

Santos Ltd Sustainability Performance Data 2016

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 2016 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	2011-12	2012-13	2013-14	2014-15	2015-16
Direct energy consumption	PJ	30	29	32	34	48
Indirect energy consumption	PJ	0.2	0.2	0.18	0.19	0.19
Scope 1 (direct GHG emissions)	MtCO ₂ e	3.81	3.68	3.94	4.35	5.04
Emissions of CO ₂	MtCO ₂ e	3.24	3.17	3.49	3.86	4.51
Emissions of CH ₄	MtCO ₂ e	0.56	0.50	0.45	0.48	0.53
Emissions of N ₂ O	MtCO ₂ e	0.00	0.00	0.00	0.01	0.01
Emissions from Fuel	MtCO ₂ e	1.60	1.55	1.70	1.67	2.38
Emissions from Flare	MtCO ₂ e	0.17	0.21	0.30	0.54	0.38
Emissions from Vent	MtCO ₂ e	0.43	0.38	0.30	0.30	0.30
Emissions from CO ₂ Removal	MtCO ₂ e	1.59	1.52	1.62	1.81	1.94
Emissions from Fugitives	MtCO ₂ e	0.02	0.02	0.02	0.02	0.03
Volume of flared hydrocarbon	Million m ³	58.3	61.3	94.1	212.2	216.5
Volume of vented hydrocarbon	Million m ³	45.6	38.1	35.4	38.0	45.0
Scope 2 (purchased electricity)	MtCO ₂ e	0.04	0.04	0.03	0.03	0.03
Scope 3 (product use)	MtCO ₂ e		17.0	18.0	15.5	18.8
Scope 1 (Santos equity share)	MtCO ₂ e	2.94	2.97	3.36	3.63	3.79
Intensity (Santos equity share)	ktCO ₂ e/mmmboe	59	58	65	63	63

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
Arsenic & compounds	Tonnes	0.016	0.018	0.021
Benzene	Tonnes	42	45	42
Beryllium & compounds	Tonnes	0.004	0.004	0.005
Cadmium & compounds	Tonnes	0.021	0.022	0.020
Carbon monoxide	Tonnes	7,641	10,678	9,829
Chromium III Compounds	Tonnes	0.054	0.050	0.045
Copper & compounds	Tonnes	0.047	0.039	0.031
Cumene	Tonnes	1.3	3.9	4.1
Cyclohexane	Tonnes	33	27	23
Ethylbenzene	Tonnes	47	47	47
n-Hexane	Tonnes	508	486	442
Hydrogen sulphide	Tonnes	35	44	39
Lead & compounds	Tonnes	0.059	0.028	0.026
Mercury & compounds	Tonnes	0.006	0.007	0.036
Methanol	Tonnes	78	57	37
Nickel & compounds	Tonnes	0.035	0.038	0.036
Oxides of Nitrogen	Tonnes	12,257	13,444	11,329
Particulate Matter (less than 2.5 micrometres)	Tonnes	275	314	219
Particulate Matter (less than 10.0 micrometres)	Tonnes	279	313	225
Phenol	Tonnes	21	23	31
Polychlorinated dioxins and furans (TEQ)	Tonnes	0.001	0.000	0.000
Polycyclic aromatic hydrocarbons	Tonnes	0.048	0.006	0.046
Sulphur dioxide	Tonnes	30	38	23
Toluene (methylbenzene)	Tonnes	83	79	70
Total Volatile Organic Compounds	Tonnes	8,897	8,002	6,552
Xylenes	Tonnes	61	63	61

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. Annual reports are submitted on 31 March, therefore 2016 data will be reported in 2017

Waste	General Waste		
	Septic Waste kilo litres	Landfill tonnes	Recycling tonnes
Indonesia	0	55	67
New South Wales	208	30	35
Queensland	4,715	40,304	8,823
South Australia	78	3,036	1,440
Western Australia	0	78	35

Water	Formation Water	Aquifer Injection	Beneficial use	Evaporation	Seawater Discharge	Surface Water Discharge	Water Recycled (Treated)	Groundwater Withdrawal	Municipal Water Withdrawal	Surface Water Withdrawal
	1000 m3	1000 m3	1000 m3	1000 m3	1000 m3	1000 m3	1000 m3	1000 m3	1000 m3	1000 m3
Indonesia	187	-	-	-	187	-	-	212	-	8,572
New South Wales	224	-	-	220	-	-	4	17	-	-
Queensland	9,029	-	218	1,833	-	3,016	4,033	101	5	10
South Australia	4,631	69	-	4,558	-	-	4	1,297	-	-
Western Australia	5,006	-	-	-	5,006	-	-	0	-	-

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	872	0	180,573	5
Northern Territory	8,395,522	449	0	424,010	0
Queensland	4,152,387	14,634	1,577	163,605	743
South Australia	1,181,195	9,203	3,425	821,531	4,825
Victoria	147,720	25	0	0	0
Western Australia	3,540,405	236	0	0	0
Bangladesh	487,179	0	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	25,202,789	25,441	5,002	1,589,719	5,573

Incidents and spills		
	Units	
Volume hydrocarbon released	m3	131.5
Number hydrocarbon spills		43*
Volume produced water released	m3	1,498.8
Number produced water spills		43*
Regulator instruments received		1
Fines received from regulators	A\$	8,835

* 17 of the hydrocarbon and produced water spills released both produced water and hydrocarbon i.e. there were 26 spills that released just hydrocarbon, 26 spills that released just produced water and 17 that released both
 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

Fatalities	0
Employee TRCFR *	1.3
Contractor TRCFR *	3.6
Total TRCFR *	2.2
Employee LTIFR *	0.25
Contractor LTIFR *	0.00
Total LTIFR *	0.14
High potential events (HiPos)	4
Tier 1 loss of containment incidents	6
Tier 2 loss of containment incidents	11

* TRCFR and LTIFR are annual rates (e.g. calculated over the 12 months of 2016). The LTIFR is not consistent with the company scorecard which is a 3 year rolling average. In 2016 the 3-year rolling average LTIFR was 0.37
 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.

Socio-economic contribution

	US\$ M
Wages and salaries	426
Materials, goods and services	1,714
Royalties and taxes	55
Community Investment	7
Payments to providers of capital (excl capital repayment)	289

Note: A\$ amounts have been converted to US\$ using an average rate of \$0.7451 for 2016

Community Investment

	US\$ M
Environment & Climate Change	0.47
Healthy Living	1.01
Indigenous	0.58
Other	0.23
Regional Communities	4.15
Training & Education	0.34
Total	6.79

Note: A\$ amounts have been converted to US\$ using an average rate of \$0.7451 for 2016

Workforce

	Male	Female	Total
Full-time	1,745	452	2,197
Part-time	13	102	115
Graduate/trainee	28	24	52
Total Santos employees	1,786	578	2,364
Seconded (onsite) *	12	3	15
Contractors (onsite)	915	204	1,119
External service providers (onsite)	98	29	127
Workforce Total	2,811	814	3,625

* 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	
Strategic Leader	0.0%	0.0%	33.3%	11.1%	55.6%	0.0%	7	1	87.5%
Functional Leader / Manager	0.6%	0.0%	54.7%	15.7%	24.5%	4.4%	128	32	80.0%
Team Leader / Supervisor	1.6%	0.3%	63.7%	11.3%	21.9%	1.3%	271	40	87.1%
Technical Specialist	0.0%	0.8%	55.8%	21.5%	21.1%	0.8%	204	61	77.0%
Team Members	10.7%	6.2%	45.4%	19.1%	16.5%	2.1%	1176	444	72.6%
Grand Total	7.6%	4.4%	49.5%	18.1%	18.4%	2.0%	1786	578	75.5%
Director	0.0%	0.0%	0.0%	0.0%	87.5%	12.5%	7	1	87.5%