

Santos Ltd Sustainability Performance Data 2017

All reasonable effort has been made to provide accurate information in this spreadsheet; however, Santos does not warrant or represent its accuracy.

All data are reported for the 2017 calendar year and as Santos gross operated unless otherwise stated.

Data are presented to nearest significant figure. Where data are unavailable or not applicable, it is left blank, where data is zero or de minimis it is represented as (0).



Greenhouse gas (GHG) emissions and energy consumption (Santos gross operated, unless otherwise stated, financial years)

	Units	2012-13	2013-14	2014-15	2015-16	2016-17
Direct energy consumption	PJ	29	32	34	48	65
Indirect energy consumption	PJ	0.2	0.18	0.19	0.19	1.47
Scope 1 (direct GHG emissions)	MtCO2e	3.68	3.94	4.35	5.04	5.82
Scope 2 (purchased electricity)	MtCO2e	0.04	0.03	0.03	0.03	0.31
Scope 3 (product use)	MtCO2e	17.0	18.0	15.5	18.8	20.4
Scope 1 (Santos equity share)	MtCO2e	2.97	3.36	3.63	3.79	3.79
Intensity (Santos equity share)	ktCO2e/mmboe	58	65	63	63	63
Scope 2 (Santos equity share)	MtCO2e					0.09
Scope 3 (Santos equity share)	MtCO2e					22.0
Further details of Scope 1 emissions and flared and vented hydrocarbon (Santos gross operated)						
Emissions of CO2	MtCO2e	3.17	3.49	3.86	4.51	5.09
Emissions of CH4	MtCO2e	0.50	0.45	0.48	0.53	0.72
Emissions of N2O	MtCO2e	0.00	0.00	0.01	0.01	0.01
Emissions from Fuel	MtCO2e	1.55	1.70	1.67	2.38	3.19
Emissions from Flare	MtCO2e	0.21	0.30	0.54	0.38	0.25
Emissions from Vent	MtCO2e	0.38	0.30	0.30	0.30	0.31
Emissions from CO2 Removal	MtCO2e	1.52	1.62	1.81	1.94	2.03
Emissions from Fugitives	MtCO2e	0.02	0.02	0.02	0.03	0.04
Volume of flared hydrocarbon	Million m3	61.3	94.1	212.2	134.8	90.5
Volume of vented hydrocarbon	Million m3	38.1	35.4	38.0	45.0	38.7

Notes: Emissions and energy are reported on an Australian financial year basis in accordance with National Greenhouse and Energy Reporting Act, 2007.

Pollutant emissions (Santos Australian operations, gross operated, calendar year)



	Units	2013	2014	2015	2016	2017
Arsenic & compounds	Tonnes	0.016	0.018	0.021	0.022	0.026
Benzene	Tonnes	42	45	42	30	26
Beryllium & compounds	Tonnes	0.004	0.004	0.005	0.006	0.008
Cadmium & compounds	Tonnes	0.021	0.022	0.020	0.017	0.014
Carbon monoxide	Tonnes	7,641	10,678	9,829	10,838	9,747
Chromium III Compounds	Tonnes	0.054	0.050	0.045	0.042	0.041
Copper & compounds	Tonnes	0.047	0.039	0.031	0.031	0.029
Cumene	Tonnes	1.3	3.9	4.1	3.4	2.9
Cyclohexane	Tonnes	33	27	23	23	20
Ethylbenzene	Tonnes	47	47	47	40	35
n-Hexane	Tonnes	508	486	442	414	366
Hydrogen sulphide	Tonnes	35	44	39	61	47
Lead & compounds	Tonnes	0.059	0.028	0.026	0.025	0.023
Mercury & compounds	Tonnes	0.006	0.007	0.036	0.000	0.000
Methanol	Tonnes	78	57	37	150	147
Nickel & compounds	Tonnes	0.035	0.038	0.036	0.034	0.031
Oxides of Nitrogen	Tonnes	12,257	13,444	11,329	17,083	16,838
Particulate Matter (less than 2.5 micrometres)	Tonnes	275	314	219	234	219
Particulate Matter (less than 10.0 micrometres)	Tonnes	279	313	225	238	223
Phenol	Tonnes	21	23	31	33	33
Polychlorinated dioxins and furans (TEQ)	Tonnes	0.001	0.000	0.000	0.000	0.000
Polycyclic aromatic hydrocarbons	Tonnes	0.048	0.006	0.046	0.015	0.005
Sulphur dioxide	Tonnes	30	38	23	19	20
Toluene (methylbenzene)	Tonnes	83	79	70	64	56
Total Volatile Organic Compounds	Tonnes	8,897	8,002	6,552	7,072	6,263
Xylenes	Tonnes	61	63	61	50	44

Notes: Pollutant emissions to air, land and water, including waste transfers, are reported on a calendar year basis in accordance with the Australian National Pollutant Inventory compliance reporting requirements

Waste			
	Septic Waste kilo litres	General Waste Landfill tonnes	Recycling tonnes
New South Wales	71	29	20
Queensland	907	1,395	3,697
South Australia	0	4,007	751
Western Australia	896	59	97

Water										
	Formation Water 1000 m3	Aquifer Injection 1000 m3	Beneficial use 1000 m3	Evaporation 1000 m3	Seawater Discharge 1000 m3	Surface Water Discharge 1000 m3	Groundwater Withdrawal 1000 m3	Seawater Withdrawal 1000 m3	Surface Water Withdrawal 1000 m3	
New South Wales	171	-	110	261	-	-	17	-	-	
Queensland	10,263	88	4,299	1,504	-	3,362	280	-	10	
South Australia	3,386	120	184	3,266	-	-	1,330	-	-	
Western Australia	5,130	-	-	-	16,780	-	0	11,639	-	

Footprint of operations					
	Tenements ha	Operations footprint ha	Rehabilitated sites ha	Protected areas within tenements ha	Operations within protected areas ha
New South Wales	5,366,113	871	0	180,487	5
Northern Territory	10,952,697	457	1	424,014	0
Queensland	3,790,072	15,433	1,579	163,566	724
South Australia	1,181,199	9,233	3,428	821,531	4,813
Victoria	0	15	0	0	0
Western Australia	3,492,054	226	0	0	0
Bangladesh	492,224	1	0	0	0
Indonesia	184,409	15	0	0	0
India	1,207,992	0	0	0	0
Papua New Guinea	8,488	7	0	0	0
Vietnam	531,379	0	0	0	0
Total	27,206,627	26,258	5,008	1,589,598	5,542

Notes: Data current as of April 2018

Incidents and spills					
	Units	2014	2015	2016	2017
Volume hydrocarbon released	m3	20	382	132	5
Number hydrocarbon spills		81	61	42	34
Volume produced water released	m3	2,957	2,274	1,499	565
Number produced water spills		61	36	47	22
Regulator instruments received		13	3	1	1
Fines received from regulators	A\$	70,500	34,155	8,835	12,190

Definition: Regulator instruments – notices from environmental regulators that require action to address an identified non-compliance (e.g. penalty infringement notice, environment protection order)

Safety					
		2014	2015	2016	2017
Fatalities		0	0	0	0
Employee TRCFR *		1.3	1.7	1.3	2.2
Contractor TRCFR *		4.8	3.9	3.6	5
Total TRCFR *		3.5	2.8	2.2	3.5
Employee LTIFR *		0.46	0.12	0.25	1.24
Contractor LTIFR *		0.78	0.12	0	0.72
Total LTIFR *		0.67	0.12	0.14	1
High potential events (HiPos)		15	4	4	6
Tier 1 loss of containment incidents		8	4	6	3
Tier 2 loss of containment incidents		27	20	11	13

* TRCFR and LTIFR are annual rates (e.g. calculated over the 12 months of 2017)

Definitions:

TRCFR – total recordable frequency rate (the number of recordable injuries (lost time injuries, alternate duty injuries, medical treatment injuries) per million hours worked)

LTIFR – lost time injury frequency rate (the number of lost time injuries per million hours worked)

High potential incidents (HiPo) – incidents involving personnel that did not reach their ultimate potential and could have resulted in a fatality.



Community Investment

	A\$ M
Environment & Climate Change	0.6
Healthy Living	3.1
Indigenous	1.1
Other	0.4
Regional Communities	6.3
Training & Education	1.8
Total	13.3

Workforce

	Male	Female	Total
Full-time	1,563	386	1,949
Part-time	17	90	107
Graduate/trainee	12	12	24
Total Santos employees	1,592	488	2,080
Seconded (onsite) *	13	3	16
Contractors (onsite)	1,053	220	1,273
External service providers (onsite)	127	39	166
Workforce Total	1,193	262	1,455

* Non-Santos employees seconded into a Santos role.

Employee Composition

	Under 30 years		30 to 50 years		Over 50 years		Total		%	
	M	F	M	F	M	F	M	F	M	F
Strategic Leader	0.0%	0.0%	30.0%	10.0%	60.0%	0.0%	8	1	88.9%	11.1%
Functional Leader / Manager	0.0%	0.0%	43.1%	15.4%	36.9%	4.6%	53	13	80.0%	20.0%
Team Leader / Supervisor	0.6%	0.6%	64.0%	11.6%	21.5%	1.6%	268	43	86.2%	13.8%
Technical Specialist	4.1%	2.8%	54.2%	22.5%	14.9%	1.5%	585	214	73.2%	26.8%
Team Members	10.7%	5.6%	44.8%	16.1%	20.2%	2.6%	678	217	75.8%	24.2%
Grand Total	6.3%	3.6%	51.2%	17.8%	19.1%	2.1%	1592	488	76.5%	23.5%
Non Executive Director	0.0%	0.0%	12.5%	0.0%	62.5%	25.0%	5	2	71.4%	28.6%