



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, June 2021

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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 2019-20 Australian Energy Statistics, which will be released later in 2021.

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 calendar year time-series has been recalculated to:

- implement the reallocation of hydro between NSW and VIC introduced in the Australian Energy Update 2020
- improve reconciliation between the financial and calendar year data.

Australian Energy Statistics, Table O
Australian electricity generation, by fuel type, physical units

AUS	NSW	VIC	QLD	WA	SA	TAS	NT
Financial year Calendar year	Financial year Calendar year	Financial year Calendar year	Financial year Calendar year	Financial year Calendar year	Financial year Calendar year	Financial year Calendar year	Financial year Calendar year
State Summary	Bioenergy detailed breakdown	Industry breakdown	Batteries				
Financial year Calendar year	Australian electricity generation from bioenergy	Electricity generation by industry Electricity generation by industry, by state	Financial year Calendar year				

Table O2
Electricity generation in New South Wales, by fuel type, physical units

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
	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
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
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
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
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
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
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
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
Large-scale solar PV						10.6	60.2	399.5	567.6	700.0	1,348.2	2,084.6
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
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
Of which ACT									165.5	223.9	254.9	279.0
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

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

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
Electricity generation in Victoria, by fuel type, physical units

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels												
Black coal								31.9	36.3	13.0	35.3	12.2
Brown coal	52,094.0	51,541.7	51,066.5	52,059.7	45,317.6	43,977.7	48,336.8	46,202.2	43,557.8	36,008.4	34,460.0	33,649.3
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
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
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
Renewable fuels												
Bagasse, wood ^b				187.1	171.1	188.8	252.0	235.4	263.4	241.0	235.5	243.8
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
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
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
Large-scale solar PV						4.4	9.1	11.5	13.8	39.4	462.5	872.5
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
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
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

	Calendar year					
	2015(e)	2016(e)	2017(e)	2018(e)	2019(e)	2020(e)
	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels						
Black coal	16.0	34.1	24.7	24.1	23.7	12.2
Brown coal	47,832.0	45,648.6	38,252.0	35,937.3	33,198.2	34,181.9
Natural gas	1,735.9	1,688.3	4,150.7	2,937.8	3,889.5	2,258.7
Oil products	128.6	140.6	171.0	187.5	202.0	200.7
Total non-renewable	49,712.5	47,511.6	42,598.4	39,086.7	37,313.4	36,653.5
Renewable fuels						
Biomass	736.2	735.7	723.2	776.7	819.3	846.3
Wind	3,288.5	3,703.2	3,748.3	4,616.8	5,431.2	6,733.5
Hydro	2,816.1	4,132.4	2,532.3	2,974.4	2,280.8	2,488.7
Large-scale solar PV	11.9	13.6	19.8	198.9	771.4	1,022.4
Small-scale solar PV	970.0	1,140.8	1,343.1	1,659.1	2,167.1	2,786.4
Geothermal						
Total renewable	7,822.7	9,725.6	8,366.7	10,225.8	11,469.8	13,877.3
Total	57,535.2	57,237.2	50,965.1	49,312.5	48,783.2	50,530.8

Totals may not add due to rounding.

^a Includes multi-fuel fired power plants.

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

Table O4
Electricity generation in Queensland, by fuel type, physical units

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
	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
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
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
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
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
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
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
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
Large-scale solar PV						4.0	5.9	7.3	34.1	171.5	1,491.7	3,334.5
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
Geothermal	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.2	0.5			
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
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

	Calendar year					
	2015(e)	2016(e)	2017(e)	2018(e)	2019(e)	2020(e)
	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
Brown coal						
Natural gas	15,770.3	12,532.9	11,661.4	10,416.2	10,564.1	11,531.3
Oil products	1,080.3	1,172.0	1,164.2	1,024.1	1,000.8	985.0
Total non-renewable	63,219.1	63,589.1	65,269.8	64,387.1	61,679.0	59,600.2
Renewable fuels						
Biomass	1,639.6	1,540.8	1,422.2	1,378.7	1,269.4	1,218.2
Wind	30.8	26.6	28.5	140.6	624.5	1,364.5
Hydro	506.9	543.5	662.1	825.2	1,067.7	650.8
Large-scale solar PV	8.0	17.1	85.8	818.6	2,733.4	3,396.0
Small-scale solar PV	1,922.7	2,177.4	2,525.5	3,024.1	3,692.5	4,607.3
Geothermal	0.4	0.4	0.3			
Total renewable	4,108.4	4,305.8	4,724.4	6,187.1	9,387.4	11,236.7
Total	67,327.5	67,894.9	69,994.2	70,574.2	71,066.5	70,836.9

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 O5
Electricity generation in Western Australia, by fuel type, physical units

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
	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
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
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
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
Renewable fuels												
Bagasse, wood								0.4	56.4	5.5	11.4	8.3
Biogas	119.6	121.2	111.7	125.7	108.3	124.0	126.9	94.2	126.8	135.7	119.9	104.1
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
Hydro	na	na	na		221.3	205.4	206.1	217.0	212.6	220.8	217.0	205.5
Large-scale solar PV						24.1	23.9	28.3	34.3	45.6	74.5	174.7
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
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
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

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

Totals may not add due to rounding.

na not available.

^a Includes multi-fuel fired power plants.

Table O6
Electricity generation in South Australia, by fuel type, physical units

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
	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	0.0	0.0	0.0	
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
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
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
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
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
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
Large-scale solar PV						1.4	1.7	2.0	3.9	20.0	321.3	627.8
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
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
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

	Calendar year					
	2015(e)	2016(e)	2017(e)	2018(e)	2019(e)	2020(e)
	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
Oil products	151.8	160.8	158.8	153.7	160.2	151.2
Total non-renewable	7,766.5	6,419.4	7,818.9	6,902.4	7,700.1	6,207.5
Renewable fuels						
Biomass	87.0	83.9	80.1	83.4	86.5	103.3
Wind	4,217.2	4,562.2	4,888.9	5,704.1	5,694.4	5,856.2
Hydro	8.7	5.0	4.9	7.6	9.5	10.3
Large-scale solar PV	1.8	3.8	11.7	161.2	545.1	746.7
Small-scale solar PV	847.8	942.0	1,068.8	1,275.8	1,548.7	1,912.7
Geothermal						
Total renewable	5,162.5	5,596.9	6,054.4	7,232.0	7,884.2	8,629.2
Total	12,928.9	12,016.3	13,873.3	14,134.5	15,584.3	14,836.6

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 O7
Electricity generation in Tasmania, by fuel type, physical units

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
	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
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
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
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
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
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
Large-scale solar PV						0.0	0.0	0.0	0.3	0.6	1.5	2.8
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
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
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

	Calendar year					
	2015(e)	2016(e)	2017(e)	2018(e)	2019(e)	2020(e)
	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
Oil products	26.0	210.8	158.0	21.8	20.0	20.7
Total non-renewable	132.7	1,064.6	1,484.5	655.9	609.6	206.7
Renewable fuels						
Biomass	32.3	26.8	24.6	23.3	29.8	29.7
Wind	1,001.3	1,131.3	1,056.0	1,102.6	1,215.1	1,533.5
Hydro	8,518.8	9,062.2	8,059.1	10,353.7	8,801.6	9,066.6
Large-scale solar PV	0.1	0.3	0.5	1.6	3.0	2.5
Small-scale solar PV	102.6	115.1	130.3	150.7	173.3	202.3
Geothermal						
Total renewable	9,655.1	10,335.7	9,270.5	11,631.9	10,222.9	10,834.6
Total	9,787.8	11,400.3	10,755.0	12,287.7	10,832.5	11,041.3

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 O8
Electricity generation in the Northern Territory, by fuel type, physical units

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
	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
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
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
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
Wind												
Hydro												
Large-scale solar PV						5.1	6.4	8.5	18.5	30.5	32.7	39.2
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
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
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

	Calendar year					
	2015(e)	2016(e)	2017(e)	2018(e)	2019(e)	2020(e)
	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
Oil products	576.3	532.1	742.3	871.1	649.7	504.4
Total non-renewable	2,980.0	2,955.6	3,144.4	3,841.6	4,543.8	4,789.4
Renewable fuels						
Biomass	7.8	8.2	7.1	8.3	8.5	8.4
Wind						
Hydro						
Large-scale solar PV	8.9	18.7	27.2	31.2	40.2	38.3
Small-scale solar PV	35.1	51.5	72.6	100.6	138.7	184.5
Geothermal						
Total renewable	51.8	78.5	106.9	140.1	187.5	231.1
Total	3,031.8	3,034.1	3,251.3	3,981.7	4,731.3	5,020.5

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 O9
Australian electricity generation, by fuel type, physical units, 2019-20

	NSW	VIC	QLD	WA	SA	TAS	NT	Aus
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels								
Black coal	53,566.7	12.2	48,568.9	9,725.2				111,873.0
Brown coal		33,649.3						33,649.3
Natural gas	2,870.9	3,117.0	11,214.1	26,918.6	6,614.0	196.6	4,285.0	55,216.3
Oil products	337.3	202.0	983.7	2,301.7	159.4	20.7	504.4	4,509.2
Other a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total non-renewable	56,774.9	36,980.6	60,766.8	38,945.5	6,773.4	217.3	4,789.4	205,247.9
Renewable fuels								
Bagasse, wood	716.2	243.8	1,029.8	8.3				1,998.1
Biogas	387.4	535.7	189.2	104.1	97.4	30.9	8.7	1,353.5
Wind	4,574.3	5,596.2	927.9	2,122.5	5,812.9	1,362.0		20,395.9
Hydro	2,110.1	2,310.8	634.6	205.5	10.3	9,878.3		15,149.6
Large-scale solar PV	2,084.6	872.5	3,334.5	174.7	627.8	2.8	39.2	7,136.1
Small-scale solar PV	3,417.3	2,457.3	4,120.2	1,835.3	1,717.6	187.2	162.2	13,897.1
Geothermal								
Total renewable	13,289.8	12,016.3	10,236.2	4,450.5	8,266.0	11,461.2	210.2	59,930.3
<i>Of which ACT</i>	279.0	0.0	0.0	0.0	0.0	0.0	0.0	279.0
Total	70,064.7	48,996.9	71,003.0	43,396.0	15,039.4	11,678.5	4,999.6	265,178.2
<i>Per cent renewable generation</i>	19%	25%	14%	10%	55%	98%	4%	23%

Australian electricity generation, by fuel type, physical units, calendar year 2020

	NSW	VIC	QLD	WA	SA	TAS	NT	AUSTRALIA
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Non-renewable fuels								
Black coal	52,454.7	12.2	47,083.9	9,202.3				108,753.1
Brown coal		34,181.9						34,181.9
Natural gas	1,934.8	2,258.7	11,531.3	26,872.3	6,056.2	186.0	4,285.0	53,124.3
Oil products	338.7	200.7	985.0	2,305.6	151.2	20.7	504.4	4,506.4
Total non-renewable	54,728.2	36,653.5	59,600.2	38,380.2	6,207.5	206.7	4,789.4	200,565.6
Renewable fuels								
Biomass	1,086.8	846.3	1,218.2	117.8	103.3	29.7	8.4	3,410.4
Wind	4,604.7	6,733.5	1,364.5	2,514.4	5,856.2	1,533.5		22,606.9
Hydro	2,399.8	2,488.7	650.8	190.4	10.3	9,066.6		14,806.6
Large-scale solar PV	2,603.6	1,022.4	3,396.0	313.9	746.7	2.5	38.3	8,123.4
Small-scale solar PV	3,974.7	2,786.4	4,607.3	2,051.5	1,912.7	202.3	184.5	15,719.3
Geothermal								
Total renewable	14,669.6	13,877.3	11,236.7	5,188.0	8,629.2	10,834.6	231.1	64,666.6
Total	69,398	50,531	70,837	43,568	14,837	11,041	5,021	265,232
<i>Per cent renewable generation</i>	21%	27%	16%	12%	58%	98%	5%	24%

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 O10**Australian Bioenergy detailed electricity generation breakdown**

	2015-16	2016-17	2017-18	2018-19	2019-20
	GWh	GWh	GWh	GWh	GWh
Fuels					
Bagasse	1,810.4	1,435.4	1,425.1	1,287.1	1,166.5
Wood, woodwaste	248.4	354.6	314.8	398.2	381.2
Municipal and industrial waste	42.8	75.7	95.1	60.3	34.0
Sulphyte lyes (black liquor) and biofuels	416.7	442.4	429.4	418.0	416.3
Landfill biogas	1,060.7	969.7	1,026.9	1,084.0	1,105.1
Sludge biogas	211.0	222.8	226.4	248.3	248.5
Total bioenergy	3,789.9	3,500.5	3,517.7	3,495.9	3,351.6

Totals may not add due to rounding.

Table O11
Australian electricity generation by industry

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

Totals may not add due to rounding.

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

Australian electricity generation by industry, by state and territory, 2019-20

	NSW	VIC	QLD	WA	SA	TAS	NT	Aus
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
Industry								
Mining and Manufacturing	613.3	913.1	4,239.2	16,729.5	401.0	96.3	2,590.1	25,582.6
Electricity sector	65,719.8	45,277.2	61,697.2	24,577.8	12,843.2	11,382.3	2,238.8	223,736.3
Other a	3,731.6	2,806.6	5,066.6	2,088.8	1,795.2	199.9	170.6	15,859.3
Total generation	70,064.7	48,996.9	71,003.0	43,396.0	15,039.4	11,678.5	4,999.6	265,178.2

Totals may not add due to rounding.

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

Table O12**Australian electricity supplied from utility-scale battery storage**

	2017-18	2018-19	2019-20
	GWh	GWh	GWh
NSW			
VIC		20.4	51.7
QLD			
WA			
SA	22.0	41.8	50.1
TAS			
NT			
Aus	22.0	62.2	101.8

	Calendar year			
	2017	2018	2019	2020
	GWh	GWh	GWh	GWh
NSW				
VIC		2.7	48.5	51.4
QLD				
WA				
SA	2.6	40.1	45.8	64.3
TAS				
NT				
Aus	2.6	42.8	94.3	115.6

Totals may not add due to rounding.

Electricity that is stored and released from batteries is not included in the electricity generation estimates because generation is measured at the point of generation.