2011 Australian Statistical Geography Standard (ASGS) (ABS, 2010). Urban/non-urban estimates are based on ASGS Significant Urban Areas.
- Busway lengths are not available for 2010 and 2011 because PSMA did not classify 'Busway' as a road type until 2012. Small variations in busway lengths year on year may reflect re-classification of some segments such as interchanges.

4. Reported road lengths represent approximate total route-kilometres. Dual carriageway section lengths are the approximate length of the centreline between each carriageway. PSMA data was used to determine dual carriageway lengths for New South Wales, Victoria, South Australia, Tasmania and the Australian Capital Territory. Due to limitations in the PSMA data, OpenStreetMap data was used to estimate dual carriageway lengths for Queensland and Western Australia. Dual carriageway estimates derived from OpenStreetMap data are typically larger than equivalent PSMA estimates, and may vary more from year to year. Estimation of dual carriageway length was not necessary for Northern Territory or Other Territories.
5. Arterial and local roads are defined based on PSMA classifications, as based on the function roads play within the hierarchy of the road system. The definition of arterial roads differs from the definition used in Table T 1.5, and also will not in general be the same as in each State Government's classification. The definition of local roads differs from 'LGA-managed roads', the definition more commonly used by state and local road authorities, the Australian Local Government Association (ALGA) and previous BITRE publications.
6. Roads designated as either 'access only', of undetermined type, for non-vehicular use, or which are not openly accessible to the public (limited-access) are excluded from the road length counts. These include fire trails, forestry roads, military roads, agricultural and mining access and haulage roads, private driveways, bike paths and walking trails. Busways are a special case: limited-access busways are included. Tollways are not considered to be limited-access roads.
7. The proportion of limited-access roads is determined from PSMA data in 2012 and 2013; an estimate is used for 2010 and 2011.
8. The decline in total road length in 2012 and 2013 is driven by a reclassification of several Queensland local roads as 'Undetermined', excluding them from the count. This effect reduced Queensland's non-urban local road total by an estimated 1,100 kilometres in 2011 (relative to 2010), a further 1,900 kilometres in 2012, and another 3,500 kilometres in 2013. This trend has continued at a reduced rate in subsequent years, with an estimated 350 kilometres reclassified in 2014, and 400 kilometres in 2015, for a cumulative total of approximately 7,250 kilometres in the period 2010–2015. Western Australia sees a similar pattern in the latest two years, with an estimated 350 kilometres of local roads excluded in 2014 (relative to 2013) and an additional 400 kilometres in 2015.

Table T 1.7

Table T 1.7 includes a mix of indexes from ABS and BITRE sources. ABS Producer Price Indexes (ABS 2015e) for Australian road and bridge construction commence in September 1997 (base of index 2011–12 = 100), with state data only available from September 1998 for New South Wales, Victoria, Queensland, South Australia and Western Australia. The ABS does not publish road and bridge construction indexes for Tasmania, the Northern Territory or the Australian Capital Territory. The ABS Producer Price Index series is provided quarterly. Estimates provided in Table T 1.7 are a mean of the four relevant quarters. The 2015–16 BITRE index is preliminary, based on final values for seven of the eight RCMPI inputs. The bituminous materials component was estimated based on changes to petroleum prices over the same period.

Table T 1.8

From the 2014 issue of the Yearbook onwards BITRE publishes estimates of expenditure on rail infrastructure based on unpublished ABS Government Finance Statistics (GFS) data and internal Department of Infrastructure and Regional Development data. Tables T 1.8a to T 1.8c provide estimates of construction and maintenance expenditure on railway infrastructure:

- by Commonwealth and State/Territory government net of rail-specific grants from other levels of government; and
- national aggregates for the Non-financial Public Sector which includes expenditure by Public Non-Financial Corporations (PNFC). An example of a PNFC included in the rail expenditure aggregate is the Australian Rail Track Corporation (ARTC). These corporations may fund expenditure from their own revenue sources, such as fares or access charges.

It should be noted that in state expenditure table T 1.8b the difference between the expenditure totals for Non-financial Public Sector and General Government (GG) will not equal the expenditure total for Public Non-Financial Corporations, due to the existence of payments between General Government and Public Non-Financial Corporations. The sum of Public Corporations and Total Government in Table T 1.8c will not add to Total Public Sector for the same reason. Table T 1.8b, which presents net state rail expenditure, contains some negative values. This is due to some mismatch between Commonwealth expenditure, and reported state expenditure from the ABS GFS. Issues include some state expenditure being reported under GPC code 128 (Other Transport) which includes GPC 1281 (Multi-model Urban Transport).

Estimates adjusted for inflation and are presented at constant 2014–15 prices calculated using the Consumer Price Index with June quarter 2015 as the base period. Previous issues of BITRE's Australian Infrastructure Statistics Yearbook have used non-farm GDP deflator to adjust for price. This has been replaced with Consumer Price Index. This is consistent with Treasury's approach in budget paper since 2008–09, as well as the Intergenerational Report. According to Treasury "the change from using the non-farm GDP deflator to the CPI provides a more accurate depiction of real government spending growth." This is due to volatility in the non-farm GDP deflator, driven by commodity price fluctuations (Treasury, 2016, 2008).

Domestic freight transport

Tonne kilometres (TKM) is a measure of freight task. It is measured as the number of tonnes moved by a vehicle multiplied by the distance the load travelled in kilometres. Individual trips are aggregated to provide estimates for total TKM by mode.

Road Freight

The aggregate road freight estimates in this chapter are modelled by BITRE based on estimates from the Survey of Motor Vehicle Use (SMVU) by the Australian Bureau of Statistics (ABS 2015b and ABS 2015b). These estimates differ from those in previous Yearbook, due to the availability of the ABS Road Freight Movements survey for 12 months ending October 2014, the first such survey since 2001. For years between 2001 and 2014, figures have been estimated using the ABS Survey of Motor Vehicle Use. See BITRE (2016d).

The SMVU is not designed for time series usage, with the sample design and survey methodology changing several times since the survey commenced in 1963. In addition, the survey was only conducted annually between 1998 and 2007 (the survey was undertaken approximately triennially between 1971 and 1995, and biennially since 2007).

BITRE modelling modifies SMVU estimates to enable time series analysis by adjusting estimates to a common reference period, interpolating data for years when the survey was not conducted and imposing consistency requirements between SMVU and related data from other sources. An analysis of data discrepancies was undertaken in a joint ABS/BITRE project and published in an ABS research paper, Survey of Motor Vehicle Use—An investigation into coherence (ABS 2006a). A detailed description of BITRE modelling techniques for freight data is provided in Freight Measurement and Modelling (BTRE 2006a).

Rail Freight

From 2001 to 2003, the ABS published estimates of Australian rail freight in Freight Movements, Australia (ABS 2002) and Rail Freight Movements, Australia, Summary (ABS 2004). These data have been used in BITRE modelling to estimate the tonne kilometres moved by rail for 1970–71 through to 2001–02. Estimates of total tonnes moved by rail and tonne kilometres moved for 2002–03 to 2006–07 were based on the results of the 2007 Australian Rail Survey as published in the Australian Rail Industry Report 2007 (ARA 2008). The Australasian Railway Association Inc commissioned the Apelbaum Consulting Group to prepare the report. The Australian Rail Industry Report 2007 provides measures of bulk and non-bulk freight based on definitions that differ from BITRE models and, therefore, are only included in estimates of total rail freight in this publication. Estimates for state rail freight are derived from the Australian estimates using BITRE models (BTRE 2006a).

9. From the 2007–08 financial year, BITRE expanded the scope of direct collection activities to include businesses for which rail transport was not their primary activity (eg: large mining companies). Previously this information had been estimated using data from other sources. Recent estimates should not be compared with earlier data.
10. Estimates of tonne kilometres and tonnes moved by rail for 2010–11 and 2011–12 are based on the Australian Rail Industry Report 2012 (ARA 2013). Data from 2007–08 to 2009–10 are taken from TrainLine 1 (BITRE 2012a). The calculation methodologies differ between publications. The values for 2014–15 are as described in Trainline 4 (2016b) and do not include traffic data for some of the smaller train operators.

Air Freight

For some time, estimates have only been available in respect of Australia's international air freight tonnage (Table T 6.2). Air freight statistics (Table T 2.1 and Table T 6.3) are compiled from surveys undertaken by the Aviation Statistics Unit of BITRE.

Sea freight

Australia's international freight task relies heavily on shipping in terms of tonnage moved, with all of Australia's international trade in bulk commodities transported by sea. Specific bulk shipping

statistics are not readily available. For some time BITRE estimated bulk sea freight under the assumption that all non-liner freight transport was for bulk commodities (non-liner cargo consisted of all dry and liquid bulk cargo, but also comprised cargo not shipped on regular liner services such as charters, dedicated car carriers and passenger ships). Liner/non-liner statistics are no longer available from ABS.

Tables T 2.1–T 2.5

Measures of domestic freight moved by mode are provided in terms of tonnes moved and tonne kilometres, where data are available. For road and rail, figures refer to freight activity undertaken within each state. For interstate trips, components of the journey will be counted in each state or territory passed through. In the case of sea freight, the figures refer to the state or territory in which the freight was loaded.

11. The total road freight estimates in Tables T 2.2a and T 4.5 differ slightly because they were derived from independent methodologies. The main difference between the series is that the estimates in Table T 4.5 net out the transport of 'tools of trade'.

Passenger transport

Passenger kilometres (PKM) is a measure of total passenger travel. It is the number of kilometres travelled by a vehicle multiplied by the number of occupants in the vehicle. Individual trips are aggregated to provide estimates for total PKM.

Tables T 3.1–T 3.2

BITRE modelling uses data from a range of sources to provide a consistent time series of Australian passenger travel (PKM) (BITRE 2015I and BITRE 2015o). Estimates of air passenger travel (Table T 3.1) differ from survey results for revenue passenger travel on domestic airlines (Table T 6.3) as Table T 3.1 also includes rough allowance for passenger travel by general aviation or charter aircraft.. Vehicles not classified to passenger cars, buses, rail or air are included in 'other transport mode' (Table T 3.1).

12. The other transport mode represents primarily non-freight use of light commercial vehicles (with contributions from motorcycles, non-business use of trucks and ferries).

For intercapital city passenger travel, estimates of the land based component include travel between origin and principle destination, while the aviation component includes all travel between city pairs.

Table T 3.3

These estimates draw on BITRE models developed for estimating congestion costs and public transport trends in Australian cities (BITRE 2015b, 2015e and BITRE 2015g). Estimates of passenger kilometres travelled in commercial vehicles primarily represent non-freight use of light commercial vehicles. Data for cars, light commercial vehicles and motorcycles were drawn from successive Surveys of Motor Vehicle Use, updated where possible using information on fuel sales, vehicle registrations, city traffic monitoring and household travel surveys. Data on

rail, light rail and buses up to 2 000 were drawn from quarterly surveys of state authorities with updates relying on performance results reported in each of the transit operators' Annual Reports.

Bus values refer to all bus use, both by urban transit operators (route buses) and by private buses (such as charter/hire).

Table T 3.4

Method of travel to work statistics are compiled every five years as part of the Population Census conducted by the ABS. These statistics show the method used to travel to work on the day of the Census by the entire Australian working population, attributed to the state or territory where each worker spent Census night.

13. Public transport and other method refers to the total number of persons who used more than one method of travel for the day which included bus or trains.

Road

Vehicle kilometres travelled (VKT) is a measure of the total distance travelled by vehicles in a year.

Figure T 4

A map of the National road network is provided. The National road network follows Australia's national land transport plan, linking cities, regions and communities.

Table T 4.1

Intercapital road distances are calculated from capital city GPO to capital city GPO using the fastest route as provided by whereis.com.au.

Tables T 4.2–T 4.5

Estimates for motor vehicle usage are modelled by BITRE, primarily from data compiled by the SMVU (ABS 2015b). In addition to the SMVU, modelling of passenger transport also incorporates fuel use statistics from the monthly Australian Petroleum Statistics published by the Office of the Chief Economist (OCE). Freight Measurement and Modelling (BITRE 2006a) provides an outline of modelling techniques used for freight estimation, while Greenhouse Gas Emissions From Transport (BITRE 2002 and 2006b) provide an outline of modelling techniques used for passenger estimation.

The total road freight estimates in Tables T 2.2a and T 4.5 differ slightly because they were derived from independent methodologies. The main difference between the series is that the estimates in Table T 4.5 net out the transport of 'tools of trade'.

Table T 4.6

The Australian motor vehicle producer price index reflects movements in the prices received by manufacturers for new motor vehicles. The motor vehicle retail price index reflects the prices consumers pay for new and used motor vehicles and vehicle hire and lease expenses (non-holiday). The other indexes in this table reflect changes in the prices consumers pay for a range of motor vehicle goods and services.

Tables T 4.7–T 4.8

The ABS Motor Vehicle Census (ABS 2016i) is a census of all vehicles registered for use on public roads, excluding vehicles registered as vintage or historical cars, military vehicles and consular vehicles (in New South Wales, vintage or historical cars cannot be separately identified and are included in census results). The census date is 31 March each year; although this has varied in previous years (care should be taken when comparing movements over years). From 1991 onwards, data are not strictly comparable with previous surveys due to revisions to Australian Design Rules, which had an impact on the way vehicles were classified in ABS statistics:

- The classification of rigid trucks is restricted to only vehicles with a gross weight of 3.5 tonnes or more. Vehicles that had previously been classified as rigid trucks with a gross weight of less than 3.5 tonnes are classified as light commercial vehicles under the new standards.
- The classification of buses is restricted to only vehicles with seating for 10 passengers (including driver) or more. Vehicles that had previously been classified as buses with seating for less than 10 passengers are classified as passenger vehicles under the new standards.

Data from the Motor Vehicle Census are not available with a state disaggregation prior to 1982.

Tables T 4.9–T 4.10

Data for new motor vehicle sales are sourced from the Federal Chamber of Automotive Industries and presented in Sales of New Motor Vehicles, Australia (ABS 2016j). The scope of these statistics is different to motor vehicle registrations data (Tables T 4.7–T 4.8) as it may include defence force vehicles, consular vehicles and vehicles that are intended for off-road use that are not registered for use on public roads. New motor vehicle sales statistics do not include sales of new motor cycles.

Tables T 4.11

14. Licence count data include driver licences with an active status. They do not include driver licences with the following status;

- Cancelled;
- Suspended;
- Surrendered;
- Expired; or
- Disqualified.

Provisional and learner driver permits are included in licence counts.

Licence count data also include other classes of active car licences, so are not directly comparable to data in Table 4.12. Total licence holder counts for Victoria include licences where gender is not specified or not recorded as male or female.

Tables T 4.12

15. Licence count data include driver licences with an active status. They do not include driver licences with the following status;

- Cancelled;
- Suspended;
- Surrendered;
- Expired;
- Disqualified; or
- Restricted.

Where someone holds a car licence and a heavy vehicle licence, this is counted twice. Any heavy vehicle category between the car category and highest heavy vehicle category held is not counted.

For example, for full heavy combination (HC) licence holders, the following counting rules apply:

- Full Car Licence - (counted)
- Light rigid (not counted)
- Medium Rigid (not counted)
- Heavy rigid (not counted)
- Full Heavy Combination – (counted)

Where someone holds a full car licence and a full motorcycle licence, this is counted twice. Where a customer holds a car, motorcycle and truck licence, this is counted three times.

Provisional licence counts include all sub classes

Rail

Table T 5.1

Intercapital rail distances can vary significantly depending on whether the distances are measured between freight terminals or passenger terminals and on the route chosen. The freight and passenger terminals used in compiling Table T 5.1 are provided below:

Sydney:

- Chullora South Junction (for the Chullora freight terminal).
- Sydney Central Railway Station (for regional and interstate passengers).

Melbourne:

- Tottenham Junction (for Tottenham yard, Dynon terminals and the Port of Melbourne).
- Southern Cross Railway Station (Spencer Street) for regional and interstate passengers.

Brisbane:

- Acacia Ridge freight terminal.
- Roma Street Railway Station for regional and interstate passengers.

Adelaide:

- Islington Freight Terminal
- Adelaide—Parklands Terminal (Keswick) for interstate passengers.

Perth:

- Forrestfield freight yards.
- East Perth for regional and interstate passengers.

Darwin:

- East Arm Wharf.
- Darwin Railway Station, Berrimah, for interstate passengers.

Canberra:

- Railway lands adjacent to railway corridor, Queanbeyan–Canberra (Fyshwick).
- Canberra Railway Station, Kingston.

Where more than one route exists between capital cities, the route chosen is the one that is typically used by the given train type. Some city pairs do not have point-to-point services so routes have been assumed. The following routes have been used:

Cootamundra/Parkes route for:

- Sydney–Adelaide/Perth/Darwin freight
- Brisbane–Adelaide/Perth/Darwin freight
- Canberra–Perth/Darwin freight

Lithgow/Parkes route for:

- Sydney–Adelaide/Perth/Darwin passenger

Melbourne route for:

- Canberra–Adelaide

For the Brisbane–Melbourne passenger terminal calculations, the distance is calculated via North Strathfield and Granville, bypassing Sydney Central.

Table T 5.2

Estimates on route-kilometres of open railway are as at 30 June 2015.

16. "Open" means operational. There are some lines that are non-operational but are not closed. Non-operational railways are excluded from the totals. Also excluded are Queensland narrow-gauge (610 mm) sugar tram lines — estimated to be around 4 000 route-kilometres.
17. Railway route length refers to lines that are operational. It is based on an estimate of route kilometres as at 30 June 2015. There have been minor route length increases in Victoria and New South Wales due to the opening of the Regional Rail Link in Victoria and Glenfield to Leppington line in New South Wales. The estimate of the Queensland total route length has been revised, and is based on data which Aurizon has provided.

Table T 5.3

- Sydney's metropolitan network is defined here as being bounded by Waterfall, Macarthur, Emu Plains, Richmond and Berowra.
- Melbourne's metropolitan network is defined here as being bounded by Stony Point, Sandringham, Williamstown, Werribee, Sunbury, Flemington Racecourse, Craigieburn, Upfield, South Morang, Hurstbridge, Lilydale, Belgrave, Alamein, Glen Waverley, Pakenham and Cranbourne.
- Brisbane's metropolitan network is defined here as being bounded by Caboolture, Shorncliffe, Domestic Airport, Doomben, Cleveland, Beenleigh, Rosewood, Springfield Central and Ferny Grove.
- Perth's metropolitan network is defined here as being bounded by Midland, Armadale, Thornlie, Mandurah, Fremantle and Clarkson.
- Adelaide's metropolitan network is defined here as being bounded by Belair, Tonsley, Seaford, Grange, Outer Harbor and Gawler Central.

Aviation

Table T 6.1

Intercapital air distances are provided in terms of greater circle distances. These are distances that take into account the curvature of the earth.

Tables T 6.2–T 6.3

18. Revenue passengers are fare paying passengers uplifted from or discharged in Australia.
19. Number of international revenue passengers uplifted from or discharged in Australia as well as passengers carried via Australia by Australian Airlines, Qantas Airways, Emirates (for November 2011 onwards), China Airlines (for January 2014 onwards), Philippine Airlines (for December 2015 onwards) and AirAsia X (for April 2016 onwards) divided by the number of available seats.

20. Revenue passenger kilometres are calculated by multiplying the number of revenue passengers travelling on each flight stage by the distance in kilometres between the airports. Modelled estimates of air passenger travel (Table T 3.1) differ from survey results for domestic airline revenue passenger travel.

21. Domestic revenue passenger kilometres divided by available seat kilometres.

Table T 6.4

22. Regular Public Transport (RPT) operations only. RPT is aircraft transport available to the public and operated to fixed schedules and between specified fixed terminals.

Table T 6.5

Airline on time measures are provided in terms of on time departures (flights that depart within 15 minutes of the scheduled departure time), on time arrivals (flights that arrive within 15 minutes of the scheduled arrival time) and cancellations (flights cancelled or rescheduled within seven days of the scheduled departure time).

23. Participating airlines are Jetstar, Qantas, QantasLink, Regional Express, Tigerair Australia, Virgin Australia and Virgin Australia Regional Airlines.

Table T 6.6

Airfare indexes provided are the annual average of monthly indexes compiled by BITRE.

Shipping

Deadweight tonnage (DWT) is the measure of weight that a vessel can carry, including cargo, bunkers, water and stores, expressed in tonnes.

Table T 7.1

The main source of information on intercapital sea distances was The Ports of Australia (Australian Chamber of Shipping 1993). Where optional routes are available, the shorter distance was used.

Tables T 7.2–T 7.3

Tables T 7.2 and T 7.3 provide estimates of the number of ships that visit major ports or states and the number of vessel visits a port or state receive during a financial year.

24. Improvements have been made to the methodology used to compile estimates of port calls, with revisions back to 1998-99.

Tables T 7.4–T 7.6

Tables T 7.4, T 7.5 and T 7.6 provide estimates of the tonnes of cargo loaded or discharged from ships at Australian ports. Domestic cargo is recorded in these estimates at both the port of loading and the port of discharge, while international cargo is recorded only at the Australian port of loading or discharge.

25. International trade cargo statistics are no longer available, so merchandise trade data have been used and back-cast to 2005–06 for comparative purposes. Merchandise trade data have a different scope to the previously used cargo statistics with one of the differences being the inclusion of exports' ship and aircraft stores. The timing of the data supply has also changed to now include fully revised data.

26. Port throughput data may differ slightly from data reported directly by port authorities.

Table T 7.8

Table T 7.8 provides the number of ships operating out of Australian ports for at least part of the financial year that are owned or operated by Australian entities. In any financial year, there may be ships managed by Australian registered companies that operate internationally without calling into Australian ports.

Tables T 7.9–T 7.10

A list of the Major Australian registered trading vessels (greater than 2 000 DWT) engaged in Australian coastal and international trade is provided in Tables T 7.9 and T 7.10. Australian Trading Vessels are defined as cargo ships that are owned or operated by Australian companies as at the end of the financial year. The trading fleet includes ships that carried cargo, or both cargo and passengers, but excludes ships that carried passengers only. Cargo ships in the trading fleet must have called at an Australian port during the reporting year. Vessels are classified to coastal or international trade based on their primary activity. Some predominantly international trading vessels occasionally engage in coastal trade and some predominantly coastal trading vessels occasionally engage in international trade.

Safety

Fatalities include injuries resulting in death within 30 days of the accident where death is attributable to injuries sustained during the accident.

Serious injuries are defined as injuries that require hospitalisation.

Table T 8.1

Table T 8.1 provides a cross-modal comparison of fatality accidents and fatalities. Road statistics are compiled by BITRE, while marine and aviation statistics are compiled by the Australian Transport Safety Bureau (ATSB) and rail statistics are compiled by the Office of the National Rail Safety Regulator (ONRSR). ONRSR is an independent body corporate with regulatory safety oversight for South Australia, New South Wales, Tasmania, Northern Territory, Victoria and the Australian Capital Territory. Data are not currently available for the number of rail fatality accidents.

Marine accident and fatalities statistics only include occurrences reported to ATSB which take place in Australia's maritime jurisdiction. They include accidents and other safety incidents involving Australian registered trading vessels (cargo and/or passengers) and trading vessels flying foreign flags. They also include injuries on board recreational and fishing vessels drawn into accidents that also involved a ship.

Marine accidents are defined as an occurrence involving a vessel where:

- A person dies or suffers serious injury as a result of an occurrence associated with the operation of the vessel; or
- The vessel is destroyed or seriously damaged as a result of an occurrence associated with the operation of the vessel; or
- Any property is destroyed or seriously damaged as a result of an occurrence associated with the operation of the vessel (Transport Safety Investigation Act 2003).

Cross-modal comparisons should be undertaken with caution as level crossing accidents between trains and road vehicles are included in the estimates of both modes from 2001 (level crossing deaths were not included in rail fatality statistics prior to 2001). In addition, suicides are excluded from aviation casualty estimates and road estimates but included in rail estimates from 2001 to 2011.

Tables T 8.2–T 8.9

Fatality rates and serious injury rates are presented for each mode using population data provided in Table I 1.5 and passenger kilometre data provided in Table T 3.1.

27. Between 1989 and 1997, statistics for hospitalised injury crashes were based on statistics compiled from police accident reports. Comparable national statistics are no longer available from these sources.
28. From 2000–01, serious injury statistics for roads are compiled on a financial year basis (year ended 30 June) from hospital records provided to the Australian Institute of Health and Welfare and maintained on their National Hospital Morbidity Database.

2012 calendar year data is not directly comparable with previous years due to a break in the hospitalised injury series in 2012. A large jurisdiction changed case inclusion criteria to exclude cases cared for solely in Emergency Departments from 1 July 2012. The National Injury Surveillance Unit (NISU) estimates this decreased admitted case counts in Australia by 2000 cases (-5.6 per cent) in 2012–13 compared to 2011–12. The estimated decrease in 2012 was approximately 1000 cases, or -2.8 per cent, with the reduction likely to differ by road user group.”

Tables T 8.10–T 8.12

Rail safety statistics are sourced from the Office of the National Rail Safety Regulator (ONRSR).

Rail occurrence data for 2012 onwards include only heavy rail (excluding tram, non-heavy rail tourist and heritage operators) operations. Rail occurrence data from 2001 onwards excludes tram and monorail. Fatality and serious injury data excludes suspected suicide and trespass.

29. NSW records occurrences where transfers by ambulance were required (excluding a person being transported for non-rail safety related health reasons, e.g. heart attack, seizure) as proxies for serious injuries. Consequently, this information has been provided separately.

30. The Rail Safety National Law came into force in ACT on 20 November 2014. Prior to this there were no formal legal requirements for operators in ACT to notify rail safety occurrences.

The data are based on information provided by rail operators. The ONRSR cannot guarantee the accuracy or completeness of information provided by third parties.

Tables T 8.13–T 8.15

Aviation accident statistics include all occurrences associated with the operation of an aircraft which take place between the time any person boards the aircraft with the intention of flight until disembarking, in which a person is injured as a result of:

- being in the aircraft, or
- direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or
- direct exposure to jet blast.

For aviation safety statistics, injuries include serious and minor injuries.

Casualties are excluded when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew.

Energy and the environment

Tables T 9.1–T 9.2

Australian petroleum sales data include reporting companies' own use of petroleum products, but excludes refinery fuel.

31. Includes all LPG production and trade.

32. All diesel imports are included in automotive diesel.

Table T 9.3

Annual average retail petrol prices are calculated as a simple average of daily unleaded petrol prices at metropolitan and regional locations across Australia (where prices are available).

National averages are calculated as weighted averages of the state/territory prices, with weights based on vehicle numbers using petrol in each region.

Tables T 9.4–T 9.13

Emission estimates that are provided in terms of carbon dioxide equivalent emissions in Tables T 9.4 and T 9.5 follow the emission accounting framework of the National Greenhouse Gas Inventory (NGGI) and include only the directly radiative gases carbon dioxide, methane and nitrous oxide emitted from transport fuel combustion (with the exception of CO₂ released from the in-vehicle combustion of biofuels). These estimates of carbon dioxide equivalent emissions do not include upstream emissions (from fuel or electricity supply), the indirect effects of gases such as carbon monoxide, nitrogen oxides and non-methane volatile organic compounds, or the direct effects of black carbon emissions or fluorocarbon releases. Emission estimates are available in Tables T 9.6 to

T 9.8 for carbon dioxide, methane and nitrous oxide without conversion to carbon dioxide equivalent. The carbon dioxide equivalent values (Tables T 9.4 and T 9.5) use conversion factors, Global Warming Potentials, for calculating the CO₂ equivalent mass estimates for emissions of methane and nitrous oxide, using a reference period for warming effects of 100 years, from previous Intergovernmental Panel on Climate Change (IPCC) guidelines.

Greenhouse gas emissions presented in *Australian Infrastructure Statistics Yearbook 2016* for tables T 9.4 to T 9.8 represent emissions from end-use activity only. That is, they do not include emissions from 'upstream' activity (primarily fuel refining, electricity generation and biofuel production). Greenhouse gas emission estimates provided in *Australian Transport Statistics Yearbook 2009* were presented on a 'full fuel cycle' basis (inclusive of 'upstream' emissions), with such estimates provided here in Table 9.9.

Estimates for maritime and aviation emissions only include domestic transport (coastal shipping and domestic aviation).

A discussion of the modelling techniques used is available in *Greenhouse Gas Emissions from Australian Transport* (BITRE 2009, BTRE 2006b) and *Long-Term Projections of Australian Transport Emissions: Base Case 2010* (BITRE 2010).

Part E Energy infrastructure

Table E I.1

Table E I.1 provides estimates of engineering construction work done on energy infrastructure, providing energy detail to the data provided in Table I 2.1. For the 2016 issue of Yearbook, estimates are no longer provided for construction work done of Gas and other hydrocarbons projects. The ABS definition of pipelines used in this table includes oil and gas pipelines, urban supply mains for gas, pipelines for refined petroleum products, chemicals, etc. Pipelines used for water supply are included in the category 'water storage and supply' (see Table W 1.1).

Table E I.2, E I.3 and E 3.6

Early statistics (up to 1993–94) presented in these tables were sourced from a Historical Data Disk produced by ESAA. ESAA also provided data from 1997–98, however data for 1994–95 to 1996–97 were not available. From 1997–98, measures of ACT activity were included with NSW and were not available separately.

Table E 1.4

Table E 1.4 provides reliability measures of electricity supply. In general, data have not been normalised to exclude distribution outages beyond the reasonable control of the network operator.

The State of the Energy Market report (2015) reported unplanned outages for 2014–15. In previous years, its estimates included total planned and unplanned outages. Therefore, the 2014–15 data should not be compared to previous years.

However, adjustments have been made to estimates for Queensland in 2005–06 to take into account the impact of Cyclone Larry, and estimates for New South Wales in 2006–07 to take into account extreme storm activity in that year.

Raw inputs to energy supply

Table E 2.1

Australia's economic demonstrated mineral energy resources are estimated by Geoscience Australia using a methodology based on the McKelvey resource classification system. It classifies identified mineral resources according to two parameters: the degree of geological assurance and the degree of economic feasibility of exploitation.

The degree of geological assurance is determined by the results of geological testing. A demonstrated resource is considered to exist where the tonnage, density, shape, physical characteristics, grade and mineral content of a deposit can be estimated with a reasonable level of confidence. Overlaying the measure of geological assurance is the economic feasibility of the extraction or production of the mineral. A demonstrated mineral energy resource is determined to be economic when 'profitable extraction or production under defined investment assumptions has been established, analytically demonstrated, or assumed with reasonable certainty' (GA 2013).

Table E 2.2 and E 2.3

These tables show the input fuels used to generate electricity (Table E 2.2) and gas (Table E 2.3) measured in terms of energy units (petajoules) and physical measures (units vary depending on input fuel type). The Office of the Chief Economist (OCE) presents energy use statistics in terms of energy units only; BITRE has converted these measures to physical units using conversion factors provided by OCE.

Energy production and usage

The majority of statistics provided in this chapter are sourced from the OCE Australian energy statistics (AES) database, as published on the OCE website. The AES uses a methodology which balances energy consumption estimates with production and trade estimates. As such, data from AES are internally consistent, but may differ slightly from individual source datasets.

Energy consumption estimates are provided as a net concept. That is, intermediate consumption of energy (energy used to produce energy products) is not included in estimates of total energy consumed (further explanation is provided in Australian Energy Statistics, OCE 2015b).

Where separate estimates for ACT are not provided in state/territory tables, ACT estimates are included with NSW estimates. Estimates of energy consumption by industry are compiled based on a modified form of the 1993 version of the Australia and New Zealand Standard Industry Classification (ANZSIC). The ANZSIC was updated in 2006, however the industry classification used for energy consumption estimates has not been updated to avoid breaks in time series and consequential breaches of confidentialised data.

For several detailed energy consumption tables, there are time series that are not published to preserve the confidentiality of individual responses. Where this has occurred, suppressed estimates have been included in totals.

Table E 3.10

In converting black coal consumption estimates from energy units (petajoules) to physical units (kilotonnes), a number of assumptions had to be made relating to the grade of coal used in each state/territory and industry. The energy content of solid fuels in Australia for some states and some categories of fuel are provided in Energy in Australia (OCE 2014a). Where the energy content of a fuel type is not available for a particular state, assumptions were made based on energy content of fuels used by similar industries or in nearby states.

For NSW, BITRE assumes that the representative grade of coal used by the food, beverages and tobacco industry is washed thermal coal, the grade of coal used by other manufacturing industries (including the suppressed industries: cement, lime, plaster and concrete; iron and steel; and basic non-ferrous metals manufacturing industries) is steelworks grade coal, and the coastal shipping bunkers and other industries use unwashed thermal coal. The electricity generation industry in NSW uses a grade of black coal specific to that industry.

For VIC, BITRE assumes that the representative grade of coal used by all manufacturing industries has the same energy content as NSW washed thermal coal. In addition, BITRE assumes that non-manufacturing industries use the same grade of coal as NSW non-manufacturing industries (unwashed thermal coal).

The electricity generation industry in QLD uses a grade of black coal specific to that industry and that state. For all other industries in QLD, BITRE assumes that the representative grade of coal is other non-export grade.

For SA, BITRE assumes that the representative grade of coal used by all manufacturing industries has the same energy content as NSW washed thermal coal. In addition, BITRE assumes that non-manufacturing industries use the same grade of coal as NSW non-manufacturing industries (unwashed thermal coal).

For WA and TAS, Energy in Australia (OCE 2014a) only provides one conversion factor for each state (thermal coal).

Table E 3.13

State and territory based estimates of petroleum fuel consumption by the petroleum refining and basic chemicals manufacturing industries are not separately available for publication, but have been included in the other manufacturing industry. Estimates for the petroleum refining and basic chemical manufacturing industries are available at the national level.

- I. Estimates of Australian petroleum fuel consumption include all petroleum fuels, but exclude petroleum-based lubricants and greases.

Table E 3.14

Annual world crude oil prices are presented as the average of quarterly prices compiled by OCE from posted or official selling prices with Rotterdam spot prices for Middle East and North Sea crudes.

2. Middle East crude, 32 American Petroleum Institute (API) gravity.
3. North Sea crude, 38 API gravity.
4. North American crude, 40 API gravity.
5. Australian crude, 42 API gravity.
6. Malaysia tapis blend, 44 API gravity.

API gravity is an international standard measure of crude oil density, with higher API gravities signifying lighter oils. Light crude oil has an API gravity higher than 30.

Energy safety and emissions

Table E 4.1

- I. It is not meaningful to compare the data for 2014–15 with data for previous years. In 2014–15, the AIHW's figures reflect counts only for separations for which the principal diagnosis was an injury or poisoning. In previous year's the figures presenting external causes included counts for separations for which the principal diagnosis was not an injury or poisoning, and the external cause was related to an additional diagnosis (that is, a diagnosis that was not the cause of the hospitalisation, for example, a post-procedural complication).

There are few datasets available that provide quality estimates of health-related issues for the production or use of energy in Australia. Annual estimates of hospital admissions due to exposure to electricity, radiation, or extreme temperature/pressure have been provided in Table E 4.1. Further disaggregation of these estimates to measure admissions by states is not possible.

Table E 4.2 and Table E 4.3

Greenhouse gas emissions provided elsewhere in the Yearbook are presented as direct or 'Scope 1' (National Greenhouse Gas Inventory terminology) emissions. This excludes upstream or indirect emissions from the conversion of energy to its final form. The National Greenhouse

Gas Inventory defines 'Scope 2' emissions as 'indirect greenhouse gas emissions from the generation of purchased electricity'.

The sum of all estimates of the direct (Scope 1) greenhouse gas emissions for the electricity generation industry that are presented in Tables E 4.2 and E 4.3 are equal to the sum of Scope 2 emissions for all industries.

Part C Communications infrastructure

Table C 1.1

Table C 1.1 provides estimates of engineering construction work done on telecommunications infrastructure, drawing together telecommunications data provided in Table I 2.1.

Table C 1.2

Table C 1.2 provides a number of broad indicators of capital investment by selected communications industries using the national accounts concepts gross fixed capital expenditure, net capital expenditure, and depreciation and amortisation.

Gross fixed capital expenditure represents the total value of producers' acquisitions less disposals of fixed assets during a financial year; where fixed assets are assets used repeatedly in processes of production for more than one year (e.g. vehicles, machinery, capitalised computer software, computers, electronics, houses, buildings and structures, mining exploration expenditure, etc).

Net capital expenditure represents the value of total capital expenditure less disposal of assets, while depreciation and amortisation represent the notional reduction in value (consumption) of an asset over the life of the asset, apportioned to the reference time period (depreciation usually refers to the reduction in value of tangible assets and amortisation usually refers to the reduction in value of intangible assets).

Investment in information technology

Table C 2.1 to Table C 2.3

These tables provide a statistical summary of investment in information technology assets by businesses classified to the information media and telecommunications industry, with assets classified by broad technology.

1. Gross fixed capital formation is a measure of total expenditure on new and second-hand fixed assets, less sales of fixed assets, which occur during the reference period.
2. Consumption of fixed capital represents the reduction in the value of fixed assets resulting from physical deterioration, obsolescence or accidental damage that occurs over the reference period.

3. Information technology net capital stock is a measure of the total value of all information technology capital assets held at the end of the reference period. The change in net capital stock from the end of one financial year to the next is equivalent to gross fixed capital formation (Table C 2.1) less consumption of fixed capital (Table C 2.2).

Subscribers and providers

Table C 3.1 to Table C 3.2

Statistics on communications subscribers and providers are classified according to the technology or medium used. For telecommunications, Table C 3.1 provides estimates of the number of public payphones, fixed voice telephones and terrestrial mobile phones (excludes satellite mobile phones), while Table C 3.2 provides recent estimates of total number of terrestrial mobile subscribers.

Table C 3.3 to Table C 3.4

Table C 3.3 provides a summary of internet subscribers by download speed and type of subscriber; while Table C 3.4 provides a summary of internet subscribers by type of access connection. In earlier years, statistics for both tables reflect information gathered from a complete census of all internet service providers, but for the December 2009 collection, information was gathered from a survey of only the internet service providers with more than 1000 active subscribers.

Table C 3.6

Table C 3.6 provides a summary of communications subscription rate by communications medium, geographical regions and development status. The Australian Communications and Media Authority (ACMA) also have international comparison on communications subscription rate in their Communications report 2013–14.

Definition of total fixed (wired) broadband Internet subscriptions refers to subscriptions to high-speed access to the public Internet (a TCP/IP connection), at downstream speeds equal to, or greater than, 256 kbit/s. This can include for example cable modem, DSL, fibre-to-the-home/building and other fixed (wired) broadband subscriptions. This total is measured irrespective of the method of payment. It excludes subscriptions that have access to data communications (including the Internet) via mobile cellular networks. If countries use a different definition of broadband, this should be indicated in a note. It should exclude technologies listed under wireless broadband category.

Price and activity

Table C 4.1

The numbers presented in Table C 4.1 are an annual average of the quarterly telecommunication services index that contributes to the Consumer Price Index estimation process. Indexes are available for capital cities only.

Table C 4.3

Table C 4.3 provides estimates of businesses undertaking internet commerce activity as a percentage of all businesses, including businesses with no internet connection.

Communications security

There is no known source for statistics on physical injuries associated with communications infrastructure. The Yearbook provides statistics on the number of telephone numbers listed on the ACMA Do Not Call register (covering unsolicited telemarketing calls and marketing faxes) and the number of 000 and 112 calls forwarded to emergency service organisations.

Part W Water infrastructure

Table W 1.1

Table W 1.1 provides estimates of engineering construction work done on water infrastructure, providing water detail to the data provided in Table I 2.1. Pipelines used for water supply and sewerage and drainage are included in this Table, however the ABS definition of pipelines used in Table E 1.1 includes oil and gas pipelines, urban supply mains for gas, pipelines for refined petroleum products, chemicals, etc.

Table W 1.2

Current value of water infrastructure assets are measured as the written down replacement costs of fixed water assets. This concept represents the 'current cost of replacing the service potential of fixed water and sewerage business assets based on current technology'.

1. BITRE estimates for Urban Water supply are sourced from utility reports in the National Performance Report 2014–15, published by BOM (2016b). BITRE aggregates reports only for those utilities with more than 10 000 connections.
2. For the majority of states there are relatively few water utilities with less than 10 000 customers; however, Tasmania were the exception to this rule, with most Tasmanian utilities falling below this threshold. This recently changed, with utilities amalgamating into three large water providers.
3. The number of utilities reporting on urban water services in 2014–15 (87 utilities) increased from that of 2013–14 (78 utilities). This is because of changes to Queensland

State regulations that now require all utilities with over 10 000 connections to report through the NPR process. SA Water also merged with several smaller providers in 2013–14 resulting in more data being reported for this year and 2014–15.

BITRE have not reported Urban Water data for years prior to 2014–15 for Queensland and 2013–14 for South Australia as differences in values over time are largely due to changes in the number of utilities reporting.

4. Historical values for all financial indicators have been adjusted by BoM using consumer price index (CPI) data to facilitate comparison in real terms.

Table W 1.3 to Table W 1.4

5. A definition of 'large dams' is provided by the Australian National Committee on Large Dams (ANCOLD): The dam wall must be more than 15 m in height, or more than 10 m in height, but with:
 - a crest of at least 500 m in length,
 - a capacity of at least 1 million cubic metres,
 - a maximum flood discharge dealt with by the dam of at least 2000 cubic metres per second, or
 - unusual design.
6. From 2010–11, data are sourced from Water Storage (BOM 2015c). Capacity measures on Water Storage measure accessible capacity (excludes "dead storage" - water at the bottom of the dam, below the take-off pipe that cannot be accessed)

Table W 1.5

Water and sewerage infrastructure capital expenditure includes all capital expenditure on new works, renewals or replacements, other expenditure that would otherwise be referred to as capital and recycling water assets.

Table W 1.6

Water treatment plants providing full treatment generally use multiple processes to achieve high quality water. In addition to filtration and disinfection, plants may also undertake processes for taste and odour reduction.

Table W 1.7

The length of urban water mains includes all transfer, distribution, and reticulation mains, but excludes connections between mains and property meter; mains delivering recycled water for non-urban use (e.g. agriculture re-use), disused pipe lengths, privately owned mains, mains associated with source works (e.g. borefield mains), interconnecting mains between schemes or sources, and on-site mains within water facilities.

Table W 1.9

This table provides estimates of the average number of water main breaks, bursts and leaks. Estimates exclude breaks in mains to meter connections and above-ground seepage that can be repaired without shutting down the main.

Table W 1.10

Estimates of the number of sewerage treatment plants include all primary, secondary and tertiary level treatment plants.

Table W 1.11

The length of sewerage mains and channels includes all trunk, pressure and reticulation mains, but excludes connections between mains and properties, and conduits carrying treated effluent downstream from treatment plants.

Table W 1.13

The definition of recycled water treatment plants used in Table W 1.13 includes sewerage treatment plants where the majority of treated water output has undergone additional treatment beyond tertiary standard for discharge to meet the requirements of the recycled water customer.

Table W 1.14

This table provides estimates of the average number of breaks or chokes to sewer mains, where a break is any failure of a sewer main leading to an interruption to service and a choke is a confirmed partial or total blockage.

Table W 1.15

A regulated river normally has a dam or weir structure that regulates or diverts the flow of water to storages or supply networks.

Table W 1.16

Table W 1.16 provides a measure of the current cost of replacing assets (excluding administration, buildings, furniture fittings, equipment, vehicles and corporate service networks). This measure does not take into account accumulated depreciation based on the age and remaining life of the assets.

Water inputs

Table W 2.1

The total volume of rainwater available each year is a function of the area averaged annual state and territory rainfall and the land area of each state/territory.

7. Includes mainland area and island area. Total Australian island area is 32,163 square kilometres.
8. NSW figures include estimates for New South Wales, the Australian Capital Territory and Jervis Bay territory.

Table W 2.2

Surface water sources include dams, rivers or irrigation channels.

Table W 2.3

The volume of water sourced from groundwater excludes water sourced from groundwater supplies that have been artificially recharged using sources of water already counted elsewhere, such as:

- rivers;
- desalination plants; and
- sewage treatment plants.

Other forms of artificial groundwater recharge (e.g. storm water) that have not already been counted are included.

Table W 2.5

The volume of water sourced from recycling includes all recycled water from direct or indirect reuse. This measure includes only recycled water used as a substitute for potable water.

Table W 2.6

The volume of residential sewage, non-residential sewage and non-trade waste includes volumes collected in the sewerage system due to stormwater, illegal connection inflow and infiltration to the sewerage system. Estimates of the volume of trade waste include liquid waste generated from any industry, business, trade or manufacturing process and stormwater collected in the trade waste system.

Table W 2.7

The Consumer Price Index for water and sewerage services provides a measure of annual changes in the price to consumers of water and sewerage services.

Table W 2.9

The measure of treated waste water intake by the rural water supply network (Table W 2.9c) complements the measure of urban water sourced from recycling (Table W 2.5) as it represents the volume of recycled water that is not used as a substitute for potable water.

Table W 2.10

9. Entitlement trading includes, but is not limited to, water access entitlements. Water access entitlements are 'a perpetual or ongoing entitlement to exclusive access to a share of water from a specified consumptive pool as defined in the relevant water plan'.
10. Water allocations are 'the specific volume of water allocated to water access entitlements in a given season, defined according to rules established in the relevant water plan' (NWC 2014).

Water supply and use

Table W 3.2 and Table W 3.5

Table W 3.2 provides estimates of the number of properties connected to the urban supply network, while Table W 3.5 provides estimates of the number of properties connected to urban sewerage services. To be included, properties must be connected to the networks as a separate entity. Properties that are connected but are non-rateable or non-metered are included, while properties that are rateable, but not connected are excluded. Strata title flats or units are counted as separate properties, but a site with no more than 10 per cent of its properties as non-strata title units may be counted as one property.

Table W 3.6

11. Recycled water would generally be provided via a third (non-potable, non-sewerage) pipe system.
12. Includes recycled water supplied to golf courses, heavy industry and commercial areas.
13. Recycled water used to irrigate forestry, pastures for livestock and other agricultural products.
14. Recycled water used on-site at water treatment plants that is external to the treatment process.

Table W 3.8 and Table W 3.9

Table W 3.8 provides an estimate of the volume of water supplied to customer service points by rural water service providers, while Table W 3.9 provides an estimate of the volume of water consumed by agricultural activity. Conceptually, the majority of the difference between the estimates in the two tables represents rural water extracted from sources other than the major rural water service providers.

Table W 3.10

15. The register of all farms in scope of the statistical collection prior to 2005–06 was maintained internally by ABS. From 2005–06 on, the register of all farms was derived from the Australian Business Register, maintained by the Australian Taxation Office.
16. This series groups several agricultural activities into the one measure. Relative standard errors were calculated for component series, but are not available for the new measure.

Table W 3.12

The application rate for irrigation water is calculated by dividing the total volume of irrigation water applied by the area of pasture or crop that is being irrigated.

Table W 3.14

The gross value of irrigated agricultural production (GVIAP) is the value placed on recorded production of agricultural commodities produced with the assistance of irrigation at wholesale market prices (prices realised in the market place). GVIAP is not a measure of the value that irrigation adds to production.

Health and emissions

Urban supply water quality standards are either specified in the utility's licence or franchise agreement, set by the state health regulatory agency or government, or in the absence of a formal agreement, the compliance of utilities is measured against the Australian Drinking Water Guidelines (2004).

Water supply zones are generally a discrete area of similar water quality. Zones may be based on the area served by one treatment plant or an area that is easily described by its boundaries or system characteristics.

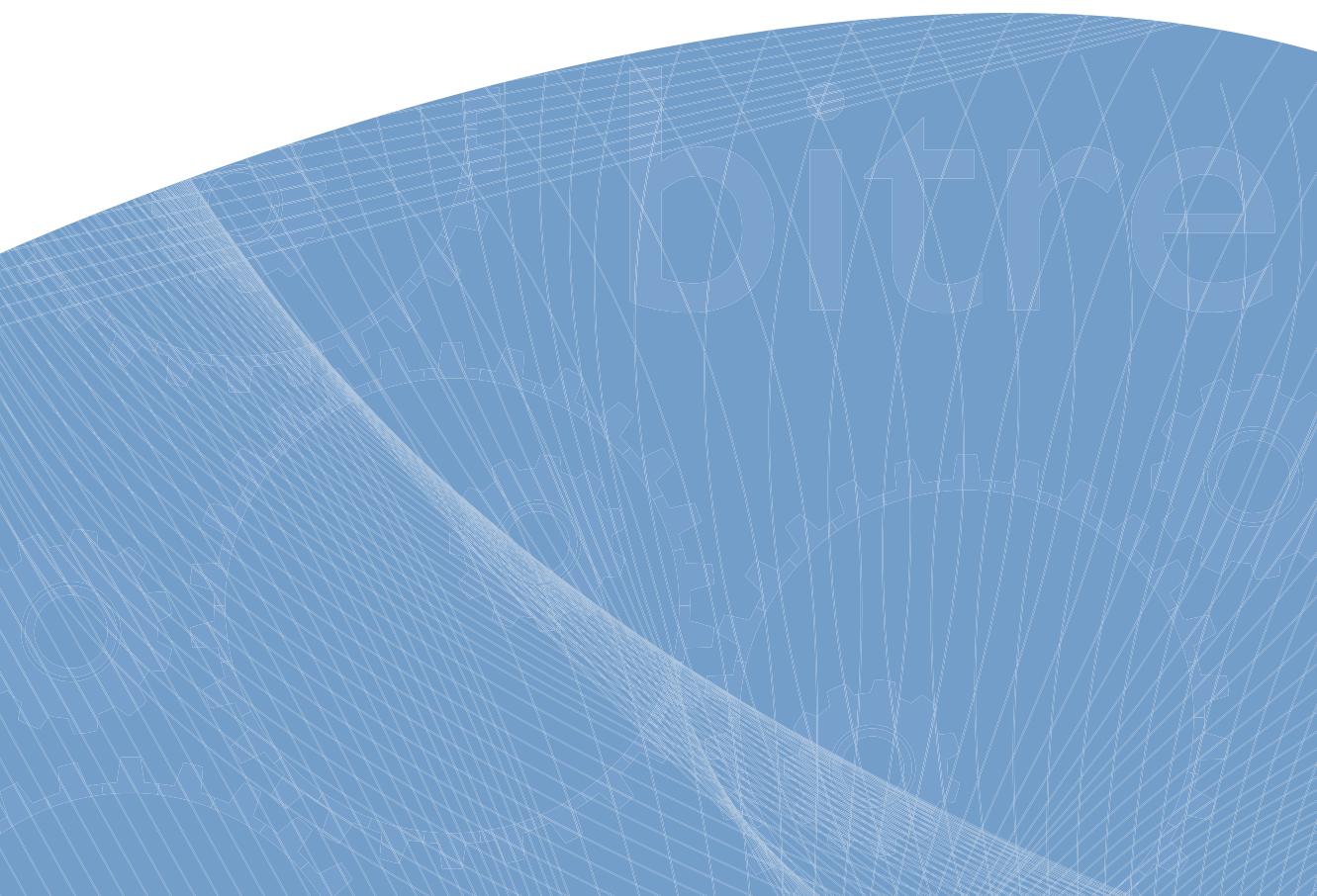
Table W 4.3 and Table W 4.4

Greenhouse gas emissions of transport, energy, communication or water activities can either be measured in terms of the direct emissions of the activity or all greenhouse gas emissions resulting from the activity (direct emissions plus upstream emissions, in particular the emissions resulting from the generation of purchased electricity). To avoid double counting, the preferred Yearbook greenhouse gas measures are for direct emissions only, with Table E 4.2 electricity generation emissions, representing all upstream emissions for the economy. In National Greenhouse Gas Inventory terminology, direct emissions represent 'scope 1' emissions, while emissions from the generation of purchased electricity represent 'scope 2' emissions.

As direct emissions statistics are not available for water supply networks, Table W 4.3 provide estimates of greenhouse gas emissions from water supply and sewerage networks that include both end-use emissions and upstream emissions from the generation of purchased electricity. These estimates are not comparable with greenhouse gas emission estimates for other major forms of infrastructure presented in Parts T, E and C of the Yearbook, which present direct emissions only.

Table W 4.4 provides estimates of scope 1 greenhouse gas emissions from wastewater handling sourced from the National Greenhouse Gas Inventory.

References



References

- AusRegistry 2016, AusRegistry Quarterly report to auDA, <<http://www.auda.org.au/industry-information/registry/ausregistry-reports/>>
- Australasian Railway Association Inc (ARA) 2008, *Australian Rail Industry Report*, 2007, Canberra
- Australasian Railway Association Inc (ARA) 2013, *Australian Rail Industry Report*, 2012, Canberra
- Australian Bureau of Statistics (ABS) 2002, *Freight movements: Australia summary*, ABS cat. no. 9220.0, Canberra
- Australian Bureau of Statistics (ABS) 2004, *Rail freight movements, Australia, Summary – Electronic Delivery*, ABS cat. no. 9220.0.55.001, Canberra
- Australian Bureau of Statistics (ABS) 2006a, *Research Paper: Survey of Motor Vehicle Use – An investigation into coherence*, ABS cat. no 9208.0.55.005, Canberra
- Australian Bureau of Statistics (ABS) 2008, *Australian and New Zealand Standard Industrial Classification (ANZSIC)*, ABS cat. no. 1292.0, Canberra
- Australian Bureau of Statistics (ABS) 2010, *Australian Statistical Geography Standard (ASGS): Volume 1 – Main Structure and Greater Capital City Statistical Areas*, July 2011, ABS cat. no. 1270.0.55.001, Canberra
- Australian Bureau of Statistics (ABS) 2012a, *Australian Statistical Geography Standard (ASGS): Volume 4 – Significant Urban Areas, Urban Centres and Localities, Section of State*, July 2011, ABS cat. no. 1270.0.55.004, Canberra
- Australian Bureau of Statistics (ABS) 2012b, *Census Basic Community Profile Series (2011)*, ABS website release, Canberra
- Australian Bureau of Statistics (ABS) 2014c, *Gross Value of Irrigated Agricultural Production*, ABS cat. no. 4610.0.55.008, Canberra
- Australian Bureau of Statistics (ABS) 2014d, *Water Use on Australian Farms*, ABS cat. no. 4618.0, Canberra
- Australian Bureau of Statistics (ABS) 2015a, *Employee Earnings and Hours, Australia*, ABS cat. no. 6306.0, Canberra
- Australian Bureau of Statistics (ABS) 2015b, *Survey of Motor Vehicle Use, Australia*, ABS cat. no. 9208.0, Canberra
- Australian Bureau of Statistics (ABS) 2015c, *Labour Force, Australia*, ABS cat. no. 6202.0, Canberra
- Australian Bureau of Statistics (ABS) 2015d, *International cargo statistics*, unpublished data, Canberra
- Australian Bureau of Statistics (ABS) 2015e, *Australian System of National Accounts*, ABS cat. no. 5204.0, Canberra

Australian Bureau of Statistics (ABS) 2016a, *Engineering Construction Activity, Australia*, ABS cat. no. 8762.0, Canberra

Australian Bureau of Statistics (ABS) 2016b, *Australian National Accounts: National Income, Expenditure and Product*, ABS cat. no. 5206.0, Canberra

Australian Bureau of Statistics (ABS) 2016c, *Labour Force, Australia, detailed, Quarterly*, ABS cat. no. 6291.0.55.003, Canberra

Australian Bureau of Statistics (ABS) 2016d, *Consumer Price Index, Australia*, ABS cat. no. 6401.0, Canberra

Australian Bureau of Statistics (ABS) 2016e, *Producer Price Indexes, Australia*, ABS cat. no. 6427.0, Canberra

Australian Bureau of Statistics (ABS) 2016f, *Regional Population Growth, Australia*, ABS cat. no. 3218.0, Canberra

Australian Bureau of Statistics (ABS) 2016g, *Balance of Payments and International Investment Position, Australia*, ABS cat. no. 5302.0, Canberra

Australian Bureau of Statistics (ABS) 2016h, *Government Finance Statistics, Australia, 2014–15*, ABS cat. no. 5512.0, Canberra

Australian Bureau of Statistics (ABS) 2016i, *Motor Vehicle Census, Australia*, ABS cat. no. 9309.0, Canberra

Australian Bureau of Statistics (ABS) 2016j, *Sales of New Motor Vehicles, Australia*, ABS cat. no. 9314.0, Canberra

Australian Bureau of Statistics (ABS) 2016k, *Australian Industry*, ABS cat. no. 8155.0, Canberra

Australian Bureau of Statistics (ABS) 2016l, *Internet Activity, Australia*, ABS cat. no. 8153.0, Canberra

Australian Bureau of Statistics (ABS) 2016m, *Water Use on Australian Farms*, ABS cat. no. 4618.0, Canberra

Australian Bureau of Statistics (ABS) 2016n, *Selected Characteristics of Australian Business*, ABS cat. no. 8167.0, Canberra

Australian Chamber of Shipping 1993, *The Ports of Australia, thirteenth edition*, Sydney

Australian Communications and Media Authority (ACMA) 2015, *Communications report 2014–15*, Melbourne

Australian Energy Regulator (AER) 2015, *State of the Energy Market 2015*, unpublished data, Canberra

Australian Institute of Health and Welfare (AIHW) 2016a, *National Hospital Morbidity Database*, unpublished

Australian Institute of Health and Welfare (AIHW) 2016b, *Admitted patient care 2013–14: Australian hospital statistics*, Health services series no. 68. Cat. no. HSE 172, Canberra

- Australian Institute of Health and Welfare (AIHW): Henley G & Harrison JE 2012, *Trends in serious injury due to land transport accidents Australia 2000–01 to 2008–09*. Injury research and statistics series no.66. Cat. No. INJCAT 142, Canberra: AIHW
- Australian Institute of Petroleum (AIP) 2016, AIP Annual Retail Price Data – website release, <<http://www.aip.com.au/pricing/retail.htm>>
- Australian Taxation Office (ATO) 2016a, *Taxation statistics 2013–14*, Canberra
- Australian Taxation Office (ATO) 2016b, *Statistical Enquiry Service*, unpublished data
- Australian Transport Safety Bureau (ATSB) 2004, *Railway accident Fatalities: Australia Compared with Other OECD Countries, 1980–1999*, Canberra
- Australian Transport Safety Bureau (ATSB) 2010, *Australian Rail Safety Occurrence Data: 1 January 2001 to 31 December 2009*, Canberra
- Australian Transport Safety Bureau (ATSB) 2012, *Australian Rail Safety Occurrence Data 1 January 2002 to 31 December 2011*, Canberra, <<http://www.atsb.gov.au/publications/2012/rr-2012-001.aspx>>
- Australian Transport Safety Bureau (ATSB) 2016a, *Maritime Occurrence Database*, unpublished data
- Australian Transport Safety Bureau (ATSB) 2016b, *National Aviation Occurrence Database*, unpublished data
- Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2009, *Greenhouse Gas Emissions from Australian Transport: Projections to 2020 Working Paper 73*, Canberra
- Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2010, *Long-Term Projections of Australian Transport Emissions: Base Case 2010*, Commissioned Report, Commonwealth of Australia Canberra, <<http://webarchive.nla.gov.au/20140801060611/http://www.climatechange.gov.au/climate-change/greenhouse-gas-measurement-and-reporting/australias-emissions-projections/australias-emissions-projections-2010>>
- Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2012a, *TrainLine 1*, Statistical Report, Canberra
- Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2015a, *BITRE Road Construction and Maintenance Price Index—2015*, Information Sheet 72, Canberra
- Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2015b, *Traffic and congestion cost trends for Australian capital cities* Information Sheet 74, Canberra
- Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2015c, *Yearbook 2015: Australian Infrastructure Statistics, Statistical Report*, Canberra, ACT
- Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2015d, *Australian Sea Freight 2014–15, Statistical Report*, Canberra
- Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2015e, *Long-term trends in urban public transport*, Information Sheet 60, Canberra

Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2015f, *Aviation statistics – website release*, Canberra <http://www.bitre.gov.au/statistics/aviation/australian_air_distances.aspx>

Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2015g, *Urban public transport: updated trends*, Information Sheet 59, Canberra

Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2016a, *Toll Roads in Australia*, Information Sheet 81, Canberra

Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2016b, *TrainLine 4*. Statistical Report, Canberra

Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2016c, *Domestic aviation activity*, Statistical Report, Canberra

Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2016d, *Australian Road Freight Estimates: 2016 update*, Canberra

Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2016e, *Aviation statistics – website release*, Canberra <<http://www.bitre.gov.au/statistics/aviation/international.aspx>>

Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2016f, *Aviation statistics – website release*, Canberra <http://www.bitre.gov.au/publications/ongoing/domestic_airline_activity-annual_publications.aspx>

Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2016g, *Aviation statistics – website release*, Canberra <http://www.bitre.gov.au/publications/ongoing/airport_traffic_data.aspx>

Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2016h, *Aviation statistics – website release*, Canberra <<http://www.bitre.gov.au/statistics/aviation/otphome.aspx>>

Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2016i, *Waterline*, issue 58, Canberra

Bureau of Infrastructure, Transport and Regional Economics (BITRE) 2016j, *Australian Road Deaths Database (ARDD)*, Canberra

Bureau of Meteorology (BOM) 2016a, *Australian Climate Variability and Change – Time Series Graphs*, BOM website release, <http://www.bom.gov.au/climate/change/index.shtml#tabs=Tracker&tracker=timeseries&tQ%5Bgraph%5D=rain&tQ%5Barea%5D=vic&tQ%5Bseason%5D=0112&tQ%5Bave_yr%5D=T>

Bureau of Meteorology (BOM) 2016b, *National performance report 2014–15: urban water utilities*, Canberra

Bureau of Meteorology (BOM) 2016c, *Water Storage*, BOM website release, <<http://water.bom.gov.au/waterstorage/awris/?ref=ftr>>

Bureau of Transport and Regional Economics (BTRE) 2002, *Greenhouse gas emissions from transport: Australian trends to 2020*, Report 107, Canberra

- Bureau of Transport and Regional Economics (BTRE) 2006a, *Freight measurement and modelling in Australia*, Report 112, Canberra
- Bureau of Transport and Regional Economics (BTRE) 2006b, *Greenhouse gas emissions from Australian transport: base case projections to 2020*, Commissioned Report, Canberra
- Civil Aviation Safety Authority (CASA) 2015, *Civil aircraft register – website release*, <http://www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_93247>
- Energy Supply Association of Australia (ESAA) 2005, *Historical Statistics – Australian electricity sector statistics from 1955 to 1994*, data disk
- Energy Supply Association of Australia (ESAA) 2015, *Electricity Gas Australia*, ESAA, Melbourne
- Environment, Department of (Environment) 2016, *National Greenhouse Gas Inventory, Australian Greenhouse Emissions Information System, Australian Greenhouse Emissions Information System (AGEIS)*, website release, Canberra
- Geoscience Australia (GA) 2010, *Area of Australia – States and Territories*, GA website release, <<http://www.ga.gov.au/education/geoscience-basics/dimensions/area-of-australia-states-and-territories.html>>
- Geoscience Australia (GA) 2012, *Oil and Gas Resources of Australia 2010*, Geoscience Australia, Canberra
- Geoscience Australia (GA) 2013, *Australia's Identified Mineral Resources 2013*, Geoscience Australia, Canberra
- Geoscience Australia (GA) 2014, *Statistical Enquiry Service*, unpublished data
- Geoscience Australia (GA) 2015, *Australia's Identified Mineral Resources 2015*, Geoscience Australia, Canberra
- Industry, Department of (Industry and Science) 2014a, *Energy in Australia*, Canberra, November
- Industry, Department of (Industry and Science) 2015a, *Australian Energy Resource Assessment*, Canberra
- Industry, Department of (Industry and Science) 2015b, *Australian Energy Statistics*, Canberra, August
- Industry, Department of (Industry and Science) 2015c, *Resources and Energy Quarterly*, Canberra, September
- Industry, Department of (Industry and Science) 2016a, *Australian Petroleum Statistics*, Canberra, August
- Infrastructure and Transport, Department of (Infrastructure) 2012, *Casualty Crash Database*, unpublished data
- National Marine Safety Committee (NMSC) 2010, *Incident data*, <http://www.nmsc.gov.au/research_data/index.php?MID=84&COMID=1&CID=80>
- National Transport Commission (NTC) 2016a, *PAYGO model*, Melbourne

National Transport Commission (NTC) 2016b, *2016 NTC Expenditure Template Reporting Guidelines*, unpublished

National Water Commission (NWC) 2014, *National Performance Report 2012–13: rural water service providers*, Canberra

Office of the National Rail Safety Regulator (ONRSR) 2016, *Statistical Enquiry Service*, unpublished data

OpenStreetMap 2012, *Australia extract*, 23 August 2012, <<http://www.osmaustralia.org>>

OpenStreetMap 2014, *Oceania extract*, 4 September 2014, <<http://download.geofabrik.de/osm덈umps>>

PSMA 2010, *Transport & Topography*, May 2010 release, PSMA Australia Limited, Griffith ACT

PSMA 2011, *Transport & Topography*, May 2011 release, PSMA Australia Limited, Griffith ACT

PSMA 2012, *Transport & Topography*, May 2012 release, PSMA Australia Limited, Griffith ACT

PSMA 2013, *Transport & Topography*, May 2013 release, PSMA Australia Limited, Griffith ACT

PSMA 2014, *Transport & Topography*, May 2014 release, PSMA Australia Limited, Griffith ACT

PSMA 2015, *Transport & Topography*, May 2015 release, PSMA Australia Limited, Griffith ACT

Reserve Bank of Australia 2016, *Economic and Financial Statistics, Historical Data*

Tourism Research Australia (TRA) 2016, *Statistical Enquiry Service*, unpublished data

Treasury, 2008, *Budget 2008–09*, Canberra

Treasury, 2016, *Budget 2016–17*, Canberra

Whereis, 2016, <<http://whereis.com>>, viewed on 6 April 2016



www.bitre.gov.au

ISBN 978-1-925401-94-3