



Australian Government

**Department of Industry, Science,
Energy and Resources**

Australian Energy Statistics, Table O

Australian electricity generation, by state and territory, by fuel type, physical units

Citation: Department of Industry, Science, Energy and Resources, Australian Energy Statistics, Table O, April 2022

Australian Energy Statistics, Table O

Method note:

Table O provides the official estimates of total electricity generation in Australia. Estimates are derived from multiple data sources including:

- Australian Energy Market Operator, which includes the National Electricity Market and the Western Australian Wholesale Electricity Market
- Clean Energy Regulator, which includes data collected under National Greenhouse and Energy Reporting Scheme and the Renewable Energy Target

These estimates are subject to change in the full release of the 2020-21 Australian Energy Statistics, which will be released later in 2022.

These statistics cover all electricity generation in Australia. This includes by power plants, and by businesses and households for their own use, in all states and territories. This also includes both on and off grid generation.

Calendar year data includes some estimates based on financial year data where detailed calendar year data is not available. For example for industrial generation and some multi-fuel generation.

Changes in this issue

The black coal series in Victoria has been amalgamated with the brown coal series for confidentiality reasons. The bagasse, wood series in Western Australia has been amalgamated with the biogas series for confidentiality reasons.

Australian Energy Statistics, Table O

Australian electricity generation, by fuel type, physical units

AUS

[Financial year](#)
[Calendar year](#)

NSW

[Financial year](#)
[Calendar year](#)

VIC

[Financial year](#)
[Calendar year](#)

QLD

[Financial year](#)
[Calendar year](#)

WA

[Financial year](#)
[Calendar year](#)

SA

[Financial year](#)
[Calendar year](#)

TAS

[Financial year](#)
[Calendar year](#)

NT

[Financial year](#)
[Calendar year](#)

State Summary

[Financial year 2020-21](#)
[Calendar year 2021](#)

Bioenergy breakdown

[Financial year](#)

Industry breakdown

[Industry, financial year](#)
[Industry, by state, financial year](#)

Table O2.1

Electricity generation in New South Wales, by fuel type, physical units, financial year

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels													
Black coal	67,650.3	64,398.6	60,732.2	60,453.7	56,798.6	55,819.5	52,562.2	55,334.5	55,967.1	57,022.2	57,734.9	53,566.7	50,790.8
Brown coal													
Natural gas	2,445.1	4,681.3	4,742.7	4,212.1	5,168.7	5,528.3	4,528.4	4,628.6	3,330.8	3,045.8	2,360.3	2,870.9	1,903.2
Oil products	24.7	5.6	61.4	42.1	190.9	170.7	284.3	289.5	321.6	324.4	322.6	337.3	340.6
Other ^a	336.6	493.6	266.1										
Total non-renewable	70,456.7	69,579.1	65,802.4	64,707.9	62,158.2	61,518.5	57,374.9	60,252.6	59,619.5	60,392.3	60,417.8	56,774.9	53,034.6
Renewable fuels													
Bagasse, wood	291.3	295.3	253.3	413.6	425.4	461.7	551.1	601.7	696.5	765.0	758.8	716.2	686.1
Biogas	383.4	385.8	360.0	408.7	413.4	420.6	472.1	444.6	406.2	424.4	418.8	387.4	411.0
Wind	41.3	432.5	530.1	697.6	832.6	899.2	1,376.0	1,898.8	1,872.0	2,431.6	3,739.7	4,574.3	4,805.9
Hydro	1,497.0	2,689.5	2,474.9	2,446.9	3,298.1	2,721.1	1,771.0	3,170.2	3,290.6	2,915.5	2,160.3	2,110.1	2,964.2
Large-scale solar PV						10.6	60.2	399.5	567.6	700.0	1,348.2	2,084.6	3,368.0
Small-scale solar PV	36.3	119.2	526.3	657.7	857.6	964.9	1,211.2	1,461.9	1,706.8	2,095.8	2,717.1	3,417.3	4,892.9
Geothermal													
Total renewable	2,249.3	3,922.3	4,144.6	4,624.5	5,827.1	5,478.1	5,441.6	7,976.8	8,539.7	9,332.3	11,143.0	13,289.8	17,128.2
Of which ACT									165.5	223.9	254.9	279.0	341.2
Total	72,706.0	73,501.4	69,947.0	69,332.4	67,985.3	66,996.6	62,816.4	68,229.4	68,159.2	69,724.6	71,560.8	70,064.7	70,162.8

Totals may not add due to rounding.

^a Includes multi-fuel fired power plants. This series was discontinued in 2013-14 and multi-fuel allocated to specific fuel types.

Table O3.1

Electricity generation in Victoria, by fuel type, physical units, financial year

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels													
Black coal													
Brown coal	52,094.0	51,541.7	51,066.5	52,059.7	45,317.6	43,977.7	48,336.8	46,234.1	43,594.1	36,021.4	34,495.2	33,661.5	34,060.0
Natural gas	1,451.9	1,697.9	1,289.8	1,142.5	3,247.7	3,239.3	2,390.9	1,892.2	2,658.7	3,829.9	3,334.0	3,117.0	1,956.9
Oil products	20.4	1.1	38.2	4.0	10.7	145.8	156.0	70.6	109.3	178.0	204.7	202.0	179.1
Other ^a	61.1	115.9	114.5										
Total non-renewable	53,627.4	53,356.6	52,509.0	53,206.2	48,576.0	47,362.8	50,883.7	48,197.0	46,362.1	40,029.3	38,033.9	36,980.6	36,196.0
Renewable fuels													
Bagasse, wood ^b				187.1	171.1	188.8	252.0	235.4	263.4	241.0	235.5	243.8	229.7
Biogas ^b	292.0	303.4	339.6	672.2	674.0	698.1	420.3	512.3	431.1	460.2	497.6	535.7	499.3
Wind	573.0	1 406.0	1 434.4	1 416.2	2,005.1	2,771.9	3,067.8	3,341.8	3,560.9	4,303.9	4,863.7	5,596.2	7 080.6
Hydro	2,234.5	1,975.0	3,910.6	2,393.3	3,293.8	2,595.0	2,513.6	3,228.5	3,673.3	2,803.1	2,702.8	2,310.8	2,852.0
Large-scale solar PV						4.4	9.1	11.5	13.8	39.4	462.5	872.5	1,455.5
Small-scale solar PV	24.1	66.2	205.5	378.7	580.1	674.2	874.8	1,056.1	1,231.7	1,481.2	1,900.0	2,457.3	3 176.4
Geothermal													
Total renewable	3,123.6	3,750.6	5,890.1	5,047.5	6,724.1	6,932.4	7,137.5	8,385.6	9,174.1	9,328.8	10,662.0	12,016.3	15,293.5
Total	56,751.0	57,107.2	58,399.1	58,253.7	55,300.1	54,295.2	58,021.2	56,582.5	55,536.2	49,358.1	48,696.0	48,996.9	51,489.5

Totals may not add due to rounding.

^a Includes multi-fuel fired power plants. This series was discontinued in 2013-14 and multi-fuel allocated to specific fuel types.

^b In Victoria, solid biomass generation for 2011-12 is not separately identified for confidentiality reasons and is included in biogas generation.

^c Black coal generation is included with brown coal generation for confidentiality reasons.

Table O4.1

Electricity generation in Queensland, by fuel type, physical units, financial year

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels													
Black coal	50,882.2	49,713.7	45,864.3	45,417.3	44,415.6	40,260.7	44,553.8	48,015.8	51,042.7	53,635.3	52,120.6	48,568.9	46,248.2
Brown coal													
Natural gas	9,257.2	12,020.6	14,595.3	15,303.4	13,909.5	15,454.3	18,248.5	13,816.9	12,236.6	11,045.5	9,933.9	11,214.1	10,324.4
Oil products	711.4	370.7	373.7	306.0	1,042.6	959.5	1,197.2	1,199.1	1,215.9	1,047.7	1,000.6	983.7	1,034.9
Other ^a	691.8	1 025.9	1 038.7	15.7	54.2								
Total non-renewable	61,542.6	63,130.9	61,872.0	61,042.4	59,421.9	56,674.5	63,999.5	63,031.9	64,495.2	65,728.5	63,055.1	60,766.8	57,607.5
Renewable fuels													
Bagasse, wood	1,472.1	1,466.5	823.7	1,005.6	1,117.8	1,403.0	1,550.3	1,656.3	1,291.8	1,252.9	1,157.9	1,029.8	1,076.4
Biogas	116.4	81.5	97.0	119.2	121.4	82.8	91.1	115.5	118.3	126.5	175.1	189.2	198.5
Wind	27.3	30.9	27.3	27.7	30.7	33.7	32.5	28.4	29.0	30.3	399.1	927.9	1 826.0
Hydro	820.2	572.8	965.6	723.2	684.1	820.9	649.1	491.7	672.2	646.1	1,057.3	634.6	950.2
Large-scale solar PV						4.0	5.9	7.3	34.1	171.5	1,491.7	3,334.5	3,395.8
Small-scale solar PV	50.8	121.3	400.6	760.3	1 310.2	1 460.6	1 788.0	2 055.9	2 335.9	2 760.9	3 330.2	4 120.2	5 160.9
Geothermal	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.2	0.5				na
Total renewable	2,487.3	2,273.5	2,314.7	2,636.5	3,264.7	3,805.5	4,117.5	4,355.3	4,481.7	4,988.1	7,611.4	10,236.2	12,607.9
Total	64,029.9	65,404.4	64,186.7	63,678.9	62,686.6	60,480.0	68,117.0	67,387.1	68,976.8	70,716.6	70,666.5	71,003.0	70,215.4

Totals may not add due to rounding.

na not available.

^a Includes multi-fuel fired power plants. This series was discontinued in 2013-14 and multi-fuel allocated to specific fuel types.

Table O5.1

Electricity generation in Western Australia, by fuel type, physical units, financial year

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels													
Black coal	8,738.0	9,612.2	10,352.3	10,783.3	10,276.9	10,885.3	10,523.4	10,912.7	11,226.2	11,031.9	9,954.0	9,725.2	9,212.4
Brown coal													
Natural gas	14,556.1	16,006.3	18,115.7	17,538.3	17,645.1	20,880.0	20,412.8	21,899.6	22,941.4	24,789.1	25,778.3	26,918.6	25,680.3
Oil products	1,464.4	1,373.4	1,413.8	1,171.2	2,045.0	2,486.1	4,223.5	3,347.4	2,883.5	2,166.5	2,417.9	2,301.7	2,458.3
Other ^a	2 153.0	1 017.8	1 029.4	1 072.4	1 855.8								
Total non-renewable	26,911.5	28,009.7	30,911.2	30,565.2	31,822.8	34,251.4	35,159.7	36,159.7	37,051.0	37,987.5	38,150.1	38,945.5	37,351.0
Renewable fuels													
Bagasse, wood													
Biogas	119.6	121.2	111.7	125.7	108.3	124.0	126.9	94.6	183.2	141.1	131.3	112.4	110.8
Wind	675.1	664.0	719.3	1 278.7	1 300.2	1 578.8	1 643.2	1 476.5	1 616.7	1 587.0	1 851.2	2 122.5	3 140.5
Hydro	na	na	na		221.3	205.4	206.1	217.0	212.6	220.8	217.0	205.5	128.0
Large-scale solar PV						24.1	23.9	28.3	34.3	45.6	74.5	174.7	486.6
Small-scale solar PV	18.7	57.5	198.1	331.4	449.5	495.8	622.1	760.8	941.1	1,196.4	1,486.7	1,835.3	2 298.5
Geothermal													
Total renewable	813.4	842.7	1,029.0	1,735.8	2,079.3	2,428.2	2,622.2	2,577.2	2,987.9	3,190.9	3,760.7	4,450.5	6,164.3
Total	27,724.9	28,852.4	31,940.2	32,301.0	33,902.1	36,679.6	37,781.9	38,736.8	40,039.0	41,178.4	41,910.8	43,396.0	43,515.3

Totals may not add due to rounding.

na not available.

^a Includes multi-fuel fired power plants. This series was discontinued in 2013-14 and multi-fuel allocated to specific fuel types.

^b Bagasse, wood generation is included with biogas generation for confidentiality reasons.

Table O6.1

Electricity generation in South Australia, by fuel type, physical units, financial year

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels													
Black coal													
Brown coal	4,887.4	4,526.6	4,231.6	3,008.0	2,237.5	2,098.5	2,633.6	2,593.7					
Natural gas	7,371.4	6,937.0	6,693.1	6,703.2	7,060.9	5,998.1	5,003.8	4,956.0	6,028.2	7,753.2	7,245.8	6,614.0	5,589.0
Oil products	63.2	163.9	89.3	97.8	141.0	106.9	197.3	136.2	183.1	132.8	163.0	159.4	126.7
Other ^a	337.4	335.4	266.9		8.5								
Total non-renewable	12,659.4	11,962.9	11,280.9	9,809.0	9,447.9	8,203.5	7,834.7	7,685.9	6,211.3	7,886.0	7,408.8	6,773.4	5,715.7
Renewable fuels													
Bagasse, wood													
Biogas	86.1	85.5	77.8	70.6	72.6	80.9	84.9	94.6	78.0	74.0	85.0	97.4	94.6
Wind	2 020.2	2 029.0	2 890.3	3 126.5	3 313.5	4 150.3	4 291.9	4 398.0	4 413.7	5 673.9	5 711.0	5 812.9	5 867.1
Hydro	4.1	4.2	4.1	4.4	5.9	5.9	10.8	6.5	3.5	6.4	8.8	10.3	3.5
Large-scale solar PV						1.4	1.7	2.0	3.9	20.0	321.3	627.8	884.3
Small-scale solar PV	23.4	50.7	182.8	398.1	558.6	677.9	802.2	895.5	1 000.8	1 163.4	1 402.5	1 717.6	2 128.2
Geothermal													
Total renewable	2,133.8	2,169.4	3,155.0	3,599.6	3,950.6	4,916.5	5,191.6	5,396.6	5,499.9	6,937.6	7,528.7	8,266.0	8,977.6
Total	14,793.2	14,132.3	14,435.9	13,408.6	13,398.5	13,120.0	13,026.3	13,082.4	11,711.2	14,823.6	14,937.5	15,039.4	14,693.3

Totals may not add due to rounding.

^a Includes multi-fuel fired power plants. This series was discontinued in 2013-14 and multi-fuel allocated to specific fuel types.

Table O7.1

Electricity generation in Tasmania, by fuel type, physical units, financial year

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels													
Black coal													
Brown coal													
Natural gas	705.3	1,109.8	1,506.0	1,562.7	1,752.5	985.0	131.0	858.0	897.6	980.4	619.8	196.6	186.1
Oil products	64.5	73.9	94.9	60.5	12.1	19.7	18.9	90.3	21.8	24.3	19.3	20.7	19.8
Other ^a					26.8								
Total non-renewable	769.8	1,183.7	1,600.9	1,623.3	1,791.4	1,004.7	149.9	948.3	919.4	1,004.7	639.1	217.3	206.0
Renewable fuels													
Bagasse, wood													
Biogas	25.1	29.0	29.9	33.3	33.0	30.6	34.6	27.3	24.5	24.1	27.0	30.9	31.8
Wind	486.9	489.3	483.5	423.1	477.5	818.0	1 055.1	1 056.0	1 104.8	1 147.8	1 147.2	1 362.0	1 815.3
Hydro	7,313.6	8,307.2	9,451.5	8,515.5	10,766.4	12,072.6	8,294.4	8,204.3	8,432.7	9,428.9	9,821.1	9,878.3	8,301.9
Large-scale solar PV						0.0	0.0	0.0	0.3	0.6	1.5	2.8	3.0
Small-scale solar PV	1.8	5.6	11.6	22.7	53.3	73.5	96.8	108.5	121.6	138.9	161.8	187.2	218.6
Geothermal													
Total renewable	7,827.4	8,831.1	9,976.5	8,994.6	11,330.2	12,994.8	9,480.9	9,396.0	9,683.9	10,740.2	11,158.6	11,461.2	10,370.6
Total	8,597.2	10,014.8	11,577.4	10,617.9	13,121.6	13,999.5	9,630.9	10,344.3	10,603.3	11,744.9	11,797.6	11,678.5	10,576.5

Totals may not add due to rounding.

^a Includes multi-fuel fired power plants. This series was discontinued in 2013-14 and multi-fuel allocated to specific fuel types.

Table O8.1

Electricity generation in the Northern Territory, by fuel type, physical units, financial year

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels													
Black coal													
Brown coal													
Natural gas	1,873.4	2,132.5	2,053.6	2,109.3	2,269.0	2,308.9	2,201.4	2,484.7	2,366.5	2,437.8	3,503.2	4,285.0	4,143.0
Oil products	1,039.3	1,118.2	1,022.5	1,020.9	1,022.0	1,123.6	751.3	522.6	537.4	947.2	795.0	504.4	502.5
Other ^a		2.4	0.5										
Total non-renewable	2,912.7	3,253.1	3,076.6	3,130.2	3,291.0	3,432.5	2,952.7	3,007.3	2,903.9	3,384.9	4,298.2	4,789.4	4,645.5
Renewable fuels													
Bagasse, wood													
Biogas	9.2	9.2	8.7	7.7	6.5	8.9	9.0	7.7	7.6	8.6	8.8	8.7	8.0
Wind													
Hydro													
Large-scale solar PV						5.1	6.4	8.5	18.5	30.5	32.7	39.2	44.6
Small-scale solar PV	0.5	4.3	5.6	9.7	16.9	19.4	28.9	42.4	61.3	85.8	117.9	162.2	203.6
Geothermal													
Total renewable	9.7	13.5	14.3	17.4	23.4	33.3	44.3	58.7	87.3	124.9	159.3	210.2	256.1
Total	2,922.4	3,266.6	3,090.9	3,147.6	3,314.4	3,465.8	2,997.0	3,066.0	2,991.2	3,509.8	4,457.5	4,999.6	4,901.6

Totals may not add due to rounding.

^a Includes multi-fuel fired power plants. This series was discontinued in 2013-14 and multi-fuel allocated to specific fuel types.

Table O9.1

Australian electricity generation, by fuel type, physical units, 2020-21

	NSW	VIC	QLD	WA	SA	TAS	NT	AUS
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels								
Black coal	50,790.8	0.0	46,248.2	9,212.4				106,251.4
Brown coal	0.0	34,060.0	0.0	0.0				34,060.0
Natural gas	1,903.2	1,956.9	10,324.4	25,680.3	5,589.0	186.1	4,143.0	49,782.9
Oil products	340.6	179.1	1,034.9	2,458.3	126.7	19.8	502.5	4,661.9
Other a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total non-renewable	53,034.6	36,196.0	57,607.5	37,351.0	5,715.7	206.0	4,645.5	194,756.3
Renewable fuels								
Bagasse, wood	686.1	229.7	1,076.4	0.0	0.0	0.0	0.0	1,992.2
Biogas	411.0	499.3	198.5	110.8	94.6	31.8	8.0	1,354.0
Wind	4,805.9	7,080.6	1,826.0	3,140.5	5,867.1	1,815.3	0.0	24,535.4
Hydro	2,964.2	2,852.0	950.2	128.0	3.5	8,301.9	0.0	15,199.7
Large-scale solar PV	3,368.0	1,455.5	3,395.8	486.6	884.3	3.0	44.6	9,637.9
Small-scale solar PV	4,892.9	3,176.4	5,160.9	2,298.5	2,128.2	218.6	203.6	18,079.1
Geothermal		na					na	
Total renewable	17,128.2	15,293.5	12,607.9	6,164.3	8,977.6	10,370.6	256.1	70,798.2
<i>Of which ACT</i>	341.2							
Total	70,162.8	51,489.5	70,215.4	43,515.3	14,693.3	10,576.5	4,901.6	265,554.5
<i>Per cent renewable generation</i>	24%	30%	18%	14%	61%	98%	5%	27%

Totals may not add due to rounding.

na not available.

a Includes multi-fuel fired power plants. This series was discontinued in 2013-14 and multi-fuel allocated to specific fuel types.

Table O10

Australian Bioenergy detailed electricity generation breakdown

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
	GWh	GWh	GWh	GWh	GWh	GWh
Fuels						
Wood and other a	640.6	740.5	738.7	804.9	789.2	729.5
Bagasse	1,810.0	1,435.4	1,425.1	1,287.1	1,166.5	1,207.4
Municipal and industrial waste	42.8	75.7	95.1	60.3	34.0	55.3
Landfill biogas	1,060.7	962.9	1,026.9	1,080.0	1,080.3	1,111.7
Sludge biogas and biofuels b	235.8	286.0	231.8	263.6	281.6	242.3
Total bioenergy	3,789.9	3,500.5	3,517.7	3,495.9	3,351.6	3,346.2

Totals may not add due to rounding.

a Includes wood, woodwaste, charcoal, sulphite lyes, other biomass, biofuels.

b Includes sludge biogas, other biogas, biodiesel, ethanol.

Table O11.1
Australian electricity generation by industry

	2016-17	2017-18	2018-19	2019-20	2020-21
	GWh	GWh	GWh	GWh	GWh
Industry					
Mining	11,959.4	13,932.4	16,326.8	17,516.6	17,568.4
Manufacturing	9,094.9	8,710.0	8,317.8	8,066.0	7,955.6
Electricity sector	227,582.8	227,653.9	226,727.0	223,736.3	220,192.1
Other a	9,379.9	10,759.9	12,655.2	15,859.3	19,838.3
Total generation	258,017.0	261,056.1	264,026.7	265,178.2	265,554.5

Totals may not add due to rounding.

a Includes transport, commercial and services, residential, agriculture and construction industries.

Table O11.2**Australian electricity generation by industry, by state and territory, 2020-21**

	NSW	VIC	QLD	WA	SA	TAS	NT	AUS
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Industry								
Mining and Manufacturing	627.5	894.0	4,249.4	16,757.3	390.3	99.5	2,506.1	25,524.1
Electricity sector	64,248.5	46,992.7	60,292.3	24,175.2	12,063.1	10,245.8	2,174.5	220,192.1
Other a	5,286.8	3,602.8	5,673.7	2,582.8	2,239.9	231.3	221.0	19,838.3
Total generation	70,162.8	51,489.5	70,215.4	43,515.3	14,693.3	10,576.5	4,901.6	265,554.5

Totals may not add due to rounding.

a Includes transport, commercial and services, residential, agriculture and construction industries.

Table O1.2

Australian electricity generation, by fuel type, physical units, calendar year

	2015(e)	2016(e)	2017(e)	2018(e)	2019(e)	2020(e)	2021(e)
	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels							
Black coal	111,654.6	115,365.7	120,892.0	120,594.1	116,618.7	108,740.9	103,922.1
Brown coal	50,547.9	46,990.9	38,276.7	35,961.4	33,221.9	34,194.1	33,476.1
Natural gas	49,705.6	48,110.5	55,087.8	51,464.7	55,710.6	53,124.3	47,631.0
Oil products	6,162.2	5,718.2	5,272.8	4,901.2	4,727.2	4,506.4	4,707.5
Total non-renewable	218,070.2	216,185.2	219,529.3	212,921.5	210,278.4	200,565.6	189,736.7
Renewable fuels							
Bioenergy	3,677.6	3,627.2	3,561.4	3,588.1	3,467.7	3,410.4	3,344.0
Wind	11,833.0	13,039.7	13,210.8	16,262.0	19,471.7	22,606.9	26,795.9
Hydro	14,207.6	17,926.4	13,747.7	17,528.3	14,385.8	14,806.6	16,381.8
Large-scale solar PV	283.5	593.9	838.9	2,402.6	5,965.0	8,123.4	10,970.7
Small-scale solar PV	5,912.0	6,845.9	8,078.6	9,929.9	12,332.0	15,719.3	20,223.1
Geothermal	0.4	0.4	0.3				na
Total renewable	35,914.2	42,033.4	39,437.8	49,711.0	55,622.2	64,666.6	77,715.6
Total	253,984.4	258,218.7	258,967.1	262,632.5	265,900.6	265,232.2	267,452.3

Totals may not add due to rounding.

na not available.

Table O2.2

Electricity generation in New South Wales, by fuel type, physical units, calendar year

	2015(e) GWh	2016(e) GWh	2017(e) GWh	2018(e) GWh	2019(e) GWh	2020(e) GWh	2021(e) GWh
Non-renewable fuels							
Black coal	54,528.2	54,111.0	57,461.9	57,245.4	56,546.2	52,454.7	49,110.2
Brown coal							
Natural gas	4,929.7	3,538.7	3,882.4	2,282.7	2,924.3	1,934.8	1,971.7
Oil products	290.4	312.0	329.1	327.7	335.8	338.7	341.7
Total non-renewable	59,748.4	57,961.7	61,673.4	59,855.8	59,806.3	54,728.2	51,423.6
Renewable fuels							
Biomass	1,027.2	1,051.0	1,134.5	1,167.3	1,124.5	1,086.8	1,069.0
Wind	1,722.1	2,064.5	1,944.9	3,123.2	4,400.0	4,604.7	5,357.1
Hydro	2,145.2	3,964.5	2,271.4	3,150.4	2,010.8	2,399.8	2,839.0
Large-scale solar PV	228.2	507.3	633.5	1,073.6	1,731.9	2,603.6	4,156.7
Small-scale solar PV	1,343.8	1,577.0	1,876.1	2,382.2	2,962.4	3,974.7	5,594.2
Geothermal							
Total renewable	6,466.5	9,164.3	7,860.4	10,896.6	12,229.7	14,669.6	19,015.9
Total	66,214.9	67,126.0	69,533.8	70,752.3	72,036.0	69,397.8	70,439.6

Totals may not add due to rounding.

Table O3.2**Electricity generation in Victoria, by fuel type, physical units, calendar year**

	2015(e)	2016(e)	2017(e)	2018(e)	2019(e)	2020(e)	2021(e)
	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels							
Black coal							
Brown coal ^a	47,848.0	45,682.7	38,276.7	35,961.4	33,221.9	34,194.1	33,476.1
Natural gas	1,735.9	1,688.3	4,150.7	2,937.8	3,889.5	2,258.7	1,678.3
Oil products	128.6	140.6	171.0	187.5	202.0	200.7	178.7
Total non-renewable	49,712.5	47,511.6	42,598.4	39,086.7	37,313.4	36,653.5	35,333.1
Renewable fuels							
Biomass	736.2	735.7	723.2	776.7	819.3	846.3	758.1
Wind	3,288.5	3,703.2	3,748.3	4,616.8	5,431.2	6,733.5	8,677.9
Hydro	2,816.1	4,132.4	2,532.3	2,974.4	2,280.8	2,488.7	2,923.8
Large-scale solar PV	11.9	13.6	19.8	198.9	771.4	1,022.4	1,816.8
Small-scale solar PV	970.0	1,140.8	1,343.1	1,659.1	2,167.1	2,786.4	3,587.6
Geothermal							
Total renewable	7,822.7	9,725.6	8,366.7	10,225.8	11,469.8	13,877.3	17,764.2
Total	57,535.2	57,237.2	50,965.1	49,312.5	48,783.2	50,530.8	53,097.3

Totals may not add due to rounding.

^a Black coal generation is included with brown coal generation for confidentiality reasons.

Table O4.2

Electricity generation in Queensland, by fuel type, physical units, calendar year

	2015(e)	2016(e)	2017(e)	2018(e)	2019(e)	2020(e)	2021(e)
	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels							
Black coal	46,368.5	49,884.2	52,444.3	52,946.8	50,114.1	47,083.9	45,229.7
Brown coal							
Natural gas	15,770.3	12,532.9	11,661.4	10,416.2	10,564.1	11,531.3	9,883.0
Oil products	1,080.3	1,172.0	1,164.2	1,024.1	1,000.8	985.0	1,070.6
Total non-renewable	63,219.1	63,589.1	65,269.8	64,387.1	61,679.0	59,600.2	56,183.3
Renewable fuels							
Biomass	1,639.6	1,540.8	1,422.2	1,378.7	1,269.4	1,218.2	1,277.4
Wind	30.8	26.6	28.5	140.6	624.5	1,364.5	1,760.5
Hydro	506.9	543.5	662.1	825.2	1,067.7	650.8	1,066.7
Large-scale solar PV	8.0	17.1	85.8	818.6	2,733.4	3,396.0	3,449.1
Small-scale solar PV	1,922.7	2,177.4	2,525.5	3,024.1	3,692.5	4,607.3	5,716.9
Geothermal	0.4	0.4	0.3				na
Total renewable	4,108.4	4,305.8	4,724.4	6,187.1	9,387.4	11,236.7	13,270.6
Total	67,327.5	67,894.9	69,994.2	70,574.2	71,066.5	70,836.9	69,453.9

Totals may not add due to rounding.

na not available.

Table O5.2**Electricity generation in Western Australia, by fuel type, physical units, calendar year**

	2015(e)	2016(e)	2017(e)	2018(e)	2019(e)	2020(e)	2021(e)
	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels							
Black coal	10,757.9	11,370.4	10,985.9	10,402.0	9,958.4	9,202.3	9,582.2
Brown coal							
Natural gas	19,844.3	22,122.7	24,004.6	25,474.7	26,308.9	26,872.3	25,128.0
Oil products	3,908.8	3,190.0	2,549.4	2,315.3	2,358.8	2,305.6	2,457.7
Total non-renewable	34,511.1	36,683.2	37,539.9	38,192.1	38,626.1	38,380.2	37,167.9
Renewable fuels							
Biomass	147.6	180.8	169.8	150.6	129.8	117.8	108.2
Wind	1,573.1	1,551.9	1,544.1	1,574.7	2,106.5	2,514.4	3,398.6
Hydro	211.9	218.9	217.9	217.1	215.3	190.4	128.0
Large-scale solar PV	24.6	33.1	60.4	117.6	140.0	313.9	577.2
Small-scale solar PV	690.0	841.9	1,062.2	1,337.6	1,649.3	2,051.5	2,543.1
Geothermal							
Total renewable	2,647.2	2,826.6	3,054.4	3,397.5	4,240.9	5,188.0	6,755.0
Total	37,158.3	39,509.8	40,594.4	41,589.6	42,867.0	43,568.2	43,922.9

Totals may not add due to rounding.

Table O6.2**Electricity generation in South Australia, by fuel type, physical units, calendar year**

	2015(e)	2016(e)	2017(e)	2018(e)	2019(e)	2020(e)	2021(e)
	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels							
Black coal							
Brown coal	2,699.9	1,308.1					
Natural gas	4,914.9	4,950.5	7,660.1	6,748.7	7,539.9	6,056.2	4,707.5
Oil products	151.8	160.8	158.8	153.7	160.2	151.2	136.4
Total non-renewable	7,766.5	6,419.4	7,818.9	6,902.4	7,700.1	6,207.5	4,844.0
Renewable fuels							
Biomass	87.0	83.9	80.1	83.4	86.5	103.3	94.0
Wind	4,217.2	4,562.2	4,888.9	5,704.1	5,694.4	5,856.2	5,739.8
Hydro	8.7	5.0	4.9	7.6	9.5	10.3	3.5
Large-scale solar PV	1.8	3.8	11.7	161.2	545.1	746.7	919.3
Small-scale solar PV	847.8	942.0	1,068.8	1,275.8	1,548.7	1,912.7	2,326.3
Geothermal							
Total renewable	5,162.5	5,596.9	6,054.4	7,232.0	7,884.2	8,629.2	9,082.8
Total	12,928.9	12,016.3	13,873.3	14,134.5	15,584.3	14,836.6	13,926.8

Totals may not add due to rounding.

Table O7.2

Electricity generation in Tasmania, by fuel type, physical units, calendar year

	2015(e)	2016(e)	2017(e)	2018(e)	2019(e)	2020(e)	2021(e)
	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels							
Black coal							
Brown coal							
Natural gas	106.7	853.8	1,326.5	634.1	589.7	186.0	119.5
Oil products	26.0	210.8	158.0	21.8	20.0	20.7	19.8
Total non-renewable	132.7	1,064.6	1,484.5	655.9	609.6	206.7	139.4
Renewable fuels							
Biomass	32.3	26.8	24.6	23.3	29.8	29.7	30.5
Wind	1,001.3	1,131.3	1,056.0	1,102.6	1,215.1	1,533.5	1,862.0
Hydro	8,518.8	9,062.2	8,059.1	10,353.7	8,801.6	9,066.6	9,421.0
Large-scale solar PV	0.1	0.3	0.5	1.6	3.0	2.5	3.2
Small-scale solar PV	102.6	115.1	130.3	150.7	173.3	202.3	237.1
Geothermal							
Total renewable	9,655.1	10,335.7	9,270.5	11,631.9	10,222.9	10,834.6	11,553.7
Total	9,787.8	11,400.3	10,755.0	12,287.7	10,832.5	11,041.3	11,693.1

Totals may not add due to rounding.

Table O8.2**Electricity generation in the Northern Territory, by fuel type, physical units, calendar year**

	2015(e)	2016(e)	2017(e)	2018(e)	2019(e)	2020(e)	2021(e)
	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels							
Black coal							
Brown coal							
Natural gas	2,403.7	2,423.6	2,402.1	2,970.5	3,894.1	4,285.0	4,143.0
Oil products	576.3	532.1	742.3	871.1	649.7	504.4	502.5
Total non-renewable	2,980.0	2,955.6	3,144.4	3,841.6	4,543.8	4,789.4	4,645.5
Renewable fuels							
Biomass	7.8	8.2	7.1	8.3	8.5	8.4	6.9
Wind							
Hydro							
Large-scale solar PV	8.9	18.7	27.2	31.2	40.2	38.3	48.5
Small-scale solar PV	35.1	51.5	72.6	100.6	138.7	184.5	217.9
Geothermal							
Total renewable	51.8	78.5	106.9	140.1	187.5	231.1	273.2
Total	3,031.8	3,034.1	3,251.3	3,981.7	4,731.3	5,020.5	4,918.7

Totals may not add due to rounding.

Table O9.2

Australian electricity generation, by fuel type, physical units, calendar year 2021

	NSW	VIC	QLD	WA	SA	TAS	NT	AUS
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels								
Black coal	49,110.2	0.0	45,229.7	9,582.2				103,922.1
Brown coal		33,476.1						33,476.1
Natural gas	1,971.7	1,678.3	9,883.0	25,128.0	4,707.5	119.5	4,143.0	47,631.0
Oil products	341.7	178.7	1,070.6	2,457.7	136.4	19.8	502.5	4,707.5
Total non-renewable	51,423.6	35,333.1	56,183.3	37,167.9	4,844.0	139.4	4,645.5	189,736.7
Renewable fuels								
Biomass	1,069.0	758.1	1,277.4	108.2	94.0	30.5	6.9	3,344.0
Wind	5,357.1	8,677.9	1,760.5	3,398.6	5,739.8	1,862.0		26,795.9
Hydro	2,839.0	2,923.8	1,066.7	128.0	3.5	9,421.0		16,381.8
Large-scale solar PV	4,156.7	1,816.8	3,449.1	577.2	919.3	3.2	48.5	10,970.7
Small-scale solar PV	5,594.2	3,587.6	5,716.9	2,543.1	2,326.3	237.1	217.9	20,223.1
Geothermal			na					na
Total renewable	19,015.9	17,764.2	13,270.6	6,755.0	9,082.8	11,553.7	273.2	77,715.6
Total	70,439.6	53,097.3	69,453.9	43,922.9	13,926.8	11,693.1	4,918.7	267,452.3
<i>Per cent renewable generation</i>	<i>27%</i>	<i>33%</i>	<i>19%</i>	<i>15%</i>	<i>65%</i>	<i>99%</i>	<i>6%</i>	<i>29%</i>

Totals may not add due to rounding.

na not available.