



2018 performance data

corporate responsibility report

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performance data

these tables include our quantitative environmental, safety and social performance data

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Environmental performance ¹	2018	2017	2016	2015	2014
Accidental release prevention and response					
Petroleum spills to land and water (volume in thousand barrels)²	1.4	3.4	0.7	0.8	0.8
Total volume recovered	1.1	3.1	0.3	0.6	0.4
Petroleum spills to land and water (number of spills)²	67	59	62	63	79
Spills of significance (number of spills)³	6	12	8	14	
Natural resources – water					
Fresh water withdrawn (million cubic meters)⁴	71	74	80	78	85
Fresh water consumed (million cubic meters)⁴	70	73	79	77	
Nonfresh water withdrawn (million cubic meters)⁴	39	41	36	43	41
Wastewater					
Average oil concentration in discharges to surface water (parts per million)⁵					
Upstream	7	8	9	10	9
Refining	1	1	1	1	1
Total amount of oil discharged to surface water (thousand metric tons)⁵					
Upstream	0.7	0.9	1.2	1.3	1.3
Refining	0.03	0.04	0.04	0.04	0.05
Greenhouse gas					
Equity basis					
Direct GHG emissions (Scope 1), equity basis (million metric tons of CO₂-equivalent)^{6, 7, 8}	59	57	58	58	56
GHG emissions from imported electricity and steam (Scope 2), equity basis (million metric tons of CO₂-equivalent)^{6, 8}	4	3	4	4	5
GHG emissions from exported electricity and steam, equity basis (a type of Scope 3 emissions) (million metric tons of CO₂-equivalent)^{6, 8}	4	4	4	5	5
GHG emissions from third-party use of our products, equity basis (a type of Scope 3 emissions) (million metric tons of CO₂)^{6, 9}	396	376	364	368	358
Operated basis					
Direct GHG emissions (Scope 1), operated basis (million metric tons of CO₂-equivalent)^{6, 7, 8}	66	64	64	66	66
GHG emissions from imported electricity and steam (Scope 2), operated basis (million metric tons of CO₂-equivalent)^{6, 8}	5	5	6	6	6

Environmental performance, ¹ continued	2018	2017	2016	2015	2014
Operated basis, continued					
Methane emissions, direct, operated basis (million metric tons of CO ₂ -equivalent) ⁸	4	4	6	6	6
Upstream GHG emissions intensity, direct, operated basis (metric tons of CO ₂ -equivalent per 1,000 barrels of oil-equivalent production) ⁸	30	31	33	34	34
Upstream direct GHG emissions (Scope 1), operated basis (million metric tons of CO ₂ -equivalent) ^{6, 7, 8}	47	46	45	47	47
Refining GHG emissions intensity, direct, operated basis (metric tons of CO ₂ -equivalent per 1,000 barrels of crude oil and other refinery feed) ⁸	35	35	36	35	37
Refining direct GHG emissions (Scope 1), operated basis (million metric tons of CO ₂ -equivalent) ^{6, 7, 8}	15	15	15	15	15
Average flare gas volume rate, direct, operated basis (million standard cubic feet per day) ¹⁰	467	556	625	615	563
Energy efficiency					
Total energy consumption, operated assets and nonoperated joint-venture refineries (trillion BTUs) ¹¹	922	820	830	865	920
Total energy consumption, operated assets	760	664	671	711	744
Total energy consumption, operated assets and nonoperated joint-venture refineries (million gigajoules) ¹¹	973	865	876	913	970
Total energy consumption, operated assets	802	701	708	750	785
Manufacturing Energy Index (Refining) (no units) ¹¹	85.0	85.0	84.6	85.2	87.6
Upstream Energy Intensity (thousand BTUs per barrel of oil-equivalent) ¹¹	349	303	308	330	341
Pipeline Energy Intensity (BTUs per barrel of oil-equivalent-mile) ¹¹	11	13	20	24	29
Shipping Energy Intensity (BTUs per metric ton-mile) ¹¹	75	70	43	32	49
Non-Manufacturing Energy Index (Oronite, Lubricants, etc.) (no units) ¹¹	74	75	75	79	86
Air emissions					
Total volatile organic compounds (VOCs) emitted (thousand metric tons) ¹²	101	139	147	144	134
Total sulfur oxides (SO _x) emitted (thousand metric tons) ¹²	40	52	66	84	112
Total nitrogen oxides (NO _x) emitted (thousand metric tons) ¹²	142	147	148	148	138
Waste					
Hazardous waste generated (million metric tons) ¹³	0.4	0.4	0.6	0.7	1.0
Hazardous waste disposed of (million metric tons) ¹³	0.3	0.3	0.4	0.3	0.8
Hazardous waste recycled (million metric tons) ¹³	0.2	0.1	0.3	0.4	0.1
Fines and settlements					
Number of environmental, health and safety fines paid and settlements entered into, equity basis ¹⁴	58	102	102	135	292
Cost of environmental, health and safety fines paid and settlements entered into, equity basis (millions of dollars) ¹⁴	\$6.4	\$40.5	\$6.7	\$3.9	\$57.1

U.S. Equal Employment Opportunity Commission statistics¹⁵	2018	2017	2016	2015	2014
Percent women among total employees	31	30	30	30	30
Percent minorities among total employees	41	39	38	37	36
Asian	14	13	13	13	12
Latino	16	15	14	13	13
Black	8	8	8	8	8
Other	3	3	3	3	2
Percent women among executives and senior managers	22	19	18	17	16
Percent minorities among executives and senior managers	19	16	13	13	12
Asian	9	7	6	6	5
Latino	6	5	4	5	4
Black	3	3	3	2	2
Other	0.9	0.5	0.3	0.4	0.5
Percent women among first- and mid-level managers	30	29	29	28	29
Percent minorities among first- and mid-level managers	33	32	30	29	29
Asian	12	12	12	12	11
Latino	12	12	11	9	9
Black	7	7	6	7	7
Other	1	1	2	2	1
Percent women among professionals	33	33	33	33	32
Percent minorities among professionals	36	35	35	35	34
Asian	16	16	16	15	14
Latino	11	11	10	10	10
Black	7	7	7	8	8
Other	2	2	2	2	2

Global employee diversity¹⁵	2018	2017	2016	2015	2014
Number of regular employees at year-end	45,047	48,456	51,953	58,178	61,456
Number of service station employees at year-end	3,591	3,298	3,248	3,316	3,259
Number of U.S. employees at year-end	21,465	22,048	23,418	26,448	28,666
Percent U.S. employees represented by unions	11	11	11	10	10
Percent women represented in total workforce	25	25	24	24	25
Percent women represented at mid-level management	19	19	18	17	16
Percent women represented at senior leadership	19	18	16	16	16
Percent women represented at executive leadership	16	14	14	15	16
Percent women and non-Caucasian men represented at senior executive levels	36	34	31	31	31
Percent employees working in their home country	96	95	94	93	92
Percent workforce in North America	47	44	45	45	46
Percent workforce in Asia-Pacific	28	28	28	29	29
Percent workforce in Africa	11	14	14	13	13
Percent workforce in Europe/Middle East	9	8	7	7	6
Percent workforce in South America	4	3	4	4	4

Supply chain^{16,17}	2018	2017	2016	2015	2014
Total goods and services spending (billions of dollars)	\$25.1	\$24.8	\$27.3	\$35.8	\$40.9
Total goods and services spending with U.S.-based businesses (billions of dollars)	\$11.6	\$11.2	\$10.7	\$13.5	\$15.4
Total goods and services spending with U.S.-based small businesses (billions of dollars)	\$1.7	\$1.6	\$1.7	\$2.1	\$2.3
Total goods and services spending with U.S.-based woman- and minority-owned businesses (billions of dollars)	\$0.7	\$0.6	\$0.5	\$0.7	\$0.9

Health and safety performance ¹⁸	2018	2017	2016	2015	2014
Total Recordable Incident Rate (incidents per 200,000 work-hours)¹⁹					
Workforce	0.128	0.13	0.14	0.18	0.18
Benchmark	0.26	0.26	0.26	0.23	0.33
Employees	0.075	0.09	0.10	0.10	0.10
Benchmark	0.21	0.23	0.24	0.24	0.28
Contractors	0.145	0.15	0.16	0.20	0.21
Benchmark	0.28	0.28	0.27	0.22	0.36
Lost-Time Incident Frequency (Days Away From Work incidents and fatalities per million work-hours)¹⁹					
Workforce	0.016	0.09	0.10	0.10	0.11
Benchmark	0.30	0.25	0.28	0.28	0.36
Employees	0.013	0.08	0.10	0.10	0.06
Benchmark	0.33	0.28	0.32	0.38	0.39
Contractors	0.017	0.10	0.11	0.10	0.12
Benchmark	0.29	0.23	0.25	0.23	0.35
Days Away From Work Rate (incidents per 200,000 work-hours)¹⁹					
Workforce	0.016	0.016	0.017	0.019	0.021
Benchmark	0.060	0.048	0.051	0.054	0.070
Employees	0.013	0.012	0.018	0.020	0.011
Benchmark	0.065	0.054	0.063	0.075	0.077
Contractors	0.017	0.018	0.016	0.018	0.023
Benchmark	0.058	0.045	0.044	0.044	0.067
Number of work-related fatalities					
Workforce	0	6	10	3	3
Employees	0	2	1	0	0
Contractors	0	4	9	3	3
Work-related fatal accident rate (work-related employee or contractor fatalities per 100 million work-hours)¹⁹					
Workforce	0.00	1.32	2.03	0.51	0.49
Benchmark	0.27	0.85	2.23	0.63	0.78
Employees	0.00	1.77	0.82	0.00	0.00
Contractors	0.00	1.17	2.44	0.67	0.63
Work-related fatal incident rate (work-related incidents with employee or contractor fatalities per 100 million work-hours)	0.00	1.32	0.81	0.51	0.49
Motor Vehicle Crash Rate (workforce vehicle incidents per million miles driven)²⁰	0.02	0.04	0.03	0.02	0.04
Number of process safety Tier 1 events (ANSI/API Recommended Practice 754 guidance)²¹	16	22	22	29	19
Upstream	9	14	16	18	15
Downstream & Chemicals	6	7	6	10	3
Midstream	1	1	0	1	1

notes to pages 1 through 5

- 1 This section reflects 2018 data collected as of April 12, 2019. All data are reported on an operated basis unless otherwise noted.
- 2 Chevron reports petroleum spills to land and water to conform to the 2015 IPIECA Reporting Guidance. Spills to land and water that are greater than or equal to one barrel are included. Spills to secondary containment and chemical spills are excluded.
- 3 The six (6) spills of significance that Chevron experienced in 2018 ranged in size from 0.01 to 0.3 thousand barrels. Of the one (1) thousand barrels spilled in total, 0.6 were spilled to secondary containment.

For purposes of conforming to the 2015 IPIECA Reporting Guidance, Chevron defines a spill of significance as a process safety Tier 1 loss-of-primary-containment (LOPC) event (as defined by American National Standards Institute/American Petroleum Institute [ANSI/API] Recommended Practice [RP] 754) with a consequence of a release of material greater than the threshold quantities described in Table 1 of ANSI/API RP 754 in any one-hour period. Spills to secondary containment, regardless of actual environmental impact, are included, as are chemical spills. Releases to air are excluded.
- 4 Fresh water withdrawn totals decreased in 2018 (relative to prior years) in part due to continued transition to the use of brackish water in lieu of fresh water at our operations in the Permian Basin and a refinement in water use estimates.

Produced water is excluded from fresh water withdrawn, fresh water consumed and nonfresh water withdrawn.

Fresh water withdrawn from the environment is defined per local legal definitions. If no local definition exists, fresh water is defined as water extracted, directly or indirectly, from surface water, groundwater or rainwater that has a total dissolved solids concentration of less than or equal to 2,000 mg/L. Fresh water withdrawn does not include effluent or recycled/reclaimed water from municipal or other industrial wastewater treatment systems, as this water is reported under nonfresh water withdrawn.

Nonfresh water withdrawn could include: seawater; brackish groundwater or surface water; reclaimed wastewater from another municipal or industrial facility; desalinated water; or remediated groundwater used for industrial purposes.
- 5 Oil concentration is determined by the sampling of effluent streams, using methods required or recommended by regulatory agencies or authorities, where applicable. Chevron reports the total cumulative amount of oil discharged to surface water excluding spills, which are reported separately.
- 6 The World Resources Institute/World Business Council for Sustainable Development *Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard* defines three “scopes” that Chevron uses to report GHG emissions. Scope 1 includes direct emissions from sources within a facility. Scope 2 includes indirect emissions from electricity and steam that Chevron facilities import. Scope 3 includes all other indirect emissions. Chevron reports information related to Scope 3 emissions from third-party use of our products, which account for over 90% of our total Scope 3 emissions.
- 7 Direct GHG emissions related to *production* of energy in the form of electricity or steam exported or sold to a third party have been included in the reported Scope 1 emissions to conform to the 2015 IPIECA Reporting Guidance.
- 8 2018 direct GHG emissions, on both an equity and operated basis, increased primarily due to increased production at our Wheatstone operations.

Refinements were made in the data reporting for 2017 equity and operated GHG emissions.

All six Kyoto GHGs—carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride, perfluorocarbons and hydrofluorocarbons—are included in Chevron’s Scope 1 emissions. CO₂, CH₄ and N₂O are accounted for in Chevron’s Scope 2 emissions and in Chevron’s Scope 3 emissions related to the electricity and steam that Chevron exports to third parties.

The following entities are not currently included in the 2018 Chevron corporate GHG inventory: Chevron Phillips Chemical Co., the Caspian Pipeline Consortium, and other nonoperated assets in which Chevron has an equity interest of 16 percent or less. Emissions from the Wheatstone asset have been included in the inventory where Chevron has operational control, as defined by Australia’s *National Greenhouse and Energy Reporting Act 2007*.

Information regarding GHG emissions from Chevron Phillips Chemical Company LLC can be found at cpchem.com.

Additional GHG emissions data can be found at chevron.com/ghgmanagement.
- 9 Chevron calculated emissions from third-party use of our products by multiplying total 2018 Upstream liquids and gas production by emissions factors from API’s *Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry* (2004, 2009).
- 10 The 2018 enterprisewide flare gas volume rate decreased due to improvements made in equipment reliability in our Australasia business unit.

The 2017 average flare gas volume rate has been restated.

In 2018, 17 percent of Chevron’s total direct (Scope 1), operated GHG emissions were from process emissions and vented sources, as defined by API’s *Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry* (2004, 2009).
- 11 Total energy consumption increased due to increased production in our Australasia and Midcontinent business units but were offset by the divestment of less efficient assets.

The 2017 energy data have been restated to correct an error and account for additional information that was received after the publication of the *2017 Corporate Responsibility Report Highlights*.

Refining energy performance is measured by the Manufacturing Energy Index (MEI), which is calculated using the Solomon Energy Intensity Index methodology. MEI includes operated assets and nonoperated joint-venture refineries.

Energy performance for Oronite, Lubricants, Americas Products and International Products is measured by the Non-Manufacturing Energy Index, which is the energy required to produce Chevron products compared to the energy that would have been required to produce the same products in 1992 (the index’s base year).
- 12 VOC, SO_x and NO_x emissions decreased in 2018 due to reductions in venting and flaring, asset divestments, revision of in-scope sources and refinements made in data collection and calculations.

Refinements were made in the data reporting for 2017 NO_x, SO_x and VOC emissions, including the exclusion of third-party time chartered vessels.

For compiling and reporting air emissions data, Chevron follows regulatory definitions of VOC. SO_x emissions include SO₂ and SO₃, reported as SO₂-equivalent. NO_x emissions include NO and NO₂ (reported as NO₂-equivalent) and exclude N₂O.

Additional air emissions data can be found at chevron.com/air.
- 13 To conform to the 2015 IPIECA Reporting Guidance, and where appropriate information and data exist, our hazardous waste numbers starting in 2015 exclude remediation waste generated, disposed of and recycled.

Hazardous waste amounts are quantified using methods required or recommended by regulatory agencies or authorities, where applicable. In other instances, similar methods are used, including direct measurement onsite or at the point of shipping, engineering estimates, and process knowledge. Chevron follows the regulatory definitions of hazardous waste applicable to the jurisdictions in which we operate, including *de minimis* specifications (below which hazardous waste quantities do not need to be reported).
- 14 Data are based on information that was received from the regulatory agency and recorded internally prior to the publication of this report.
- 15 Global employee diversity data and data from the U.S. Equal Employment Opportunity Commission have been rounded to the nearest integer for 2018 and previous years, and ethnicity/gender combined has been rounded to one decimal place.

The Other category in the U.S. Equal Employment Opportunity Commission statistics includes Two or More Races, Native American, and Pacific Islander.

U.S. Equal Employment Opportunity Commission statistics minority grouping includes ethnic diversity, both men and women.
- 16 This section reflects data collected as of February 20, 2019.
- 17 Data exclude spend that is ultimately shared with our partners.
- 18 This section reflects Chevron data collected as of February 12, 2019.
- 19 Health and safety performance rates include both injury- and illness-related incidents. API’s *Benchmarking Survey of Occupational Injuries, Illnesses and Fatalities in the Petroleum Industry* data are used as industry benchmarks.
- 20 Data include catastrophic and major incidents only.
- 21 Process safety Tier 1 (LOPC) events are unplanned or uncontrolled releases resulting in consequences equivalent to those specified by ANSI/API RP 754 and *International Oil & Gas Producers (IOGP) Report 456: Process Safety Recommended Practice on Key Performance Indicators*.

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