

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1	Saudi Aramco, Saudi Arabia		Entity emissions from combustion, venting, flaring, and fugitive methane																										Entity emi											
2			Richard Heede Climate Accountability Institute 24-Jul-19																																					
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	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD		
1	Emissions from combustion, venting, flaring, and fugitive methane																												Entity emissions from combustion, venting, flaring, and fugitive methane														
2	Richard Heede Climate Accountability Institute 24-Jul-19																				Richard Heede Climate Accountability Institute 24-Jul-19																						
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10	1890s										1900s										1910s										1920s												
11	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925		
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48	1,019	1,033	1,081	1,198	1,198	1,304	1,359	1,370	1,356	1,403	1,488	1,535	1,612	1,700	1,861	1,957	2,026	2,074	2,261	2,286	2,433	2,594	2,869	2,744	2,876	3,001	3,060	3,221	3,459	3,115	3,071	3,298	3,503	3,430	2,953	3,415	2,942	3,096	3,554	3,525	3,573		
49	278	282	295	327	327	356	371	374	370	383	406	419	440	464	508	534	553	566	617	624	664	708	783	749	785	819	835	879	944	850	838	900	956	936	806	932	803	845	970	962	975		
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51	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
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54	6.4	6.4	6.8	7.4	7.5	8.0	8.3	8.4	8.2	8.5	9.0	9.3	9.7	10.2	11.2	11.8	12.1	12.4	13.6	13.7	14.4	15.5	17.1	16.3	17.0	17.8	18.1	19.1	20.4	18.4	18.1	19.5	20.6	20.3	17.9	20.6	17.7	19.0	21.3	21.1	21.2		
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10	1930s										1940s										1950s										1960s									
11	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	
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48	3,606	3,891	3,906	4,195	3,855	3,441	3,104	3,276	3,565	3,759	4,141	4,430	4,188	4,364	4,760	4,884	4,914	5,097	5,068	4,254	4,536	5,104	5,383	5,199	5,976	6,475	6,577	6,742	6,834	7,490	7,977	8,318	8,538	8,986	9,407	9,453	9,842	10,376	10,974	
49	984	1,062	1,066	1,145	1,052	939	847	894	973	1,026	1,130	1,209	1,143	1,191	1,299	1,333	1,341	1,391	1,383	1,161	1,238	1,393	1,469	1,419	1,631	1,767	1,795	1,840	1,865	2,044	2,177	2,270	2,330	2,452	2,567	2,580	2,686	2,832	2,995	
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51	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.02%	0.05%	0.07%	0.10%	0.13%	0.13%	0.16%	0.17%	0.17%	0.19%	0.18%	0.17%	0.16%	0.16%	0.17%	0.18%	0.21%	0.22%	0.24%	0.24%		
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54	21.2	23.0	22.8	24.4	22.3	19.9	17.9	18.8	20.4	21.0	23.3	24.8	23.4	24.8	26.2	27.0	27.0	27.4	26.9	23.5	24.7	27.6	29.2	28.1	30.4	32.2	32.7	33.1	33.1	35.9	37.7	39.7	40.9	42.7	44.6	44.3	45.1	47.1	49.4	
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1																																			
2	Oil, venting, flaring, and fugitive methane																																		
3	Richard Heede																																		
4	Accountability Institute																																		
5	24-Jul-19																																		
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10	Saudi Aramco, Saudi Arabia																	to 2015				to 2016				to 2017				to 2018					
11	2000s					2010s										Cumulative		Entity emissions		Cumulative		Cumulative		Cumulative		Cumulative									
12	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	MtCO2e	MtCO2e	MtCO2e	MtCO2e	MtCO2e	MtCO2e	MtCO2e	MtCO2e	MtCO2e	MtCO2e	MtCO2e	MtCO2e	MtCO2e	MtCO2e	MtCO2e	MtCO2e	MtCO2e	MtCO2e	MtCO2e
13	(except where noted) V (V = verified)																																		
14	updated 23Jan19, after adjusting gas prodn data																																		
15	1,314	1,378	1,355	1,303	1,363	1,225	1,238	1,401	1,471	1,341	1,360	1,487	1,620	1,548	-	50,361	Entity CO2 emissions		kg CO2/ACC2		to 2015		to 2016		to 2017		to 2018 (na)								
16	104	153	160	146	155	167	183	163	176	180	186	189	198	206	-	4,003	Oil & NGLs	MtCO2	linked	3.83	linked	47,192	48,812	50,361	50,361										
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Natural Gas	MtCO2	linked	15.94	linked	3,598	3,796	4,003	4,003										
18	1,418	1,532	1,516	1,450	1,518	1,392	1,421	1,564	1,647	1,521	1,546	1,676	1,818	1,755	-	54,364	Coal	MtCO2	linked	57.26	linked	-	-	-	-										
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Combustion total	MtCO2	sum	28.53	linked	50,791	52,609	54,364	54,364										
20	5	5	5	5	5	5	5	5	6	5	5	6	6	6	-	193	Oil & NGLs: Venting	MtCO2	calculated	1.74	linked	181	187	193	193										
21	21	22	22	21	22	20	20	22	23	21	22	24	26	25	-	803	Natural Gas: Flaring	MtCO2	calculated	7.26	linked	752	778	803	803										
22	6	9	9	8	9	10	10	9	10	10	11	11	11	12	-	229	Own fuel use	MtCO2	calculated	2.53	linked	206	217	229	229										
23	3	4	5	4	4	5	5	5	5	5	5	5	6	6	-	114	Natural Gas: Venting	MtCO2	calculated	6	linked	103	108	114	114										
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	7	Natural Gas: Flaring	MtCO2	calculated	1.248	linked	6	7	7	7										
25	35	41	41	39	41	39	41	42	45	42	43	46	49	49	-	1,346	Venting & Flaring total	MtCO2	sum	1,248	linked	1,248	1,298	1,346	1,346										
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Cement	MtCO2	linked	-	linked	-	-	-	-										
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Total CO2 emissions	MtCO2	sum	row 18+24+26	linked	52,039	53,907	55,710	55,710										
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Entity methane emissions		kg CH4/ACC2		to 2015		to 2016		to 2017		to 2018								
29	1,453	1,572	1,556	1,488	1,559	1,431	1,461	1,606	1,692	1,563	1,589	1,722	1,868	1,803	-	55,710	Methane: Oil & NGLs	MtCH4	calculated	1.92	linked	91	94	97	97										
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	97	Methane: Natural Gas	MtCH4	calculated	9.88	linked	36	38	40	40										
31	3	3	3	3	3	2	2	3	3	3	3	3	3	3	-	40	Methane: Coal	MtCH4	calculated	4.03	linked	-	-	-	-										
32	1	2	2	1	2	2	2	2	2	2	2	2	2	2	-	-	Total methane emissions	MtCH4	sum	126	linked	126	131	136	136										
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Entity methane emissions		GWP		to 2015		to 2016		to 2017		to 2018								
34	4	4	4	4	4	4	4	4	5	4	4	5	5	5	-	136	Methane: Oil & NGLs	MtCO2e	calculated	28	linked	2,542	2,629	2,712	2,712										
35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Methane: Natural Gas	MtCO2e	calculated	28	linked	995	1,050	1,107	1,107										
36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Methane: Coal	MtCO2e	calculated	28	linked	-	-	-	-										
37	71	74	73	70	73	66	67	75	79	72	73	80	87	83	-	2,712	Total methane emissions	MtCO2e	sum	per IPCC SAR	linked	3,537	3,679	3,820	3,820										
38	29	42	44	41	43	46	51	45	49	50	51	52	55	57	-	1,107	Total attributed emissions	MtCO2e	sum	55,576	che	57,586	59,530	59,530	59,530										
39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	CDIAC CO2 emissions		MtCO2		to 2015		to 2016		to 2017		to 2018								
40	100	117	117	111	116	112	117	121	128	122	125	132	142	140	-	3,820	Oil, Natural Gas, Coal, Flaring, & Cement	Mt Carbon	1,502,470	1,538,147	1,574,302	1,611,433													
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Entity percent of total CO2 emissions		Percent		to 2015		to 2016		to 2017		to 2018								
42	1,552	1,689	1,674	1,599	1,675	1,543	1,578	1,726	1,820	1,686	1,713	1,855	2,010	1,944	-	59,530	3.46%	Percent	3.46%	3.50%	3.54%	3.46%													
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	CDIAC/EDGAR methane		Tg CH4		to 2015		to 2016		to 2017		to 2018								
44	28,193	29,253	30,288	30,882	31,881	31,525	33,068	34,359	34,921	35,213	35,511	35,465	35,677	36,155	37,131	1,611,433	5,459	Tg CH4	5,459	5,459	5,459	5,459													
45	7,694	7,983	8,266	8,428	8,701	8,603	9,025	9,377	9,530	9,610	9,691	9,679	9,737	9,867	10,134	439,779	Entity percent of total CH4 emissions		Percent		to 2015		to 2016		to 2017		to 2018								
46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.50%	Percent	2.50%	2.50%	2.50%	2.50%													
47	5.15%	5.37%	5.14%	4.82%	4.89%	4.54%	4.42%	4.67%	4.85%	4.44%	-	-	-	-	-	3.46%																			
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																			
49	99.3	103.4	107.4	110.2	115.4	113.2	120.9	-	-	-	-	-	-	-	-	5,459																			
50	0.04	0.04	0.04	0.04	0.04	0.04	0.03	-	-	-	-	-	-	-	-	2.50%																			
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