2016 corporate responsibility report

performance data

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performance data

These tables include our quantitative environmental, safety and social performance data. For complete reporting, including performance data, visit **chevron.com/reporting**.

Global employee diversity	2016	2015	2014	2013	2012
Number of regular employees at year-end	51,953	58,178	61,456	61,345	58,286
Number of service station employees at year-end	3,248	3,316	3,259	3,205	3,656
Number of U.S. employees at year-end	23,418	26,448	28,666	28,974	27,471
Percent U.S. employees represented by unions	10.6	10.0	9.6	10.4	10.4
Percent women in total workforce	24.2	24.3	24.7	24.3	23.8
Percent women represented at mid-level and above	14.9	14.1	14.2	13.4	12.5
Percent women and non-Caucasian men represented at senior executive levels	31.5	31.3	30.6	29.7	26.9
Percent employees working in their home country	94	93	92	91	
Percent workforce in North America	44.6	44.9	45.8	46.2	45.8
Percent workforce in Asia-Pacific	28.1	28.9	29.3	28.4	28.1
Percent workforce in Africa	13.7	13.2	12.8	13.1	13.5
Percent workforce in Europe/Middle East	7.3	7.0	6	6.4	6.4
Percent workforce in South America	4.0	3.9	3.9	3.9	4.1

Health and safety performance[1]	2016	2015	2014	2013	2012
Total Recordable Incident Rate (incidents per 200,000 work-hours)[2]					
Workforce	0.14	0.18	0.18	0.21	0.24
Benchmark	0.26	0.24	0.33	0.35	0.38
Employees	0.10	0.10	0.10	0.15	0.20
Benchmark	0.24	0.24	0.28	0.29	0.31
Contractors	0.16	0.20	0.21	0.23	0.25
Benchmark	0.27	0.24	0.36	0.38	0.42
Lost-Time Incident Frequency (Days Away From Work incidents and fatalities per million work-hours)[2]					
Workforce	0.10	0.10	0.11	0.13	0.15
Benchmark	0.28	0.29	0.36	0.38	0.39
Employees	0.08	0.10	0.06	0.14	0.13
Benchmark	0.32	0.38	0.39	0.42	0.39
Contractors	0.11	0.10	0.12	0.12	0.15
Benchmark	0.25	0.24	0.35	0.36	0.39
Days Away From Work Rate (incidents per 200,000 work-hours)[2]					
Workforce	0.016	0.019	0.021	0.020	0.027
Benchmark	0.051	0.057	0.070	0.072	0.075
Employees	0.015	0.020	0.011	0.026	0.024
Benchmark	0.063	0.075	0.077	0.083	0.075
Contractors	0.016	0.018	0.023	0.018	0.027
Benchmark	0.044	0.047	0.067	0.067	0.074
Number of work-related fatalities					
Workforce	10	3	3	16	8
Employees	1	0	0	2	1
Contractors	9	3	3	14	7
Work-related fatal accident rate (work-related employee or contractor fatalities per 100 million work-hours)[2]					
Workforce	2.03	0.51	0.49	2.71	1.48
Benchmark	2.23	0.66	0.78	1.83	1.47
Employees	0.82	0.00	0.00	1.44	0.76
Contractors	2.44	0.67	0.63	3.11	1.71
Work-related fatal incident rate (work-related incidents with employee or contractor fatalities per 100 million work-hours)	**0.81**	**0.51**	**0.49**	**1.02**	**1.11**
Motor Vehicle Crash Rate (workforce vehicle incidents per million miles driven)[3]	**0.03**	**0.02**	**0.04**	**0.04**	**0.07**
Number of process safety Tier 1 events (ANSI/API Recommended Practice 754 guidance)[4]	**22**	**29**	**19**	**38**	**76**
Upstream	16	18	15	24	58
Downstream and chemicals	6	10	3	10	15
Midstream	0	1	1	4	3

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Environmental performance[5]	2016	2015	2014	2013	2012
Accidental release prevention and response					
Petroleum spills to land and water (volume in thousand barrels)[6]	**0.7**	**0.8**	**0.8**	**2.1**	**1.7**
Total volume recovered	0.3	0.6	0.4	1.4	1.2
Petroleum spills to land and water (number of spills)[6]	**62**	**63**	**79**	**133**	**146**
Spills of significance (number of spills)[7]	**9**	**13**			
Natural resources—water					
Fresh water withdrawn (million cubic meters)[8]	**78**	**78**	**85**	**93**	**88**
Fresh water consumed (million cubic meters)[8]	**77**	**77**			
Nonfresh water withdrawn (million cubic meters)[8]	**38**	**43**	**41**	**37**	**35**
Wastewater					
Average oil concentration in discharges to surface water (parts per million)[9]					
Upstream	9	10	9	10	10
Refining	1	1	1	2	4
Total amount of oil discharged to surface water (thousand metric tons)[9]					
Upstream	1.2	1.3	1.3	1.3	1.4
Refining	0.04	0.04	0.05	0.08	0.13
Greenhouse gas					
EQUITY BASIS					
Net greenhouse gas (GHG) emissions, equity basis (million metric tons of CO_2-equivalent)[10, 11, 12, 13, 15]	**60**	**59**	**56**	**57**	**57**
Direct GHG emissions (Scope 1), equity basis (million metric tons of CO_2-equivalent)[10, 12, 13, 15]	**60**	**59**	**56**	**57**	**58**
GHG emissions from imported electricity and steam (Scope 2), equity basis (million metric tons of CO_2-equivalent)[10, 13]	**4**	**4**	**5**	**5**	**4**
GHG emissions from exported electricity and steam, equity basis (million metric tons of CO_2-equivalent)[10, 13]	**4**	**5**	**5**	**5**	**6**
GHG emissions from third-party use of our products, equity basis (million metric tons of CO_2)[14]	**363**	**366**	**358**	**363**	**364**
OPERATED BASIS					
Direct GHG emissions (Scope 1), operated basis (million metric tons of CO_2-equivalent)[10, 12, 13]	**66**	**68**	**66**	**69**	**70**
GHG emissions from imported electricity and steam (Scope 2), operated basis (million metric tons of CO_2-equivalent)[10, 13]	**6**	**6**	**6**	**6**	**6**
Methane emissions, direct, operated basis (million metric tons of CO_2-equivalent)[13]	**6**	**6**	**6**	**7**	**6**
Upstream GHG emissions intensity, direct, operated basis (metric tons of CO_2-equivalent per 1,000 barrels of oil-equivalent production)[13]	**35**	**36**	**34**	**36**	**36**

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Environmental performance,[5] continued	2016	2015	2014	2013	2012
OPERATED BASIS, continued					
Refining GHG emissions intensity, direct, operated basis (metric tons of CO_2-equivalent per 1,000 barrels of crude oil and other refinery feed)[13]	**33**	**35**	**37**	**38**	**38**
Average flare gas volume rate, direct, operated basis (million standard cubic feet per day)[15]	**644**	**615**	**563**	**692**	**821**
Energy efficiency					
Total energy consumption, operated assets and nonoperated joint venture refineries (trillion BTUs)[16]	**862**	**865**	**920**	**881**	**870**
Total energy consumption, operated assets	703	711	744	697	690
Total energy consumption, operated assets and nonoperated joint venture refineries (million gigajoules)[16]	**909**	**913**	**970**	**929**	**918**
Total energy consumption, operated assets	742	750	785	735	728
Manufacturing Energy Index (Refining) (no units)[16]	**84.2**	**85.2**	**87.6**	**88.8**	**88.9**
Upstream Energy Intensity (thousand BTUs per barrel of oil equivalent)[16]	**338**	**330**	**341**	**344**	**325**
Pipeline Energy Intensity (BTUs per barrel of oil equivalent-mile)[16]	**20.0**	**24.1**	**28.7**	**30.9**	**34.5**
Shipping Energy Intensity (BTUs per metric ton-mile)[16]	**43.4**	**32.4**	**48.7**	**50.5**	**55.2**
Non-Manufacturing Energy Index (Oronite, Lubricants, etc.) (no units)[16]	**75.6**	**79.1**	**86.0**	**81.9**	**73.7**
Air emissions					
Total volatile organic compounds (VOCs) emitted (thousand metric tons)[17]	**154**	**144**	**134**	**147**	**159**
Total sulfur oxides (SO_x) emitted (thousand metric tons)[17]	**66**	**84**	**112**	**141**	**123**
Total nitrogen oxides (NO_x) emitted (thousand metric tons)[17]	**151**	**148**	**138**	**147**	**146**
Waste					
Hazardous waste generated (million metric tons)[18]	**0.6**	**0.7**	**1.0**	**0.9**	**0.9**
Hazardous waste disposed of (million metric tons)[18]	**0.4**	**0.3**	**0.8**	**0.8**	**0.5**
Hazardous waste recycled (million metric tons)[18]	**0.3**	**0.4**	**0.1**	**0.1**	**0.4**
Fines and settlements					
Number of environmental, health and safety fines paid and settlements entered into, equity basis	**102**	**135**	**292**	**284**	**339**
Cost of environmental, health and safety fines paid and settlements entered into, equity basis (millions of dollars)	**6.7**	**3.9**	**57.1**	**119.2**	**91.1**

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U.S. equal employment opportunity commission statistics	2016	2015	2014	2013	2012
Percent minorities among total employees	38.0	37.0	36.3	35.9	36.2
Percent women among total employees	29.9	29.9	29.7	29.3	29.7
Percent minorities among executives and senior managers	13.4	13.1	11.6	12.1	11.1
Percent minorities among first- and mid-level managers	30.2	29.5	28.6	27.4	27.9
Percent women among executives and senior managers	18.5	17.0	16.3	16.4	15.9
Percent women among first- and mid-level managers	29.0	28.3	28.8	27.5	28.1
Percent minorities among professionals (women and men)	34.8	34.5	33.9	33.0	32.3
Percent women among professionals	32.5	32.5	32.3	31.8	32.0

Supply chain management[19]	2016	2015	2014	2013	2012
Total goods and services spend (billions of dollars)	$39	$54	$63	$59	$52
Total goods and services spend with U.S.-based businesses (billions of dollars)	$12	$15	$18	$17	$16
Total goods and services spend with U.S.-based small businesses (billions of dollars)[20]	$1.8	$2.3	$2.5	$2.6	$2.5
Goods and services spend with U.S.-based woman- and minority-owned businesses (billions of dollars)[20]	$0.57	$0.77	$0.98	$0.95	$0.86

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1 This section reflects data collected as of February 2, 2017.

2 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. Benchmark data on competitor-average performance for 2016 were available at the time of publication.

3 Data include catastrophic and major incidents only.

4 Loss-of-primary-containment (LOPC) incidents are unplanned or uncontrolled releases resulting in consequences equivalent to those specified by ANSI/API Recommended Practice [RP] 754 and *International Oil & Gas Producers (IOGP) Report 456: Process Safety Recommended Practice on Key Performance Indicators*.

5 This section reflects 2016 data collected as of April 14, 2017. All data are reported on an operated basis unless otherwise noted.

6 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.

7 The nine spills of significance Chevron experienced in 2016 ranged in size from 0.4 barrels to 329 barrels. Of the 882 total barrels spilled, 831 barrels 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] 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. Refer to footnote 4 for the definition of an LOPC

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event. Spills to secondary containment, regardless of actual environmental impact, are included, as are chemical spills.

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

Nonfresh water withdrawn totals decreased in 2016 (relative to prior years) due to lower demand from our operations in California and the Partitioned Zone between Saudi Arabia and Kuwait.

9 2015 average oil concentration for Upstream has been restated to correct an error.

Oil concentration is determined by the sampling of effluent streams. Chevron reports the total cumulative amount of oil discharged to surface water excluding spills, which are reported separately.

10 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 imports. Scope 3 includes all other indirect emissions. Chevron reports information related to two types of Scope 3 emissions: emissions associated with electricity and steam that Chevron exports to third parties and emissions from third-party use of our products.

11 The GHG performance data that reference this footnote were calculated by adding direct (Scope 1) emissions to indirect (Scope 2) emissions and subtracting indirect (Scope 3) emissions associated with electricity and steam that Chevron exports. Due to rounding, individual numbers may not sum to the total number.

12 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.

13 Refinements were made in the data reporting for 2015 equity and operated GHG emissions.

2016 direct, operated GHG emissions decreased primarily due to variation in which assets were producing and reduced power generation and steam demand. In addition, the execution of two flare reduction projects in our Nigeria/Mid-Africa and Southern Africa strategic business units contributed to the decrease.

The basis for the methane and GHG intensity data was changed from equity to operated.

All six Kyoto GHGs—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride, perfluorocarbons and hydrofluorocarbons—are included in Chevron's Scope 1 emissions. CO_2, CH_4 and N_2O 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 2016 Chevron corporate GHG inventory: Chevron Phillips Chemical Co., the Caspian Pipeline Consortium, the Chad–Cameroon pipeline joint venture, and other nonoperated assets in which Chevron has an equity interest of 16 percent or less.

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

14 Chevron calculated emissions from third-party use of our products by multiplying total 2016 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).

15 The 2016 enterprisewide flare gas volume rate increased due to the startup of major capital projects (MCPs). It is anticipated that the enterprisewide flare gas volume rate will decrease after steady-state operation of the MCPs is achieved.

The 2015 enterprisewide flare gas volume rate has been refined to include emissions from MCPs that started up in 2015.

In 2016, facilities under Chevron's operational control generated an enterprisewide average vent gas volume rate of 42 million standard cubic feet per day.

16 Total energy consumption for 2014 and 2015 has been restated to include consumption by Chevron Power and Energy Management.

2016 Pipeline Energy Intensity decreased due to changes in calculation methodology. 2016 Shipping Energy Intensity increased because we began reporting energy consumption from time-chartered vessels.

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).

17 VOC and NO_x emissions increased in 2016 because we began reporting emissions from MCPs that commenced operation. In addition, refinements were made in the data reporting.

SO_x emissions decreased in 2016 primarily due to the shut-in of production at facilities in the Partitioned Zone between Saudi Arabia and Kuwait.

2015 VOC, SO_x and NO_x emissions have been refined to include emissions from MCPs that started in 2015 and to align with data that were reported to regulatory agencies after the publication of Chevron's 2015 Corporate Responsibility Report.

For compiling and reporting air emissions data, Chevron follows regulatory definitions of VOC. SO_x emissions include SO_2 and SO_3, reported as SO_2-equivalent. NO_x emissions include NO and NO_2 (reported as NO_2-equivalent) and exclude N_2O.

Additional air emissions data can be found at chevron.com/air.

18 Corrections were made to the amounts of hazardous waste generated and recycled in 2015 to include waste that was previously not reported.

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 within which we operate, including *de minimis* specifications (below which hazardous waste quantities do not need to be reported).

19 This section reflects data collected as of March 29, 2017.

20 Some prior years' data are restated due to improvements in data quality.

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