



Australian Government

Department of Infrastructure, Transport, Cities and Regional Development

Bureau of Infrastructure, Transport and Regional Economics



Key Australian infrastructure statistics 2019

© Commonwealth of Australia 2019

ISSN: 2207-0974 (Print) • ISSN: 2007-0982 (Online)

ISBN: 978-1-925843-38-5

December 2019/INFRA4065

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/guidelines/index.cfm#brand> and, in particular, the Guidelines on the use of the Commonwealth Coat of Arms publication.

Acknowledgement: The booklet was compiled by Bryan Lee at the Bureau of Infrastructure, Transport and Regional Economics.

An appropriate citation for this report is: Bureau of Infrastructure, Transport and Regional Economics (BITRE), 2019, *Key Australian infrastructure statistics 2019*, Canberra ACT.

Contents

| | |
|--------------------------------------|----|
| About this booklet..... | 1 |
| About BITRE | 1 |
| Facts and figures | 2 |
| Infrastructure and the economy | 6 |
| Transport | 8 |
| Road..... | 8 |
| Rail | 12 |
| Aviation..... | 16 |
| Shipping..... | 20 |
| Safety | 24 |
| Energy..... | 26 |
| Communications | 30 |
| Water..... | 34 |
| Abbreviations | 39 |

About this booklet




Key Australian infrastructure statistics provides a snapshot of a diverse range of data. Statistics are presented for the four main types of economic infrastructure: transport, energy, communications and water. The transport chapter is split by mode and presents data on infrastructure assets and trends in passenger travel, freight movement and safety. The statistics are drawn from the Bureau of Infrastructure, Transport and Regional Economics' Australian Infrastructure Statistics Yearbook 2019.


About BITRE


The Bureau of Infrastructure, Transport and Regional Economics (BITRE) provides economic analysis, research and statistics on infrastructure, transport and regional development issues to inform Australian Government policy development and wider community understanding.


BITRE is part of the Portfolio Coordination and Research Division of the Department of Infrastructure, Transport, Cities and Regional Development.

Facts and figures

- ▶ In 2018–19, **9.4** per cent of  Australia's GDP was accounted for by Australian infrastructure industries.
- ▶ In 2018–19, **49** per cent of infrastructure  construction was in the transport sector.
- ▶ **\$28.7** billion  was spent on road by governments in 2017–18.
- ▶ Australia's total road length was **877 651** kilometres in 2018.

- ▶ In 2018–19, there were **218.9** billion tonne kilometres of freight moved by road  and in 2015–16 there were **413.5** billion tonne kilometres of freight moved by rail.

- ▶ In 2018–19, **168.6** billion passenger kilometres were travelled by car on capital city roads, and **14.4** billion passenger kilometres were travelled on urban rail networks. 

- ▶ There were **32 894** route kilometres of open railway as at December 2019. 

- ▶ There were **1 677** route kilometres of urban railway.

- ▶  In 2018–19, there were **42.1** million passengers on international flights in Australia and **61.0** million passengers on domestic flights.

- ▶ Sydney airport was the busiest in the country with **44.4** million passengers using the facility  in 2018–19.

- ▶ In 2017–18, **8.1** million TEUs were exchanged at Australia's  five principal container ports.

- ▶ **107.8** billion tonne kilometres of freight was moved by coastal shipping in 2016–17.



- ▶ In 2018–19, **25.2** per cent of infrastructure construction was in the



energy sector.

- ▶ In 2017–18, Australia produced **449 938** Kilotonnes of black coal.

- ▶ In 2018–19, **16.0** per cent of infrastructure construction was in the telecommunications sector.



- ▶ In 2018–19, **10.1** per cent of infrastructure construction was spent on water.



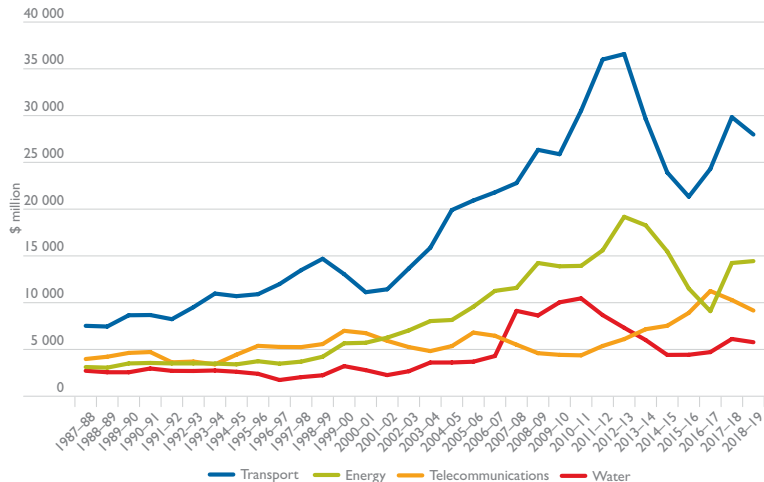
Infrastructure and the economy

Table I Gross value added, major infrastructure industries

| Financial year | Chain volume measures | | | | | Gross Domestic Product | Major infrastructure industries as percentage of GDP |
|----------------|------------------------------------|-------------|--|---------------------------------|--------|------------------------|--|
| | Gross value added, at basic prices | | | | | | |
| | Transport, postal and warehousing | Energy | Information media and telecommunications | Water Supply and waste services | | | |
| | | Electricity | | | Gas | | |
| \$ million | | | | | | | |
| 2014–15 | 79 388 | 24 779 | 1 615 | 39 408 | 16 245 | 1 676 400 | 9.6 |
| 2015–16 | 80 895 | 25 069 | 1 722 | 42 283 | 16 768 | 1 724 123 | 9.7 |
| 2016–17 | 83 053 | 25 031 | 1 730 | 43 883 | 17 132 | 1 764 512 | 9.7 |
| 2017–18 | 83 679 | 25 192 | 1 711 | 45 053 | 17 787 | 1 815 906 | 9.6 |
| 2018–19 | 83 723 | 25 103 | 1 801 | 46 269 | 17 912 | 1 850 997 | 9.4 |

Source: BITRE, Australian Infrastructure Statistics Yearbook 2019, Table I 1.1a.

Figure 1 Infrastructure construction activity, adjusted by chain volume index



Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Figure 1.1.

Transport

Road

Figure 2 National road network

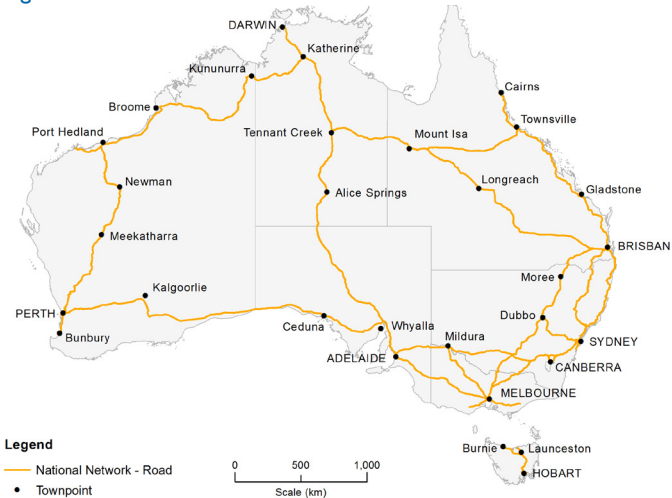


Table 2 Total road expenditure by level of government, 2017–18

| | NSW | VIC | QLD | SA | WA | TAS | NT | ACT | Other | Total |
|-----------------|---|---------|---------|---------|---------|-------|-------|-------|-------|----------|
| | <i>\$ million (constant 2017–18 prices)</i> | | | | | | | | | |
| Commonwealth | 1 974.5 | 649.2 | 1 728.6 | 681.8 | 770.2 | 175.9 | 85.5 | 33.1 | 10.4 | 6 109.2 |
| State/territory | 5 756.1 | 6 035.6 | 2 288.3 | 619.0 | 1 759.0 | 172.8 | 515.0 | 131.9 | na | 17 277.7 |
| Local | 1 119.4 | 1 347.1 | 1 656.1 | 438.0 | 557.8 | 181.6 | - 9.1 | na | na | 5 291.0 |
| All government | 8 850.0 | 8 031.9 | 5 673.0 | 1 738.8 | 3 087.0 | 530.3 | 591.4 | 165.0 | 10.4 | 28 677.8 |

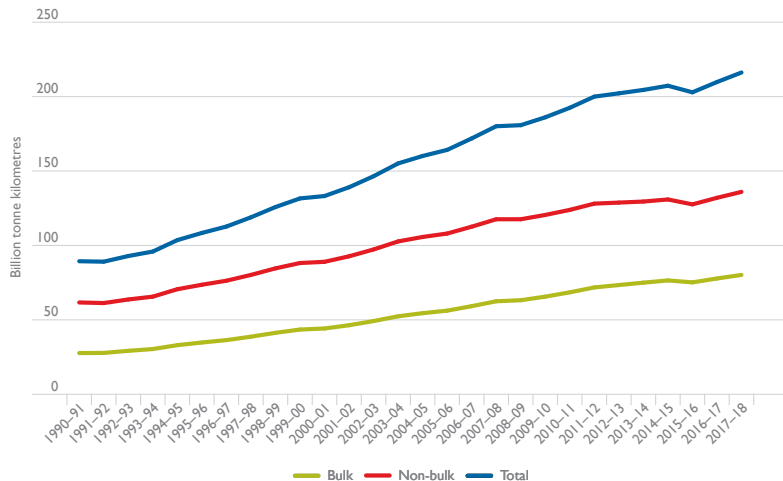
Source: BITRE, Australian Infrastructure Statistics Yearbook 2019, Tables T 1.2a–d.

Table 3 Total road length by state/territory, by road type, 2018

| | NSW | VIC | QLD | SA | WA | TAS | NT | ACT | Other | Australia |
|-----------|-------------------|-----------|-----------|----------|-----------|----------|----------|---------|-------|-----------|
| | <i>Kilometres</i> | | | | | | | | | |
| Urban | 40 310.7 | 37 703.0 | 31 338.9 | 12 527.1 | 19 577.8 | 3 982.4 | 1 299.4 | 3 154.8 | 0.0 | 149 894.1 |
| Non-urban | 168 313.4 | 111 318.4 | 195 292.7 | 80 777.1 | 137 360.6 | 15 913.4 | 18 138.7 | 463.5 | 179.2 | 727 757.0 |
| Total | 208 624.1 | 149 021.4 | 226 631.6 | 93 304.2 | 156 938.4 | 19 895.8 | 19 438.1 | 3 618.3 | 179.2 | 877 651.1 |

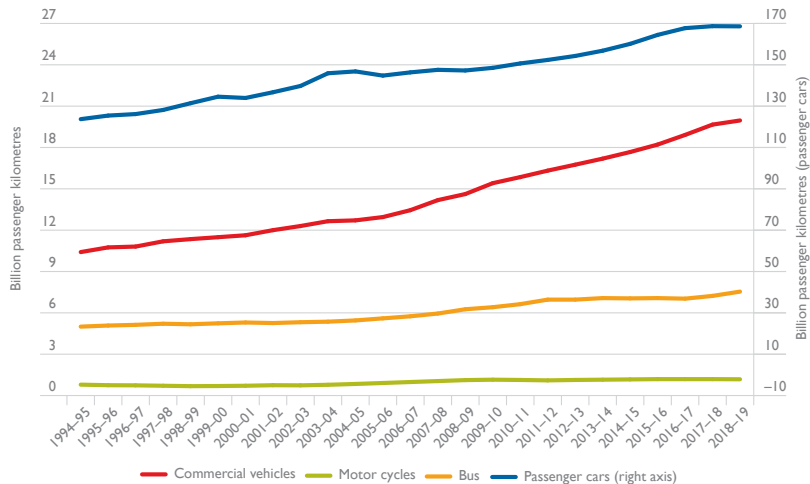
Source: BITRE, Australian Infrastructure Statistics Yearbook 2019, Table T 1.6.

Figure 3 Total bulk and non-bulk domestic freight task, by road



Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table T 2.1a-c.

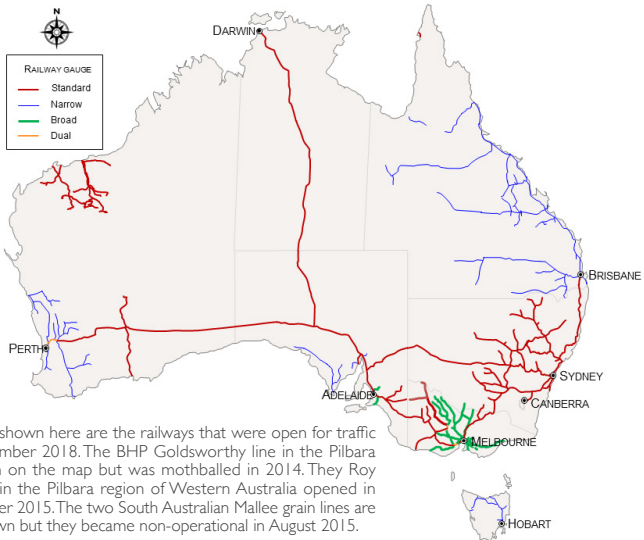
Figure 4 Total metropolitan passenger kilometres travelled by road, capital cities



Source: BITRE, *Australian Infrastructure Statistics Yearbook 2018*, Table T 3.3i.

Rail

Figure 5 Australia's railways, by gauge



Note: The lines shown here are the railways that were open for traffic at September 2018. 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 4 Estimated route-kilometres of open railway, by jurisdiction and gauge as at December 2019

| Jurisdiction | Gauge | | | | | Total |
|--------------------|---------------|---------------|--------------|------------|-----------|---------------|
| | 1 067 | 1 435 | 1 600 | Dual | Other | |
| New South Wales | | 7 128 | 73 | | 1 | 7 202 |
| Victoria | 16 | 1 912 | 2 357 | 32 | | 4 317 |
| Queensland | 8 146 | 117 | | 36 | 4 | 8 303 |
| South Australia | 184 | 2 561 | 253 | 22 | | 3 020 |
| Western Australia | 2 970 | 4 558 | | 207 | | 7 735 |
| Tasmania | 611 | | | | 7 | 618 |
| Northern Territory | 3 | 1 690 | | | | 1 693 |
| ACT | | 6 | | | | 6 |
| Total | 11 930 | 17 972 | 2 683 | 297 | 12 | 32 894 |

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table T 5.2a.

Table 5 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 | na | na | na | 400.0 | 400.0 | 186.0 |
| Melbourne | 220.0 | 28.0 | 181.0 | 429.0 | 370.0 | 221.0 |
| Brisbane | 127.8 | 34.9 | 268.1 | 430.8 | 413.8 | 152.0 |
| Adelaide | 126.0 | 62.0 | 0.0 | 188.0 | 44.0 | 87.0 |
| Perth | 180.0 | 48.0 | 1.0 | 229.0 | 181.0 | 71.0 |

na: not applicable

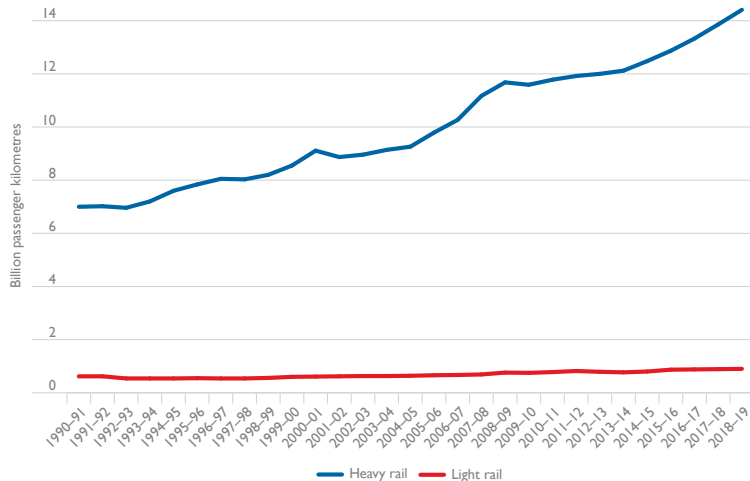
Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table T 5.3.

Table 6 Total bulk and non-bulk domestic freight task, rail

| Financial year | Goods moved (billion tonne kilometres) | | |
|----------------|--|----------|-------|
| | Bulk | Non-bulk | Total |
| 2011–12 | 260.0 | 30.7 | 290.7 |
| 2012–13 | 288.1 | 30.8 | 319.0 |
| 2013–14 | 337.6 | 30.1 | 367.7 |
| 2014–15 | 369.4 | 32.2 | 401.6 |
| 2015–16 | 381.1 | 32.4 | 413.5 |

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table T 2.1a-c.

Figure 6 Total metropolitan passenger kilometres by rail, capital cities



Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table T 3.3i.

Aviation

Figure 7 Australia's top 40 airports in 2018–19, passengers

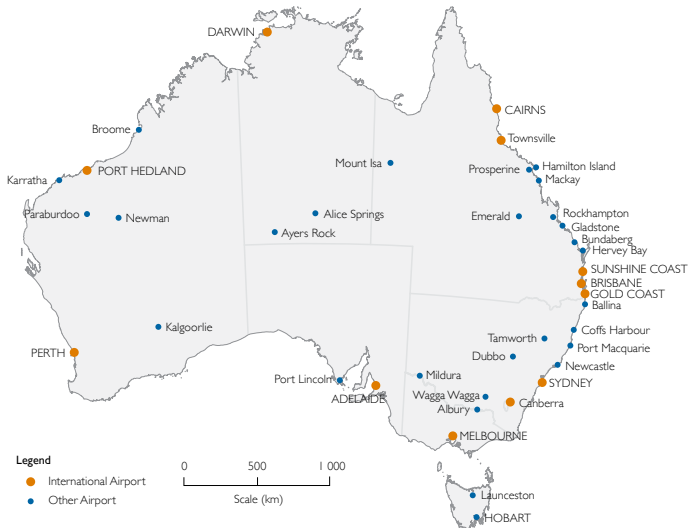


Table 7 International airline activity

| Financial year | Flights | Revenue passengers | Available seats | Load factor | Freight |
|----------------|------------|-----------------------|-----------------|-----------------|--------------------|
| | <i>no.</i> | <i>no.</i> | <i>no.</i> | <i>per cent</i> | <i>'000 tonnes</i> |
| 2014–15 | 175 251 | 33 864 637 | 44 226 790 | 79.0 | 939.8 |
| 2015–16 | 183 206 | 36 228 731 | 46 946 066 | 79.7 | 996.6 |
| 2016–17 | 193 267 | 38 660 946 | 50 599 437 | 79.3 | 1044.8 |
| 2017–18 | 201 374 | 40 619 342 | 52 896 690 | 79.6 | 1150.8 |
| 2018–19 | 205 814 | 42 121 004 | 53 863 238 | 80.4 | 1140.9 |
| 2017–18 | 201 374 | 40 619 342 | 52 896 690 | 79.6 | 1150.8 |

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table T 6.2.

Table 8 Domestic airline activity

| Financial year | Flights | Revenue passengers | Revenue passenger kilometres '000 | Available seats '000 | Available seat kilometres '000 | Domestic load factor per cent | Cargo '000 tonnes |
|----------------|---------|--------------------|--------------------------------------|-------------------------|-----------------------------------|----------------------------------|----------------------|
| 2014–15 | 633 248 | 57 233 927 | 67 439 299 | 76 560 | 88 253 534 | 76.4 | 192 |
| 2015–16 | 640 619 | 58 438 418 | 68 840 249 | 77 212 | 88 892 186 | 77.4 | 195 |
| 2016–17 | 641 564 | 59 300 109 | 69 483 706 | 77 250 | 88 672 078 | 78.4 | 225 |
| 2017–18 | 634 355 | 60 749 890 | 70 861 416 | 77 487 | 88 517 037 | 80.1 | 231 |
| 2018–19 | 633 418 | 60 953 165 | 71 063 513 | 77 476 | 88 497 935 | 80.3 | 236 |
| 2017–18 | 635 098 | 60 764 755 | 70 868 453 | 77 510 | 88 527 555 | 80.1 | 230 |

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table T 6.3.

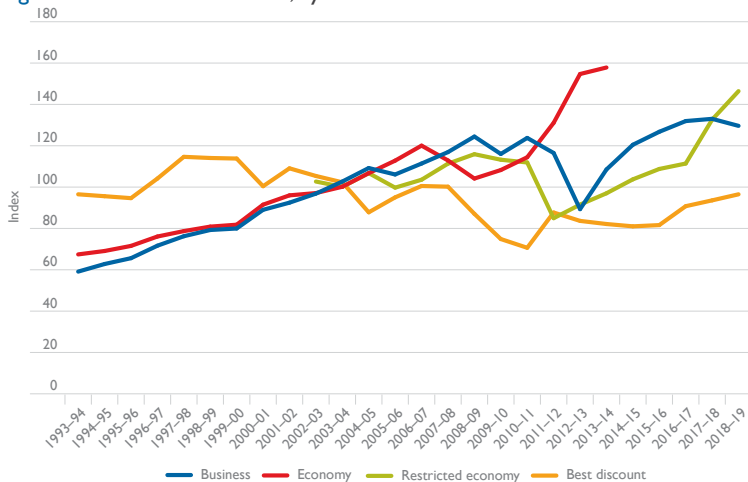
Table 9 Activity at capital city airports—revenue passengers (thousand)

| Financial year | Sydney | Melbourne | Brisbane | Perth | Adelaide | Canberra | Darwin | Hobart |
|----------------|--------|-----------|----------|--------|----------|----------|--------|--------|
| 2014–15 | 39 022 | 31 936 | 21 918 | 12 730 | 7 670 | 2 805 | 2 186 | 2 057 |
| 2015–16 | 41 105 | 33 705 | 22 320 | 12 556 | 7 778 | 2 831 | 2 313 | 2 041 |
| 2016–17 | 42 614 | 34 878 | 22 653 | 12 450 | 7 999 | 3 013 | 2 441 | 2 093 |
| 2017–18 | 44 035 | 36 319 | 23 238 | 12 419 | 8 274 | 3 179 | 2 596 | 2 030 |
| 2018–19 | 44 376 | 37 059 | 23 626 | 12 406 | 8 368 | 3 218 | 2 726 | 1 951 |
| 2017–18 | 44 035 | 36 319 | 23 238 | 12 433 | 8 274 | 3 179 | 3 179 | 2 030 |

Note: Revenue passengers are fare paying passengers.

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table T 6.4a.

Figure 8 BITRE airfare index, by ticket class



Note: Base of index: July 2003 = 100, airfare Indices are not adjusted by ABS Consumer Price Index. Restricted economy index begins 2002-03. *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.

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table T 6.6.

Shipping

Figure 9 Principal Australian ports, by commodity

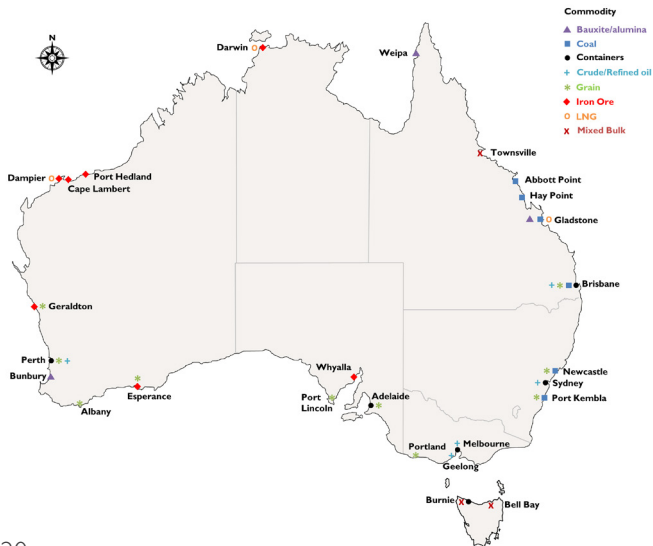


Table 10 Number of port calls made by ships involved in coastal or international voyages, by major ports

| Financial year | Melbourne | Brisbane | Sydney | Fremantle | Newcastle | Gladstone | Dampier | Port Hedland |
|----------------|-----------|----------|--------|-----------|-----------|-----------|---------|--------------|
| 2010–11 | 3 274 | 2 381 | 1 703 | 1 604 | 1 774 | 1 425 | 1 543 | 1 312 |
| 2011–12 | 3 238 | 2 463 | 1 697 | 1 700 | 1 903 | 1 566 | 1 589 | 1 672 |
| 2012–13 | 3 313 | 2 473 | 1 781 | 1 817 | 2 119 | 1 634 | 1 746 | 1 913 |
| 2013–14 | 3 209 | 2 482 | 1 792 | 1 791 | 2 282 | 1 731 | 1 871 | 2 383 |
| 2014–15 | 3 109 | 2 499 | 1 741 | 1 635 | 2 390 | 1 703 | 1 874 | 2 717 |
| 2015–16 | 3 190 | 2 357 | 1 726 | 1 705 | 2 220 | 1 917 | 1 921 | 2 710 |
| 2016–17 | 3 328 | 2 730 | 1 793 | 1 764 | 2 322 | 2 132 | 1 791 | 2 869 |
| 2017–18 | 3 422 | 2 573 | 1 676 | 1 724 | 2 282 | 2 054 | 1 699 | 2 999 |
| 2018–19 | 3 270 | 2 625 | 1 743 | 1 793 | 2 257 | 2 164 | 1 755 | 2 970 |

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table T 7.3b.

Table 11 Cargo loaded (including exports) and discharged (including imports), by capital city ports

| | Financial year | Sydney | Melbourne | Brisbane | Adelaide | Perth | Hobart | Darwin |
|-----------------------|----------------|--------|-----------|----------|----------|-------|--------|--------|
| <i>million tonnes</i> | | | | | | | | |
| Loaded | 2014–15 | 5.9 | 14.1 | 16.0 | 7.1 | 20.6 | 0.6 | 5.6 |
| | 2015–16 | 6.1 | 13.3 | 13.6 | 6.7 | 20.1 | 0.8 | 4.8 |
| | 2016–17 | 7.0 | 14.9 | 15.2 | 8.5 | 20.8 | 0.7 | 4.1 |
| Discharged | 2014–15 | 20.0 | 19.4 | 17.9 | 7.2 | 15.2 | 1.0 | 6.9 |
| | 2015–16 | 20.4 | 19.8 | 16.1 | 6.8 | 14.8 | 1.2 | 7.1 |
| | 2016–17 | 21.0 | 20.9 | 17.2 | 7.1 | 14.6 | 0.9 | 6.0 |

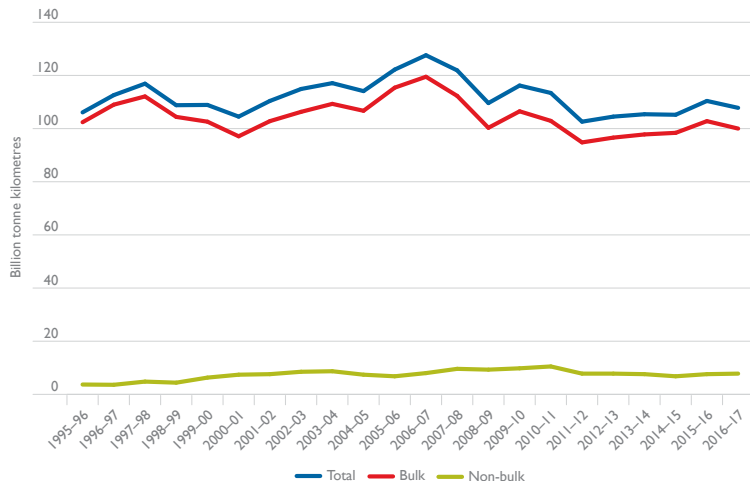
Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table T 7.6 a-b.

Table 12 Containers exchanged, selected Australian ports

| Financial year | Melbourne | Sydney | Brisbane | Fremantle | Adelaide | Five ports |
|---|-----------|-----------|-----------|-----------|----------|------------|
| <i>twenty foot equivalent units (TEU) exchanged</i> | | | | | | |
| 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 |
| 2015–16 | 2 638 536 | 2 323 722 | 1 147 173 | 715 107 | 389 684 | 7 214 222 |
| 2016–17 | 2 697 068 | 2 431 013 | 1 224 829 | 715 933 | 395 276 | 7 464 119 |
| 2017–18 | 2 929 338 | 2 613 361 | 1 349 176 | 768 246 | 407 059 | 8 067 180 |

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table T 7.7.

Figure 10 Total bulk and non-bulk domestic freight task, coastal shipping



Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table T 2.1 a-c.

Safety

Table 13 Number of fatalities by transport mode

| Year | Road | Rail ^a | Marine ^b | Aviation |
|------|-------|-------------------|---------------------|----------|
| 2004 | 1 583 | 33 | 50 | 34 |
| 2005 | 1 627 | 35 | 41 | 45 |
| 2006 | 1 598 | 39 | 49 | 40 |
| 2007 | 1 603 | 42 | 53 | 44 |
| 2008 | 1 437 | 31 | 41 | 43 |
| 2009 | 1 490 | 28 | 53 | 25 |
| 2010 | 1 350 | 29 | 2 | 24 |
| 2011 | 1 277 | 33 | 6 | 39 |
| 2012 | 1 299 | 20 | 6 | 39 |
| 2013 | 1 185 | 7 | 6 | 46 |
| 2014 | 1 150 | | 4 | 28 |
| 2015 | 1 205 | | 2 | 31 |
| 2016 | 1 295 | | 5 | 21 |
| 2017 | 1 223 | | 5 | 40 |
| 2018 | 1 136 | 9 | 2 | 20 |

Note: Data not available for missing years.

^a 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.

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

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table T 8.1b.

Table 14 Fatality rate by transport mode

| Calendar year | Road | Rail | Marine | Aviation |
|---------------|--------------------------------------|------|--------|----------|
| | <i>deaths per 100 000 population</i> | | | |
| 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 | 6.13 | 0.13 | 0.01 | 0.11 |
| 2011 | 5.72 | 0.15 | 0.03 | 0.17 |
| 2012 | 5.72 | 0.09 | 0.03 | 0.17 |
| 2013 | 5.13 | 0.03 | 0.03 | 0.20 |
| 2014 | 4.90 | | 0.02 | 0.12 |
| 2015 | 5.07 | | 0.01 | 0.13 |
| 2016 | 5.35 | | 0.02 | 0.09 |
| 2017 | 4.97 | | 0.02 | 0.16 |
| 2018 | 4.55 | 0.04 | 0.01 | 0.08 |

Note: Data are not readily available for missing years.

a 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.

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

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table T 8.2a.

Energy

Table 15 Flow of new infrastructure—total value of energy infrastructure engineering construction work done, adjusted by chain volume index, 2016-17 prices

| Financial year | Electricity generation, transmission and distribution | Pipelines | Energy infrastructure engineering construction work done | Energy percentage of total |
|----------------|---|-----------|--|----------------------------|
| | \$ million | | | per cent |
| 2014-15 | 9 189.6 | 6 287.1 | 15 476.7 | 30.1 |
| 2015-16 | 7 824.3 | 3 686.8 | 11 511.1 | 24.9 |
| 2016-17 | 7 997.9 | 1 095.5 | 9 093.4 | 18.4 |
| 2017-18 | 12 357.0 | 1 883.1 | 14 240.1 | 23.5 |
| 2018-19 | 12 782.1 | 1 662.4 | 14 444.5 | 25.2 |

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table E 1.1 d.

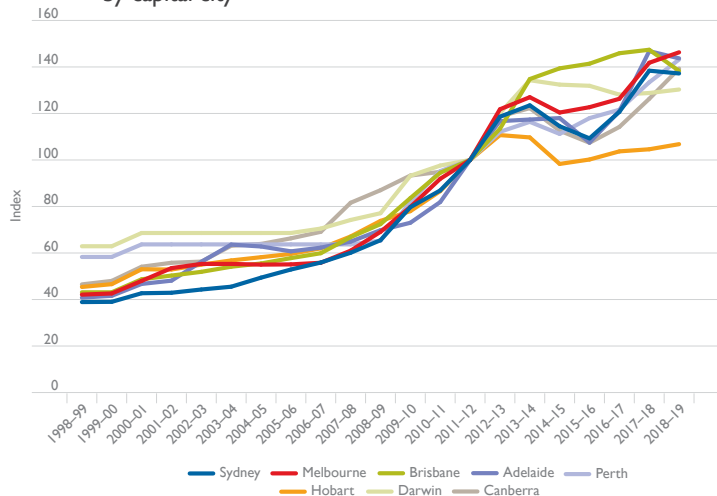
Table 16 Energy production and trade—Australian energy production (primary fuels), by fuel type

| Financial year | Black coal | Brown coal | Bagasse and wood | Crude oil, NGL and naturally occurring LPG | Natural gas | Ethane | Hydro-electricity | Solar hot-water | Uranium | Wind | Solar PV |
|----------------|------------|------------|------------------|--|-------------|-------------|-------------------|-----------------|---------|----------------|----------------|
| | kilotonnes | kilotonnes | kilotonnes | megalitres | giga-litres | giga-litres | gigawatt hours | peta-joules | tonnes | gigawatt hours | gigawatt hours |
| 2013–14 | 429 975 | 60 606 | 15 143 | 23 488 | 64 767 | 361 | 18 421 | 13 | 5 548 | 10 252 | 4 416 |
| 2014–15 | 444 365 | 66 895 | 16 417 | 22 031 | 68 073 | 345 | 13 445 | 15 | | 11 467 | 5 531 |
| 2015–16 | 437 316 | 60 639 | 16 584 | 21 107 | 83 170 | na | 15 318 | 15 | | 12 200 | 6 838 |
| 2016–17 | 443 002 | 56 719 | 17 512 | 18 824 | 106 137 | na | 16 285 | 16 | | 12 597 | 8 072 |
| 2017–18 | 449 938 | 45 956 | 16 241 | 18 210 | 121 286 | na | 16 021 | 17 | | 15 174 | 9 930 |

Note: Data are not readily available for missing years.

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table E 2.1.

Figure 11 Electricity usage—Price index for residential electricity supply, by capital city



Note: Base of index is 2011-12.

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table E 2.7.

Table 17 Energy emission—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 oil | Liquified petroleum gas (LPG) | Coal gas | Natural gas | Wood and wood waste | Gas and biomass |
| <i>gigagrams of CO2 equivalent</i> | | | | | | | | | | |
| 2013 | 97 898.0 | 59 584.3 | | 80.4 | 2 489.8 | | 4 191.3 | 22 391.2 | 27.2 | 72.1 |
| 2014 | 92 436.6 | 57 162.3 | | 492.3 | 2 810.9 | 22.6 | 3 051.5 | 24 203.2 | 29.9 | 87.7 |
| 2015 | 94 096.5 | 61 993.0 | | 170.5 | 3 859.3 | 4.7 | 4 141.8 | 24 169.7 | 32.5 | 89.1 |
| 2016 | 100 605.5 | 60 198.8 | | 242.4 | 3 493.2 | 1.2 | 3 253.0 | 26 506.9 | 38.1 | 89.2 |
| 2017 | 103 330.8 | 53 858.6 | | 429.0 | 3 445.1 | 0.0 | 1 860.7 | 26 445.8 | 43.3 | 85.9 |

Note: For years where data are missing, emissions are either not estimated, included elsewhere or are not occurring.

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table E 3.4.

Communications

Table 18 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 | Total major infrastructure engineering construction | Telecommunications percentage of total |
|----------------|---|--|---------------|--|---|
| | \$ million | | | | per cent |
| 2014–15 | 4 801.1 | 2 723.1 | 1.9 | 7 526.2 | 14.7 |
| 2015–16 | 5 064.1 | 3 825.9 | 11.9 | 8 901.9 | 19.3 |
| 2016–17 | 6 210.5 | 5 024.7 | 6.1 | 11 241.2 | 22.8 |
| 2017–18 | 5 567.0 | 4 723.8 | 10.4 | 10 301.2 | 17.0 |
| 2018–19 | 4 058.4 | 5 134.3 | 7.3 | 9 200.0 | 16.0 |

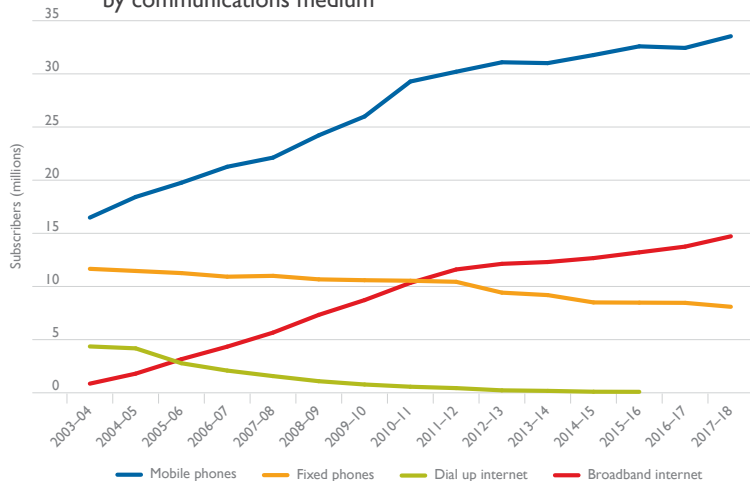
Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table C.1.1.

Table 19 Investment in information technology—Information media and telecommunications industry investment in information technology gross fixed capital formation, 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 information media and telecommunications industry | | |
| | \$ million | | | | | per cent |
| 2014–15 | 134 | 1 149 | 2 080 | 3 363 | 29 264 | 11.49 |
| 2015–16 | 218 | 1 459 | 2 364 | 4 041 | 29 894 | 13.52 |
| 2016–17 | 227 | 1 442 | 2 794 | 4 463 | 32 172 | 13.87 |
| 2017–18 | 142 | 1 158 | 3 474 | 4 774 | 35 887 | 13.30 |
| 2018–19 | 196 | 1 525 | 3 672 | 5 393 | 38 922 | 13.86 |

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table C 2.1.

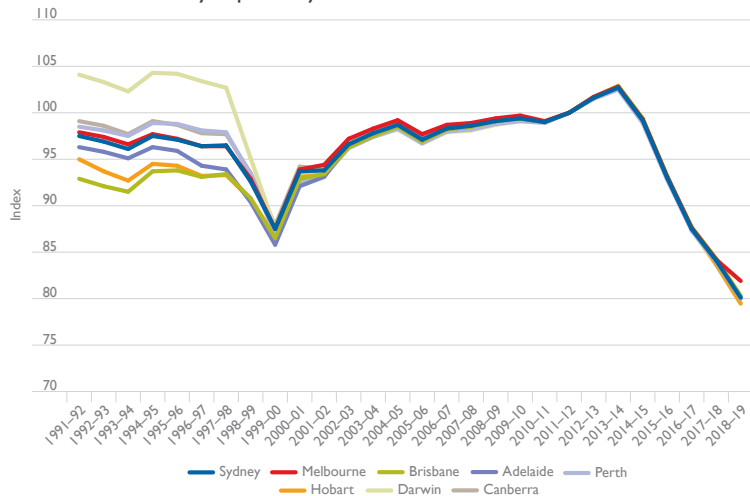
Figure 12 Communications subscribers—number of subscribers, by communications medium



Note: From 2005-06 to 2007-08 internet subscriptions reflect data from ISPs with more than 10 000 active subscribers. Internet subscriptions for 2008-09 and 2010-11 reflect data from ISPs with more than 1000 active subscribers. Internet subscriptions for 2009-10 and years prior to 2005-06 reflect data from all ISPs.

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Figure C1.

Figure 13 Communications prices—consumer price index, telecommunications services by capital city



Note: Base year of index is 2011–12.

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table C 3.5.

Water

Table 20 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 |
|----------------|--------------------------|-----------------------|---|---------------------------|
| | \$ million | | | per cent |
| 2014–15 | 2 368.0 | 2 047.8 | 4 415.9 | 8.6 |
| 2015–16 | 2 029.2 | 2 400.7 | 4 429.9 | 9.6 |
| 2016–17 | 2 522.7 | 2 192.6 | 4 715.3 | 9.6 |
| 2017–18 | 3 682.1 | 2 437.9 | 6 120.0 | 10.1 |
| 2018–19 | 3 259.0 | 2 513.7 | 5 772.7 | 10.1 |

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table W 1.1.d.

Table 21 Infrastructure capacity—Major Australian water storage dams

| End of financial year | Storage capacity (accessible capacity) | Water held in dams at end of year (accessible volume) | Percentage of capacity used | |
|-----------------------|--|---|-----------------------------|-----------------|
| | | | <i>gigalitres</i> | <i>per cent</i> |
| 2014–15 | 80 962 | 47 688 | | 58.9 |
| 2015–16 | 80 962 | 43 078 | | 53.2 |
| 2016–17 | 80 860 | 54 053 | | 66.8 |
| 2017–18 | 80 824 | 47 869 | | 59.2 |
| 2018–19 | 80 824 | 37 966 | | 47.0 |

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table W 1.2.

Table 22 Volume of water sourced in each urban centre

| Financial year | Surface Water | Groundwater | Desalination | Recycled water | Total |
|------------------------------|---------------|-------------|--------------|----------------|---------|
| <i>megalitres</i> | | | | | |
| Adelaide | | | | | |
| 2016–17 | 131 741 | 0 | 4 112 | 21 316 | 157 169 |
| 2017–18 | 143 284 | 0 | 4 268 | 26 564 | 174 116 |
| Canberra | | | | | |
| 2016–17 | 49 916 | 0 | 0 | 33 210 | 83 126 |
| 2017–18 | 52 157 | 0 | 0 | 30 296 | 82 453 |
| Darwin | | | | | |
| 2016–17 | 34 818 | 5 396 | 0 | 541 | 40 755 |
| 2017–18 | 38 292 | 4 449 | 0 | 451 | 43 192 |
| Melbourne | | | | | |
| 2016–17 | 428 407 | 0 | 46 209 | 32 442 | 507 058 |
| 2017–18 | 448 864 | 0 | 14 972 | 42 085 | 505 921 |
| Perth | | | | | |
| 2016–17 | 0 | 139 598 | 149 823 | 9 568 | 298 989 |
| 2017–18 | 1 135 | 131 948 | 148 905 | 12 100 | 378 584 |
| South East Queensland | | | | | |
| 2016–17 | 299 372 | 7 686 | 1 562 | 14 755 | 323 375 |
| 2017–18 | 325 370 | 13 368 | 2 803 | 13 056 | 354 597 |
| Sydney | | | | | |
| 2016–17 | 558 226 | 0 | 0 | 38 340 | 596 566 |
| 2017–18 | 601 069 | 0 | 0 | 42 833 | 643 902 |

Source: BITRE, *Australian infrastructure Statistics Yearbook 2019*, Table W 2.2.

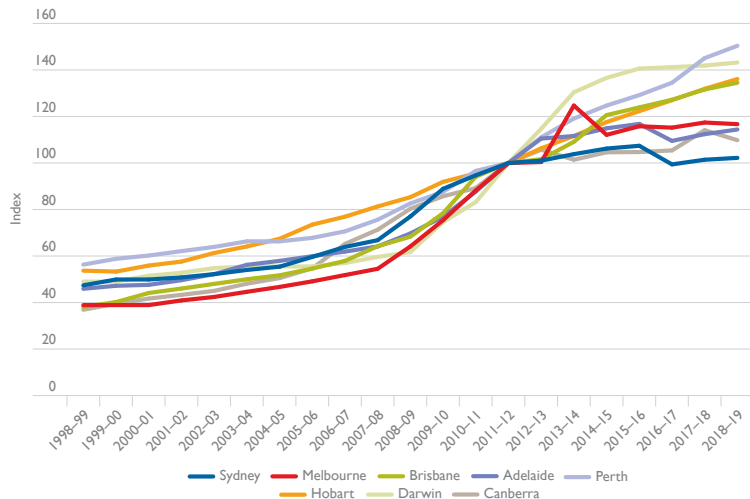
Table 23 Rural water use—water consumption by agricultural activity,
by state/territory—total

| Financial year | NSW | VIC | QLD | SA | WA | TAS | NT | Australia |
|----------------|-------------------|-----------|-----------|---------|---------|---------|--------|------------|
| | <i>megalitres</i> | | | | | | | |
| 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 |
| 2015–16 | 2 805 693 | 2 094 969 | 2 094 969 | 858 757 | 372 616 | 332 145 | 47 019 | 9 157 291 |
| 2016–17 | 4 020 792 | 1 947 161 | 2 664 295 | 610 515 | 363 839 | 267 231 | 95 165 | 9 968 998 |
| 2017–18 | 4 126 031 | 2 320 089 | 2 683 316 | 659 763 | 310 458 | 299 448 | 92 147 | 10 491 253 |

Note: NSW includes the ACT.

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table W 3.1.c.

Figure 14 Urban water prices—consumer price index, water and sewerage services by capital city



Note: Base year of index is 2011–12.

Source: BITRE, *Australian Infrastructure Statistics Yearbook 2019*, Table W 2.3.

Abbreviations

| | |
|-------|--|
| ABS | Australian Bureau of Statistics |
| ACT | Australian Capital Territory |
| BITRE | Bureau of Infrastructure, Transport and Regional Economics |
| GDP | Gross Domestic Product |
| LNG | Liquefied Natural Gas |
| Na | Not Applicable |
| NGL | Natural Gas Liquids |
| No. | Number |
| NSW | New South Wales |
| NT | Northern Territory |
| QLD | Queensland |
| SA | South Australia |
| TAS | Tasmania |
| TEU | Twenty foot equivalent units |
| VIC | Victoria |
| WA | Western Australia |

Contact

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

Telephone:

General enquiries: +61 2 6274 7818

Publication requests: + 61 2 6274 7210

Fax: + 61 2 6274 6855

Email: bitre@infrastructure.gov.au