

# we develop the energy that improves lives and powers the world forward

The Chevron Way values are the foundation upon which our company is built. These values distinguish us and guide our actions to deliver results. We conduct our business in a socially and environmentally responsible manner, respecting the law and universal human rights to benefit the communities where we work.

Our values are: diversity and inclusion, high performance, integrity and trust, partnership, and protect people and the environment.

read more > chevron.com/chevronway

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# the business of progress

Everywhere we work, we commit to running our business the right way, and we strive to build relationships and make investments that unlock the potential for progress and prosperity. We are committed to developing energy ethically and responsibly in ways that support and protect our people, the communities where we work and the environment around us. WellSafe and other programs in our Upstream business help assure that well and reservoir fluids are under control and not released and help us achieve our goal of zero significant incidents. See Page 9 for a description of Chevron's WellSafe program.

**On the cover:** Kenneth Sell, Appalachian Mountain water supervisor, inspects equipment at a well site producing natural gas from shale formations in Pennsylvania's Appalachian Basin.

# a message from our chairman and chief executive officer



**John S. Watson**Chairman of the Board and
Chief Executive Officer

For over 138 years, we have provided affordable, reliable energy that creates economic opportunity and improves lives. Our business success is driven by our people and their commitment to getting results the right way. The 2016 Corporate Responsibility Report Highlights is a summary of how we address safety and the environmental, social and governance issues that matter to our business and stakeholders.

The foundation of how we operate is The Chevron Way, which explains who we are, what we believe, how we achieve and where we aspire to go. It defines our values, which distinguish us from our competitors and make us the partner of choice.

One of these values is to protect people and the environment. We demonstrate this value in a variety of ways, including through our commitment to human rights, which is embedded in our safety culture and participation in international human rights initiatives.

The principles of "do it safely or not at all" and "there is always time to do it right" underpin how we conduct our work. As part of our continuous improvement process,

we systematically investigate "near miss" events that had the potential to cause serious injuries or loss of containment and develop appropriate mitigations. Every member of our workforce is empowered with Stop-Work Authority—the right and responsibility to halt any potentially unsafe activity, without repercussion. Learn more about this on Page 8 of this report.

In addition, Chevron is working to manage greenhouse gas emissions and potential risks related to climate change. This includes investments in flare reduction, carbon dioxide injection and improved energy efficiency. Details are provided on Pages 10–13 and in our report on *Managing Climate Change Risks* at **chevron.com/climateriskperspective**.

We know our business success is directly tied to the progress and prosperity of the communities in which we operate. In providing oil and natural gas, we create local jobs and develop local workforces. We develop supply chains by enhancing local suppliers' capabilities to meet industry standards. In 2016, we spent \$39 billion on goods and services globally.

Beyond direct business investments and taxes, we unlock the potential for progress in these communities through social investments that focus on what we see as three crucial pillars: health, education and economic development. Last year, we made more than \$185 million in such social investments.

Our investments in health supported partnerships and programs that promote healthy communities by improving access to health care, strengthening health systems and helping fight against infectious diseases. Our investments in education were directed toward inspiring young people to pursue careers in science, technology, engineering and math—or STEM—a key building block of employability and economic development. Our investments in economic development promote self-sufficiency and job growth.

These are just some of the ways in which we demonstrate our commitment to responsible development of energy resources. The 2016 Corporate Responsibility Report Highlights provides additional details, illustrating our commitment to developing energy ethically and responsibly. Thank you for your interest in Chevron.

May 2017

The Mother

- Corporate responsibility highlight
- Downstream refinery
- Downstream major chemical manufacturing facility
- Upstream exploration area
- Upstream production

Locations are approximate.



our business success is driven by our people and their commitment to getting results the right way

From Upstream exploration and production to Midstream transportation, power and trading to Downstream manufacturing and retail, each of our businesses works in concert across virtually every facet of the energy industry.



Texas In the Permian Basin, we use brackish water in lieu of fresh water, when possible. More than 90 percent of the water used in our well completions in the Permian is from brackish water sources. See Page 17.



Mississippi In 2016, we performed a successful turnaround at our Pascagoula Refinery Fluidized Catalytic Cracking Unit that was completed with no flaring during shutdown, unit cleanup or unit startup. See Page 15.



**Mississippi** 

Angola On the Cabinda coastline of Angola, we developed and applied a Land Management Plan prior to execution of our Malongo Dock Project to prevent any potential impact on the sea turtle nesting season, which includes three different species that nest along the Malongo beach. Learn more about Chevron in Angola at chevron.com/angola.



Guided by The Chevron Way, we operate responsibly, execute with excellence and conduct our business in a socially and environmentally responsible manner, respecting the law and universal human rights to benefit the communities where we work. Below are corporate responsibility examples from just a few of our locations around the world.



Kazakhstan During the largest-ever planned maintenance program at our Tengizchevroil joint venture, we had zero Days Away From Work injuries among 8,800 workers over a 40-day period. See Page 9.



Japan To support Chevron's growing position, the company expanded its fleet of technologically advanced liquefied natural gas carriers to safely and reliably deliver cargoes to customers in Japan and elsewhere. Learn more at chevron.com/shipping.



**Australia** The Gorgon Project involves the design, construction and operation of facilities to reduce the project's annual greenhouse gas emissions by as much as 4 million metric tons per year. See Page 13.



# prioritizing issues for our reporting

Our corporate responsibility reporting focuses on environmental, social and governance (ESG) issues that matter to our business and our stakeholders—investors, customers, host governments, local communities and employees. To select the content for our 2016 Corporate Responsibility Report Highlights and the corporate responsibility section of **chevron.com**, we used an issue prioritization process that involved the following steps:

**Step 1:** A team of employees from across functions and business segments identified and validated ESG topics that are salient to our stakeholders and our business, using the outcome from our 2015 issue prioritization process as a basis. The team considered internal and external sources, including international reporting guidelines and frameworks, ESG analytics, topics addressed in previous Corporate Responsibility Reports, feedback received on the *2015 Corporate Responsibility Report Highlights*, media analysis, industry peer reviews, and learnings from a range of internal and external stakeholder engagements.

**Step 2:** The team conducted an initial prioritization of ESG issues based on relevance to our business.

**Step 3:** The team sought feedback on the initial prioritization of issues through dialogues with internal subject matter experts and external stakeholders.

**Step 4:** The team determined the issues that are of highest priority for our reporting.

**Step 5:** Chevron's Global Issues Committee, a subcommittee of Chevron's Executive Committee, reviewed and validated the team's assessment and prioritization. We discuss the issues of highest priority in this report or on our website.

Our prioritized issues reflect topics covered in the 2015 edition of the IPIECA/API/IOGP\* *Oil and gas industry guidance on voluntary sustainability reporting.* For 2016, Chevron reported on all 34 indicators. An IPIECA/API/IOGP content index is available on Page 30 of this report and at **chevron.com/IPIECA**.

\*IPIECA (the global oil and gas industry association for environmental and social issues)/American Petroleum Institute/International Association of Oil & Gas Producers.

# delivering results the right way

# guided by the chevron way, our board is committed to strong governance and the highest standard of ethics

learn more > chevron.com/corporategovernance

# board of directors

Our Board of Directors oversees and guides Chevron's business and affairs. Among the many duties of the Board is oversight of Chevron's risk management policies and practices to ensure that appropriate risk management systems are employed throughout the company. It regularly considers critical risk topics as part of its deliberative decision-making process, and annually, as part of Chevron's Enterprise Risk Management process, it reviews financial, operational, market, political and other risks inherent in our business.

The Board has four standing committees, each composed solely of independent Directors: Audit, Board Nominating and Governance, Management Compensation, and Public Policy. Each committee fulfills important responsibilities to help Chevron manage risks enterprisewide and compete more effectively to help build long-term stockholder value. The Public Policy Committee assists the Board in fulfilling its oversight of risks that may arise in connection with the social, political, environmental, human rights and public policy aspects of Chevron's business.

# director nomination process

An ethical, knowledgeable and diverse board is critical to Chevron's success. In identifying Director nominees, the Board strives to maintain a balance of individuals with business acumen, broad experience and expertise at the policy-making level in various areas, including science, technology, engineering, research or academia, and environmental affairs; with extensive knowledge of governmental, regulatory, legal or public policy issues; and with expertise in finance, global business or international affairs. The Board also seeks to achieve diversity of age, gender and ethnicity.

# governance

For Chevron, good corporate governance means having structures and processes in place to ensure that decisions and actions are in the best interests of our stockholders. It also means being responsive to our stockholders. Through our Investor Relations and Corporate Governance departments, we engage with many of our stockholders to discuss operational, financial, governance, executive compensation, environmental, safety, social and policy issues. Fostering long-term relationships and maintaining stockholder trust and goodwill is a core Chevron objective.

# business ethics

Diversity and inclusion, high performance, integrity and trust, partnership, and protecting people and the environment are all core values of The Chevron Way that underpin our business conduct. We believe that when we apply our ethical principles to our business decisions, the company is positioned for success. We expect our suppliers and contractors to conduct their business in a manner that protects people and the environment and that complies with all applicable Chevron policies and with applicable environmental, health and safety laws and regulations. For more, see our Business Conduct and Ethics Code and Business Conduct and Ethics Expectations for Suppliers and Contractors, both available on **chevron.com**.

# managing risk

we place the highest priority
on the health and safety of our workforce
and protection of our assets,
communities and the environment

learn more > chevron.com/OE



Chevron's Enterprise Risk Management (ERM) process provides corporate oversight for identifying major risks to the company and ensuring that mitigation plans are in place. The ERM process includes an annual risk review with executive management and the Board of Directors that identifies financial, operational, market, political and other risks inherent in our business. Critical among these is operational risk.

We believe that incidents are preventable, and we have policies, expectations, processes and tools in place to help achieve our goal of zero serious incidents. Our systems support a culture of safety, environmental stewardship and top performance in which risk management, assurance and learning are foundational. We call this Operational Excellence (OE), and it is fundamental to all of our operations.

Our Operational Excellence Management System (OEMS) provides a disciplined approach to systematically manage process safety, personal safety and health, the environment, reliability, and efficiency. Through rigorous application of the OEMS, we are able to identify and mitigate risks by integrating OE processes, standards, procedures and behaviors into our daily operations. Our OEMS is aligned with ISO 14001:2004 and OHSAS 18001:2007.\* Chevron also maps its process safety efforts to the Center for Chemical Process Safety's *Vision 20-20* guidelines.

Management is accountable for running the OEMS to deliver results the right way, in accordance with our Chevron Way values. Leadership is the single most important factor for success in OE. Leaders at every level manage risk, drive execution, reinforce our OE culture and instill operational discipline to ensure that everyone in their organization complies with OE requirements.

Underscoring our efforts to manage risk, we have an OE Assurance process that applies across all of our operations, including work conducted by contractors. This process serves a dual purpose: (1) it establishes systems to assure that the company maintains compliance with internal and external requirements; and (2) it establishes systems of verifications to demonstrate that safeguards are in place and functioning when they are most needed, thereby reducing the risk of incidents. These verifications may include a combination of audits, inspections and routine duties.

We adopt and share best practices with our business and industry partners and continually take action to improve our practices and meet our commitments. In 2016, we continued to emphasize our focus on serious incident and fatality prevention as our most important priority.

\*Attestation: In 2015, Lloyd's Register Quality Assurance Ltd. attested that our OEMS meets the requirements of the International Organization for Standardization's environmental management system standard and the Occupational Health and Safety Assessment Series' management system specification and verified that the OEMS is implemented throughout the corporation.

# managing contractor health, environment and safety

Contractors are a critical part of the Chevron workforce. On any given day, we may have more than 177,000 contractors on the job, complementing our employee base of approximately 52,000.

Chevron's Contractor Health, Environment and Safety Management (CHESM) process establishes clear accountabilities and facilitates active engagement with contractors to help keep them, and our entire workforce, safe.

# The CHESM process helps us:

- Select contractors that are qualified for specific work activities;
- Share Chevron Health, Environment and Safety (HES) standards with contractors;
- Communicate clear HES performance expectations to contractors; and
- Engage with our contractors as work progresses to confirm our joint commitments to safe work standards and continuous improvement in HES performance.



chevron.com/OEMS chevron.com/healthsafety

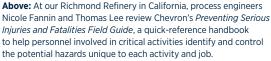
**Opposite:** Contractor surveyor Yerlan Kussainov determines the location for key infrastructure at the Future Growth Project-Wellhead Pressure Management Project in Kazakhstan.

# preventing serious incidents and impacts

everything we do begins with a commitment to safe and reliable operations

learn more > chevron.com/healthsafety







# stop-work authority

Every person involved in our operations—
employee, contractor and business partner alike—
is empowered to stop work any time there
is concern that work conditions are unsafe and
any time an unsafe act has occurred or is
about to occur. We call this Stop-Work Authority,
and it is a responsibility that is exercised
without repercussion.

# personal safety

In 2016, we set record lows in our Days Away From Work Rate (0.016) and Total Recordable Incident Rate (0.14). The largest-ever planned maintenance program at our Tengizchevroil joint venture was perhaps the greatest singular achievement in personal safety for the year, with zero Days Away From Work injuries among 8,800 workers over a 40-day period.

Overshadowing our otherwise strong performance were 10 fatalities (nine contractors, one employee) that resulted from four incidents. One of the incidents—a helicopter crash off the coast of Angola—accounted for six of the lives lost. Any loss of life is unacceptable to us, and we are determined to eliminate fatalities throughout our operations.

# process safety

Chevron continues to improve performance in preventing incidents that result in a loss of primary containment, including petroleum spills and vapor releases. Programs like WellSafe in our Upstream business and Essential Checklists in our Downstream and Chemicals (DS&C) operations support our efforts to achieve zero significant incidents and fatalities.

In DS&C, Essential Checklists pinpoint key tasks that must be completed the right way every time for potential high-consequence activities, such as vacuum truck operations and confined-space entry. These key tasks are verified by a co-worker who confirms in the field that we have safeguards in place and functioning immediately before work begins. Our manufacturing facilities and some of our complex Upstream plants use this same method of safeguard verification.

Across all of our operations, we seek to learn from past incidents and to improve our procedures, training, maintenance programs and designs. We share lessons learned throughout the company and with industry organizations, such as the American Petroleum Institute and the Center for Chemical Process Safety.



Chevron has developed and implemented WellSafe, a program to assure well and reservoir fluids are under control and not released, potentially impacting people and the environment. The program applies to all drilling operations and those completion and workover operations that are under the operational control of Chevron's Drilling and Completions (D&C) organization.

**WellSafe requires four levels of certification.**Each certification has specific requirements, or safeguards, that must be met:

- **Business Unit Certification** is focused on having technical standards in place.
- Rig Certification requires that the proper equipment and procedures are utilized and that competent personnel are on the rig sites.
- Well Design Certification is attained when the well plans have been verified to conform to the business unit's technical standards.
- Well Execution Certification occurs when the well operations are verified to have been performed in adherence with the certified well design.

Chevron's Upstream Capability D&C Assurance group is responsible for verifying that all business units achieve and maintain their certifications.



Please refer to Page 25 for an in-depth look at our health and safety performance data.

# addressing climate change risks

we take prudent, practical and cost-effective actions
to address climate change risks as part of
our commitment to running our business the right
way and to unlocking the potential for
progress and prosperity everywhere we work

learn more > chevron.com/climatechange



# climate principles

Our climate change policy principles guide us in evaluating approaches to addressing climate change.

1

Reducing greenhouse gas (GHG) emissions is a global issue that requires global engagement and action. 2

**Balanced and measured** 

policies can ensure
that long-term economic,
environmental and energy
security needs are met;
costs are allocated equitably,
gradually and predictably;
and actions consider both
GHG mitigation and climate
change adaptation.

3

The costs, risks, trade-offs and uncertainties associated with GHG reduction and climate change adaptation efforts and policies must be **transparent** and openly communicated to global consumers.

4

Continued research,
innovation and application
of technology are essential
to enable significant and
cost-effective mitigations to
climate change risks over
the long term.

# climate risk management and disclosure

Chevron believes that climate change is a global issue. We share the concerns of governments and the public about climate change risks and recognize that the use of fossil fuels to meet the world's energy needs contributes to the rising concentration of greenhouse gases in Earth's atmosphere. GHGs contribute to increases in global temperatures. We take prudent, practical and cost-effective actions to address climate change risks as part of our commitment to running our business the right way.

Reliable and affordable energy is necessary for improving standards of living, expanding the middle class and lifting people out of poverty. Oil and natural gas will continue to fulfill a significant portion of global energy demand for decades to come—even in a carbon-constrained scenario.

# managing risk

Chevron utilizes a number of processes to manage risk, including risks that may be associated with climate change. These include Enterprise Risk Management, Strategic and Business Planning, Portfolio Management, and assessments of commodity pricing.

- Chevron uses an internal outlook of carbon prices in the economic evaluations supporting major capital project appropriation approvals.
- We use a risk-based approach to address possible physical impacts to our critical infrastructure.
- We continually refresh our portfolio taking into account our views of future market and regulatory conditions. Chevron has the ability to adjust investment patterns, and portfolio composition will reflect the evolving nature of possible demand and regulatory changes.

In view of the continuing global demand for oil and gas, the substantial future investment required to meet that demand, and the way investment decisions to explore for and develop resources are phased and made with a market view in mind, the risk exposure to the company in a GHG-restricted scenario is minimal.

Even under an aggressive climate policy scenario such as the IEA's 450 Scenario.

oil and natural gas will meet 44 percent of global energy demand by 2040.

Chevron has analyzed the impacts of supply, demand and resultant pricing levels under a reduced-demand/GHG-constrained scenario, including consideration of the International Energy Agency (IEA) 450 Scenario. This analysis has shown:

- The pricing levels modeled for the IEA 450 Scenario generally align with the low end of the price trajectory range already being used throughout our various planning processes.
- Although certain high-cost assets around the world could be impacted by a hypothetical GHG-constrained case, those high-cost assets for which a final investment decision has yet to be made would not find a place in our investment portfolio given our risk management processes. Lower-cost assets remain competitive, specifically, those assets already producing, which would continue to produce.

We have undertaken a number of steps to manage GHGs, including investments in flare reduction, investments in CO<sub>2</sub> injection, improved energy efficiency and activity in biofuels.

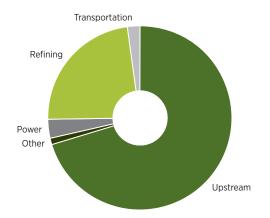
We believe that our current risk management and business planning processes are sufficient to mitigate the risks associated with climate change. These processes are appropriate to enable us to continue to monitor and adjust accordingly as climate policy developments unfold.



For more, see our report Managing Climate Change Risks: A Perspective for Investors at chevron.com/climateriskperspective.

# 2016 GHG emissions by sector\*

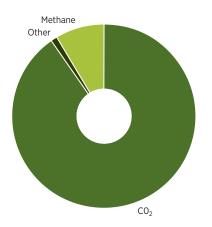
66 million metric tons



Transportation includes Chevron Pipe Line Company and Chevron Shipping Company. Power includes Chevron Power and Energy Management Company. Other includes Americas Products, International Products, Chevron Lubricants, Chevron Oronite Company, Chevron Building and Real Estate Services, Chevron Aviation Services, Chevron Environmental Management Company, and Chevron Information Technology Company.

# 2016 GHG emissions by type\*

66 million metric tons



# greenhouse gas management

We are committed to managing our GHG emissions by improving energy efficiency, reducing flaring and venting, and fixing methane leaks when they occur. We are also investing in two of the world's largest carbon dioxide injection projects.

We are addressing the GHG emissions in our operations and integrating GHG emissions management into the execution of our business activities. Further, we maintain and report inventories of our emissions, undertake projects to manage operating emissions, and apply innovative technologies to improve the energy efficiency of our operations. We also assess the GHG emissions of our capital projects. When developing and approving major capital projects, we estimate a project's incremental emissions profile, assess the potential financial impact of GHG regulations and examine the emissions reduction options.

Across our operations, the primary sources of our GHG emissions are combustion of fuels and, in some locations, flaring and venting of the natural gas (methane) that is extracted along with crude oil.

### Methane

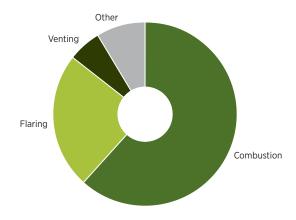
Methane accounts for approximately 9 percent of Chevron's total greenhouse gas emissions.\* Approximately one-quarter of Chevron's enterprisewide methane emissions are considered fugitive emissions; of the remaining emissions, most are generated by flaring and venting.

It is in Chevron's business interest to minimize fugitive methane and to maximize the volume of natural gas that we can commercialize. We design, construct and operate our facilities with an eye toward reducing emissions from our operations. We also have design requirements to reduce or minimize fugitive emissions from our new major capital projects. We monitor and verify the integrity of our wells and production equipment with regular inspections and safety tests. We have formal programs in a number of locations to inspect our facilities for leaks. To more efficiently track fugitive emissions, we use infrared cameras in select oil and gas operations around the globe to help pinpoint leak locations so that we can address them. In many locations where we operate, we implement procedures to comply with regulatory requirements pertaining to leak detection and repair.

<sup>\*</sup>CO2-equivalent, direct (Scope 1), operated basis.

# 2016 GHG emissions by source\*

66 million metric tons





**Above:** The power generation and transmission facility at Duri Field, Sumatra, Indonesia, has been a focus of energy efficiency improvements in our IndoAsia business unit.

# Carbon dioxide injection

Chevron Australia's Gorgon Project incorporates facilities to safely inject reservoir carbon dioxide more than 1.2 miles (2 km) below the surface of Barrow Island. Carbon dioxide occurs naturally in the gas being produced and is extracted as a routine part of the processing operations. In most gas processing plants, these gases are vented to the atmosphere. When fully operational, it is anticipated that greenhouse gas emissions from the Gorgon Project will be reduced by up to 4 million metric tons per year, or 100 million metric tons over the life of the project.

In Alberta, Canada, Chevron is a co-venture partner of the Quest Carbon Capture and Storage (CCS) project—the first CCS project in the Canadian oil sands. This innovative project is designed to capture and safely store more than a million metric tons of carbon dioxide each year—equivalent to taking 250,000 cars off the road annually. Commercial operations at the Quest CCS project began in November 2015.

## Venting and flaring

Chevron flares and vents natural gas for safety and operational purposes and in areas where pipelines or other gas transportation infrastructure and utilization alternatives do not exist. We are working to reduce natural gas flaring and venting and the resulting GHG emissions. We have developed internal country-specific plans to minimize gas flaring, and we are a member of the World Bank-led Global Gas Flaring Reduction Partnership. Since 2008, activities carried out by the Nigerian National Petroleum Corporation/ Chevron Nigeria Limited joint venture have reduced routine gas flaring by more than 90 percent in the Niger Delta. We have also made significant progress in reducing flare gas volumes in Angola through the execution of various projects. For example, our Nemba Enhanced Secondary Recovery Project reduced flaring at the South and North Nemba fields by almost 34 million standard cubic feet per day in 2016. In total, flare gas volume rates in Angola have been reduced by more than 50 percent since 2012.

# energy efficiency

Using energy more efficiently helps preserve our finite natural resources, lower energy costs and reduce carbon emissions.

# Reduction in energy intensity in IndoAsia business unit

Due to the size and nature of the operations, managing energy consumption in our IndoAsia business unit (IBU) is a critical focus area. The IBU continues to make significant improvements in energy efficiency and has reduced its energy intensity by 27 percent from 2014 to 2016. This improvement was achieved in part through the establishment of an Integrated Optimization Decision Support Center (IODSC) in the IBU's Sumatra operations in Indonesia. The IODSC monitors the day-to-day energy performance of the surface facilities and provides recommendations for optimizing energy efficiency.





Please refer to Pages 26 and 27 for data on GHG emissions and energy consumption.

# advancing environmental stewardship

we conduct our business in a socially and environmentally responsible manner, respecting the law and universal human rights to benefit the communities where we work

learn more > chevron.com/environment

Our Natural Resources Environmental Performance Standard helps us consider and address potential impacts on species such as this South American gray fox (*Lycalopex griseus*) that was observed in our El Trapial Field in Argentina.

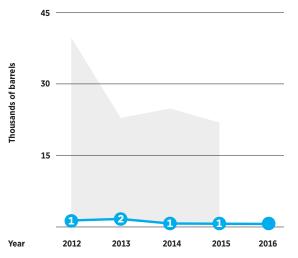


Chevron places the highest priority on the health and safety of our workforce and protection of our assets, communities and the environment. We are committed to continually improving our environmental performance and reducing the potential impacts of our operations through the implementation of our Operational Excellence Management System (OEMS). Similar to how we apply the OEMS to safework practices, our leaders are accountable for assessing strengths and gaps, completing risk-reducing actions, and enabling and delivering environmental performance.

Chevron's expectations for environmental stewardship address all Core Corporate Environmental Aspects\* of our environmental performance across the life of our assets. These expectations are met through environmental processes and standards established at the corporate and sector levels and are implemented by regional and local management. The processes and standards provide our business with the flexibility to focus on the potential risks and impacts to the environment most salient to the specific areas and communities where we operate.

We continually seek risk-based, fit-for-purpose opportunities to improve our environmental performance, and as such, we have developed desired states for each of our Core Corporate Environmental Aspects. To help us meet our desired states, we have also established objectives and actions that are specific to each aspect. Our current and future enterprise-level work focuses on pursuing these desired states.

# oil spills to land or water\*\*



Chevron ranking relative to competitors, 1 being the lowest rate

Competitor range: British Petroleum plc, ExxonMobil Corp., Royal Dutch Shell

# maintaining high-quality environmental data

We rely on our environmental data to understand our performance and help identify potential areas of improvement. We have invested in processes, systems and training to meet our objective of maintaining high-quality environmental data. For example, we conduct detailed onsite and desktop peer reviews of local data collection processes, with a focus on operations that contribute the most to our enterprisewide data. These peer reviews verify that all sources have been accounted for and reported in accordance with Chevron's Operational Excellence Data Reporting Standard. Our peer review process and independent reviews by third parties continue to provide ongoing assurance of our data quality to enable informed business decisions.

# environmental principles

We have four environmental principles that are implemented across the life of our assets:

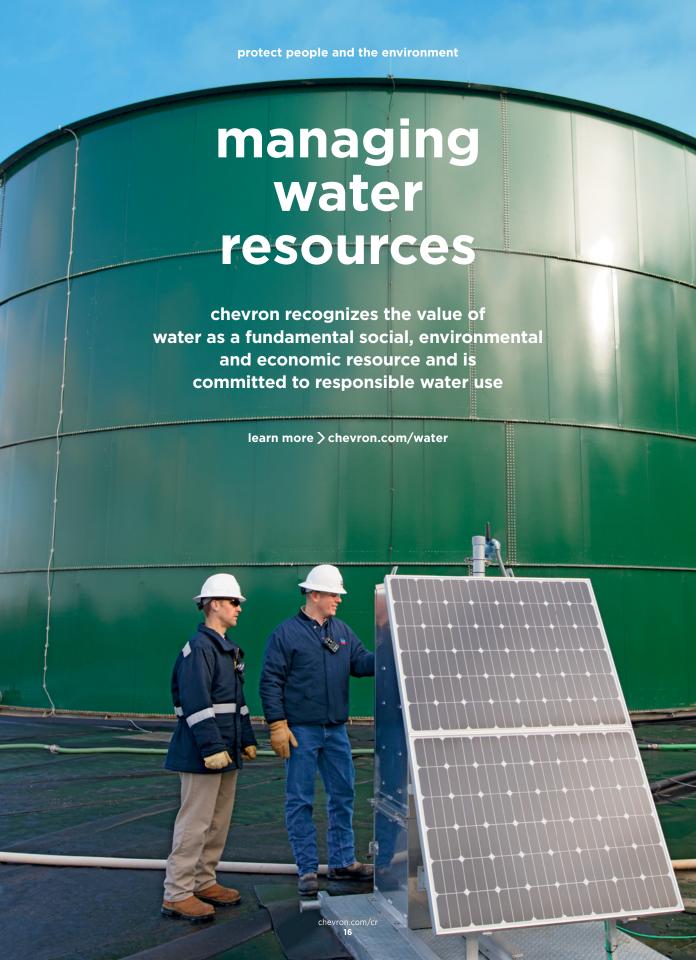
- · Include the environment in decision making
- · Reduce our environmental footprint
- Operate responsibly
- · Steward our sites

# Operating responsibly at our Pascagoula Refinery

Our refineries periodically execute turnarounds, which are planned years in advance. These shutdowns are used to perform maintenance, test and replace materials, and repair and replace equipment. To mitigate potential environmental risks from turnaround activities, our refineries prepare and execute comprehensive and detailed environmental turnaround plans that identify the specific actions that will be taken to minimize air emissions, flaring, water use, wastewater discharge and waste generation. In 2016, a turnaround at our Pascagoula Refinery Fluidized Catalytic Cracking Unit was successfully completed with no flaring during shutdown, unit cleanup or unit startup.

<sup>\*</sup>Consistent with ISO 14001, we defined seven types of environmental activities, or Core Corporate Environmental Aspects: accidental release prevention and response, air emissions, energy efficiency and greenhouse gas, natural resources (including land, water and biodiversity), site residual impacts, waste, and wastewater.

<sup>\*\*</sup>Source: Annual company sustainability reports: British Petroleum plc (BP), ExxonMobil Corp. and Royal Dutch Shell. When needed, units converted to thousands of barrels (bbl) based on the following assumptions: 1 bbl oil = 0.134 metric tons = 0.159 cubic meters; 1 cubic meter = 1,000 liters. BP spill volume excludes oil recovered.



As a global company, we know that access to adequate supplies of water is essential for the communities where we operate as well as for our ability to produce energy around the world. As users of this critical natural resource, we must manage it responsibly.

Chevron strives to use the lowest quantity of fresh water practicable in its operations. We also seek opportunities to reuse water where operational, regulatory and business conditions permit.

# water management

Our Environmental, Social and Health Impact Assessment (ESHIA) process and our Upstream-specific Natural Resources Environmental Performance Standard (Natural Resources EPS) help us manage our water use across the life of our operated assets.

The ESHIA process is used by local project teams early in the life of the project to assess the potential impacts and benefits of our activities on natural resources, including water. An important part of this process is assessing existing environmental and social conditions, such as how local communities are using water. This information is used during project planning to help us consider and address potentially significant water use by our operations in relation to local water availability.

Our Natural Resources EPS is applied across all of our onshore Upstream businesses and capital projects and requires a water resources screening assessment to identify potentially significant environmental and social impacts associated with our water use. Where there is potential for significant impacts, a water resources management plan (WRMP) is developed. The WRMP helps our operations identify and implement measures that reduce water withdrawals when possible.

# water use in hydraulic fracturing

Chevron strives to reduce the amount of fresh water used in our hydraulic fracturing operations.

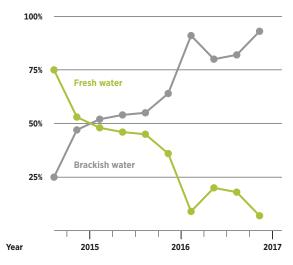
# Using brackish water in the Permian

In the Permian Basin, we use brackish water that is not suitable for human consumption or agricultural usage in lieu of fresh water, when possible. More than 90 percent of the water used in our well completions in the Permian Basin is from brackish water sources.

**Opposite:** Employees inspect a remote terminal unit for the Supervisory Control and Data Acquisition telemetry system. The unit monitors Chevron's 1 million-gallon-capacity water storage tanks, which have eliminated the use of in-ground water storage pits in our Marcellus operations in Pennsylvania.

# water use in well completions

permian basin



By using brackish water, we were able to reduce the amount of fresh water used.

# Collaboration on water management in Argentina

In the Loma Campana concession in Argentina, our activities required the use and disposal of large volumes of water in 2016. These operations were subject to stringent regulatory requirements around water management. In order to address these challenges, subject matter experts from Chevron's Energy Technology Center and our Upstream Latin America business unit collaborated with our partner YPF, S.A., who operates the project. Through this work, fit-for-purpose, reliable and cost-effective alternatives were identified to treat and reuse the water that is brought to the surface when extracting oil and gas, in lieu of disposal. These alternatives were designed to meet regulatory requirements and the needs of external stakeholders while also contributing to sustainable business development.



# respecting human rights

# chevron respects human rights and partners with host governments to complement their responsibility to protect human rights

learn more > chevron.com/humanrights

# respect for human rights

Chevron's Human Rights Policy applies to all of our employees and operations and guides our respect for human rights across the business. Chevron regularly identifies and manages potential impacts through processes and tools, including global and context-specific impact assessments. Training provides guidance to our teams to help manage potential impacts in the communities where we operate, the provision of security, the administration of our workforce, and the procurement of products and services. Our Human Rights Policy is governed by Chevron's Global Issues Committee (a subcommittee of Chevron's Executive Committee), involves oversight by our Board of Directors, and adheres to the United Nations Guiding Principles on Business and Human Rights.

# stakeholder engagement

We build trusting relationships by collaborating with communities, governments, customers, suppliers and business partners. Chevron's Stakeholder Engagement process requires that systems and plans be in place at the operational level to manage community input and issues, including the use of grievance mechanisms, as appropriate. Go to **chevron.com/worldwide/myanmar** to see an example of a grievance mechanism.

# provision of security

As a founding member of the Voluntary Principles on Security and Human Rights Initiative\* (VPI), Chevron has long demonstrated dedication to responsible security.

Government, civil and business organizations work together within the VPI to empower security forces protecting assets to work in a manner that respects human rights. Chevron's Operational Excellence Management System provides a comprehensive framework to identify and mitigate security risk and aligns security operations with our Human Rights Policy. In 2016, thousands of public and private security personnel associated with Chevron's global operations received training on the Voluntary Principles.

# labor relations

We treat our employees with dignity and respect and promote diversity and inclusion. Our policies and procedures adhere to applicable domestic laws and are consistent with the International Labour Organization's principles around supporting association and bargaining and prohibiting discrimination, forced labor and underage workers.

# contracting and procurement

We contractually require suppliers to treat their employees and interact with communities in ways that respect human rights and adhere to domestic laws. We regularly communicate with key suppliers to reinforce our human rights commitment.

\*The VPI consists of governments, extractive companies and civil society organizations that join together to proactively implement security principles that prioritize respect for human rights.





# engagement with indigenous peoples in Canada

Chevron Canada Limited works with approximately 40 Aboriginal groups across the proposed Kitimat liquefied natural gas (LNG) and Kaybob Duvernay projects. Through these relationships, Chevron Canada has developed innovative agreements, programs and opportunities for Aboriginal communities to directly benefit from our projects. For example, the proposed Kitimat LNG Project's First Nations Limited Partnership has already provided 16 First Nation groups with significant benefits, including economic benefit payments, education and training programs, and employment and contracting opportunities.

diversity and inclusion

100%

In 2016, we achieved a score of 100 percent on the Human Rights Campaign Corporate Equality Index for the 12th consecutive year. Learn more about our diverse, engaged and capable workforce at chevron.com/diversity.

# human rightsrelated guidance on community

## Indigenous peoples

Chevron's Indigenous Peoples Guidance outlines building blocks for effective management of relations with indigenous peoples, including: stakeholder identification, defining the regulatory framework, pre-consult and determine the preferred method of engagement, assess potential impacts and benefits, conduct community consultations, and develop and implement indigenous peoples plans.

# Resettlement

Chevron's Resettlement Guidance provides a framework for projects and operations to utilize when considering resettlement, from assessment and planning to implementation. Resettlement objectives include informed business decision making, partner alignment and consultation with affected persons.

# **Operational-level grievances**

Chevron's *Grievance Mechanism Guidance* outlines steps for operations to design or update an operational-level grievance mechanism that strives to be legitimate, accessible, predictable, equitable, transparent and rights-compatible. The mechanism should be based on engagement and dialogue and promote continuous learning.

# creating prosperity

we are committed to running our business
the right way and unlocking
potential for progress with our communities—
we call this the business of progress

learn more > chevron.com/creatingprosperity



**Above:** The Future Growth Project-Wellhead Pressure Management Project (FGP-WPMP) will leave a legacy of new capabilities for Kazakhstan's future—in engineering, high-tech equipment servicing, project management, construction and fabrication. At peak construction and fabrication, FGP-WPMP will generate around 20,000 jobs.

\$39B

in total goods and services spent globally in 2016

In the United States, we spent more than \$570 million with woman- and minorityowned businesses and more than \$1.8 billion on goods and services from small businesses. See Page 28 for further information on our goods and services spending. At Chevron, we believe that our business succeeds best when the people we work with and the communities in which we operate succeed too. So we work to create prosperity and contribute to progress everywhere we invest. The primary way we do this is by providing affordable, reliable energy. Supporting economic development, health and education is also fundamental to our mutual progress. Therefore, we bring together the people, resources and expertise to deliver lasting change on a local level through direct business investments, sourcing and hiring decisions, and strategic social investments.

# building local capacity

Among Chevron's most powerful tools for creating prosperity in our communities are our supply chain and workforce investments. Much of Chevron's total goods and services spending is on goods and services provided by locally owned companies (local content). For example, in 2016, the Chevron-led Tengizchevroil (TCO) joint venture spent more than \$1.9 billion on Kazakhstani goods and services. In Nigeria, we spent \$2.5 billion on local content. This represented 65 percent of our total Nigerian goods and services expenditures for the year. Chevron invests in building the capacity of local companies to help them win new business from us and our major international suppliers. We do so through partnerships with national and local governments, national oil companies, nongovernmental organizations (NGOs), and development agencies. Chevron employees work to enhance local suppliers' capabilities to meet industry standards, especially when it comes to health, environment and safety performance.

Chevron recognizes that the positive local impact of our supply chain investments can be amplified by the sourcing decisions of our suppliers. So we encourage our major international suppliers of goods and services to form joint venture partnerships with local businesses and to maximize the purchase of local goods and services. These joint ventures create an opportunity for local businesses to gain access to new technology, bring their processes up to international standards and train their people on the latest industry practices.

Chevron is also committed to investing in workforce training and job skills development in the communities where we work. Building the capabilities of local workforces not only helps us sustain a strong employee base, but also leaves a lasting positive impact on communities as they gain new skills and knowledge.

\*In 2015, Chevron commissioned a study independently administered by Aberdeen & Grampian Chamber of Commerce in collaboration with the Fraser of Allander Institute to provide an assessment of Chevron's overall economic impact in the United Kinodom.



# sourcing in Kazakhstan

In Kazakhstan, the Chevron-led TCO joint venture has worked to increase the positive local impact of our supply chain investments by collaborating with our international supplier Nabors Industries Ltd., one of the world's largest oil and gas drilling contractors. With encouragement from TCO, Nabors Industries has partnered with the Kazakhstani-owned KMG Drilling & Services. The new entity, KMG Nabors Drilling Company LLP (KMG Nabors), is one of the first Kazakhstani drilling companies to meet the standards and requirements of large operators such as TCO, and it has hired more than 100 Kazakhstani employees to support the contract with TCO. KMG Drilling & Services is also benefiting from the partnership thanks to improved safety processes and practices as well as significant technology transfer; the local company now has two world-class drilling rigs, one of which is the most advanced in the region.

# local economic impact

Beyond local sourcing and hiring, Chevron contributes to the growth of local economies in many ways, most fundamentally by providing them with reliable, affordable energy. Taken together, our operations can contribute significantly to a country's economic progress and prosperity. With the help of independent research and analysis firms, we can quantify those contributions to demonstrate the positive impacts we have on local economies and livelihoods.



# contributing in the United Kingdom\*

Chevron's 50-year partnership with the
United Kingdom continues to create a positive economic
ripple effect throughout the country. In 2015,
Chevron directly employed more than 1,000 people,
indirectly supporting the equivalent of more
than 51,700 U.K. jobs and adding around \$2.7 billion
to the country's gross domestic product. In the
10-year period to year-end 2015, Chevron's North Searelated activities generated a tax contribution
to the U.K. government of more than \$5.9 billion.



# appalachia partnership initiative

Chevron, along with regional partners, established the Appalachia Partnership Initiative (API) to address education and workforce development skills gaps in Pittsburgh's Tri-State area (Pennsylvania, Ohio and West Virginia).

The API works with local partners to make investments in K-12 science, technology, engineering and math (STEM) education as well as in post-secondary training and apprenticeship programs. For example, Chevron is working with ShaleNET, a workforce training program for the energy and advanced manufacturing industries, to provide scholarships to students at community colleges in the region. The partnership also focuses on connecting high school education programs and workforce training through career and technical curriculum resources, supply chain connections, post-secondary training programs, and trade certifications. The goal is to be a catalyst to enable generations of families to stay and thrive in their communities by preparing them for energy and advanced manufacturing jobs and careers.



**Above:** Holly Schweitzer practices technical skills at Stark State College in North Canton, Ohio. This training program is supported by the Appalachia Partnership Initiative.

# social investment

Chevron takes a collaborative approach to social investment by partnering with NGOs, government leaders, and public and private international organizations. Through these partnerships, we offer funding, technical expertise, local capabilities and convening power to bring stakeholders together around common goals. In 2016, Chevron contributed more than \$185 million around the world and has contributed more than \$1.2 billion over the past five years. This level of social investment demonstrates our commitment to investing in programs that strengthen economic development, health and education, which together are the foundation of strong communities.

## **Economic development**

We aim to foster economic stability and address local needs by making social investments in economic development programs that promote self-sufficiency and job growth. In Indonesia, our multiyear PRISMA (Promoting Sustainable Integrated Farming, Small Enterprise Cluster and Microfinance Access) program provides small grants, capacity-building training, technical assistance and access to loans through microfinance institutions to local farmer groups, small businesses and cooperatives in 11 regions throughout Indonesia. In total, the program supports more than 1,500 beneficiaries and offers assistance in 36 sectors, including agriculture, fishery, processed food commodities, weaving and batik making, and eco-cultural tourism villages.

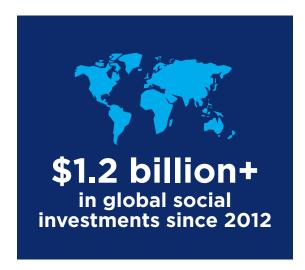
## Health

Chevron is committed to supporting partnerships and programs that promote healthy communities by improving access to health care, strengthening health systems and helping fight against infectious diseases. For example, we partner with the Baylor College of Medicine International Pediatric AIDS Initiative at Texas Children's Hospital, which works to provide treatment and training to medically underserved populations in Africa and Latin America. This partnership helped create a five-year pediatric health care program in La Guajira, Colombia, that focuses on decreasing the high morbidity and mortality rates for mothers and children from the remote Wayúu indigenous community there.

Prevention of HIV/AIDS continues to be a major focus of our health efforts, as some of our largest operations are located in countries where HIV is prevalent. We partner with organizations such as the international NGO Pact to help develop programs focused on prevention of mother-to-child transmission (PMTCT) of HIV. These initiatives work with community-based organizations and governments to provide education, testing services and capacity building. Since our partnership with Pact began in 2012, 735 individuals have been trained on state-of-the-art PMTCT approaches throughout the state of Bayelsa, Nigeria.

### Education

STEM education is a key building block of employability and economic development. Working with our partners, we take a holistic approach to our investments in education by inspiring young people to pursue STEM careers and by supporting educational standards, proven curricula and teacher professional development. We bring together the people, resources and expertise to promote lasting change on a local level by championing educational programs from kindergarten through college, as well as career and technical training for the workforce. Visit **chevron.com/education** for more information on our global education partnerships and programs.





**Above:** A Nigerian development practitioner supports cassava farmers as part of the Niger Delta Partnership Initiative's economic development program, which builds the technical and business skills of agricultural associations to improve farming productivity. In 2016, more than 30,000 low-income households experienced increased income, and more than 1,900 jobs were created through the program.



**Above:** In Richmond, California, a community member learns construction skills through RichmondBUILD, a Chevron-sponsored workforce development program. Graduates of the 12-week program have the potential to be hired by construction companies in the San Francisco Bay Area.

# 314,500+

# **U.S.** volunteer hours

# chevron humankind

In the United States, Chevron encourages employee and retiree volunteerism and giving through Chevron Humankind. In 2016, 9,384 employees and retirees contributed more than 314,500 volunteer hours to 2,475 charitable organizations in the United States, and a total of \$38 million was contributed to U.S. nonprofit organizations through a combination of employee and retiree giving and company matching funds.

# global involvement

Chevron employees are also engaged in their communities globally. As part of the One Goal – One Team campaign in Thailand, more than 550 Chevron employees and family members joined community members to develop the first Pa Sak Model learning center, which promotes natural resource conservation at Huai Krathaek in the Lopburi province. Employees in the Luanda Chevron Volunteer Opportunities program in Angola helped reduce exposure to malaria for 100 children by painting the Mama Muxima Orphanage walls with insect-repellent paint.

# 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 <sup>1</sup>	2016	2015	2014	2013	2012
Total Recordable Incident Rate (incidents per 200,000 work-hours	s) <sup>2</sup>				
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 an	d fatalities pe	million work	-hours) <sup>2</sup>		
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) <sup>2</sup>					
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 contra	ctor fatalities	per 100 millio	n work-hours	) <sup>2</sup>	
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) <sup>3</sup>	0.03	0.02	0.04	0.04	0.07
Number of process safety Tier 1 events (ANSI/API Recommended Practice 754 guidance) <sup>4</sup>	22	29	19	38	76
Upstream	16	18	15	24	58
Downstream and chemicals	6	10	3	10	15

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

Environmental performance, <sup>5</sup> 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) <sup>13</sup>	33	35	37	38	38
Average flare gas volume rate, direct, operated basis (million standard cubic feet per day) <sup>15</sup>	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) <sup>16</sup>	909	913	970	929	918
Total energy consumption, operated assets	742	750	785	735	728
Manufacturing Energy Index (Refining) (no units) <sup>16</sup>	84.2	85.2	87.6	88.8	88.9
Upstream Energy Intensity (thousand BTUs per barrel of oil equivalent) <sup>16</sup>	338	330	341	344	325
Pipeline Energy Intensity (BTUs per barrel of oil equivalent-mile) <sup>16</sup>	20.0	24.1	28.7	30.9	34.5
Shipping Energy Intensity (BTUs per metric ton-mile) <sup>16</sup>	43.4	32.4	48.7	50.5	55.2
Non-Manufacturing Energy Index (Oronite, Lubricants, etc.) (no units) <sup>16</sup>	75.6	79.1	86.0	81.9	73.7
Air emissions					
Total volatile organic compounds (VOCs) emitted (thousand metric tons) <sup>17</sup>	154	144	134	147	159
Total sulfur oxides (SO <sub>x</sub> ) emitted (thousand metric tons) <sup>17</sup>	66	84	112	141	123
Total nitrogen oxides ( $NO_x$ ) emitted (thousand metric tons) <sup>17</sup>	151	148	138	147	146
Waste					
Hazardous waste generated (million metric tons) <sup>18</sup>	0.6	0.7	1.0	0.9	0.9
Hazardous waste disposed of (million metric tons) <sup>18</sup>	0.4	0.3	0.8	0.8	0.5
Hazardous waste recycled (million metric tons) <sup>18</sup>	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

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 <sup>19</sup>	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.Sbased businesses (billions of dollars)	\$12	\$15	\$18	\$17	\$16
Total goods and services spend with U.Sbased small businesses (billions of dollars) 20	\$1.8	\$2.3	\$2.5	\$2.6	\$2.5
Goods and services spend with U.Sbased woman- and minority-owned businesses (billions of dollars) <sup>20</sup>	\$0.57	\$0.77	\$0.98	\$0.95	\$0.86

# notes to pages 25 through 28

- 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

# notes to pages 24 through 28, continued

- 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 thirdparty 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<sub>x</sub> 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.

# **IPIECA/API/IOGP** content index

This index refers to the IPIECA/API/IOGP\* sector-specific reporting guidance for the oil and gas industry. For 2016, Chevron reported on all 34 indicators. An expanded IPIECA/API/IOGP index is available at **chevron.com/IPIECA**.

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Water	E6 E7	16-17, 26, 29	chevron.com/water
Local environmental impacts	E8 E9 E10 E11	8-9, 14-15, 26-27, 28, 29	chevron.com/environment chevron.com/EMC
Social issues and indicators			
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Human rights	SE2 SE3 SE8 SE9 SE10	18-19	chevron.com/humanrights
Local content	SE5 SE6 SE7	20-23, 24	chevron.com/creatingprosperit
Business ethics and transparency	SE11 SE12 SE13 SE14	4-5	chevron.com/ethicsgovernance
Labor practices	SE15 SE16 SE17 SE18	5, 18-19, 24	chevron.com/diversity chevron.com/BCEC

# **LRQA Assurance Statement**

# Relating to Chevron Corporation's Corporate Responsibility Report for the Calendar Year 2016

This Assurance Statement has been prepared for Chevron U.S.A. Inc. in accordance with our contract but is intended for the readers of this Report.

# **Terms of Engagement**

Lloyd's Register Quality Assurance Inc. (LRQA) was commissioned by Chevron U.S.A. Inc. on behalf of Chevron Corporation (Chevron) to provide independent assurance on its processes used in the creation of the Corporate Responsibility Report (CRR) for calendar year 2016 to a reasonable level using LRQA's verification approach.

Our assurance engagement covered Chevron's operations and activities worldwide and specifically covered the following requirements:

- Reviewing the effectiveness of the processes for reporting health, environmental and safety (HES) IPIECA performance indicators.
- Confirming consistency with the IPIECA/API/IOGP oil and gas industry guidance on voluntary sustainability reporting (2015) industry guidelines.

Our assurance engagement did not include verifying the accuracy of data and information reported in the CRR.

LRQA's responsibility is only to Chevron. LRQA disclaims any liability or responsibility to others as explained in the end footnote. Chevron's management was responsible for preparing the CRR and for maintaining effective internal controls over the reporting processes and CRR. LRQA's responsibility was to carry out an assurance engagement on the reporting processes in accordance with our contract with Chevron. Ultimately, the CRR has been approved by, and remains the responsibility of, Chevron.

### **LRQA's Opinion**

Based on LRQA's approach, we believe that Chevron's reporting processes were effective in delivering HES indicators that are useful for assessing corporate performance and reporting information consistent with common reporting elements in the IPIECA/API/IOGP oil and gas industry guidance on voluntary sustainability reporting (2015).

The opinion expressed is formed on the basis of a reasonable level of assurance and at the materiality of the professional judgment of the Verifier.

## LRQA's Approach

LRQA's assurance engagement was carried out in accordance with our Verification procedure;\* the following tasks were undertaken as part of the evidence-gathering process for this assurance engagement:

- Visiting Chevron Corporation in San Ramon, California, to review data collection and checking processes. Reviewing Chevron Upstream and Gas and Chevron Downstream and Chemicals to assess business-unit understanding and implementation of Chevron's HES reporting requirements.
- Visiting three Chevron Upstream and Gas operations (Appalachian Mountain Business Unit in Pennsylvania, Canada Business Unit in Alberta and Tengizchevroil in Kazakhstan) and one Downstream & Chemicals operation (Americas Products, Transportation and Operations in San Ramon, California) to assess local understanding and implementation of Chevron's HES reporting requirements.
- Interviewing key personnel to identify and gain an understanding of Chevron's reporting requirements including key persons responsible for drafting the CRR.

- Reviewing Chevron's documented reporting requirements to validate consistency of scope, definition and reporting requirements for each of the HES performance indicators.
- Reviewing Chevron's primary data collection tools to assess use in the reporting processes.
- Evaluating consistency with the IPIECA/API/IOGP oil and gas industry guidance on voluntary sustainability reporting (2015).

### Observations

Further observations and findings, made during the assurance engagement, are:

- Processes were in place to ensure that personnel contributing to HES metrics understood corporate reporting procedures and requirements.
- Methods used for calculating each HES performance metric were clearly defined and communicated.
- Chevron's reporting requirements for HES metrics were understood and carried out. Data collected at the site/local and business-unit levels were checked and aggregated into corporationwide metrics.
- Responsibility for annually reviewing and updating reporting guidelines was clear, with improvement in methodology regularly undertaken.

### Recommendations

Additional areas for improvement were provided in a separate report to Chevron Management. These recommendations do not affect our opinion.

# LRQA's Competence and Independence

LRQA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

LRQA is one of Chevron's certification bodies for ISO 9001, ISO/TS 16949 and greenhouse gas emissions verification. The certification assessments and verification are the only work undertaken by LRQA for Chevron and as such do not compromise our independence or impartiality.



LRQA Lead Verifier

On behalf of Lloyd's Register Quality Assurance, Inc.

LRQA Reference: UQA4000679

\*LRQA's Verification procedure is based on current best practise and uses the principles of AA1000AS (2008) — Inclusivity, Materiality, Responsiveness and Reliability of performance data and processes defined in ISAE3000.



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# about this report

This report covers 2016 data and activities. We also occasionally mention activities that took place before 2016 and in early 2017 when they help provide a clearer picture of our performance. This report covers our owned and our operated businesses and does not address the performance of our suppliers, contractors and partners unless otherwise noted. All financial information is presented in U.S. dollars unless otherwise noted. Our previous report was published in May 2016 and covers 2015 data and activities.

We continue to be informed by reporting frameworks and guidelines, including the *Oil and gas industry guidance on voluntary sustainability reporting*, third edition, published in 2015 by IPIECA (the global oil and gas industry association for environmental and social issues), the American Petroleum Institute (API), and the International Association of Oil & Gas Producers (IOGP). An index to help readers find information corresponding to IPIECA/API/IOGP indicators can be found on Page 30 of this report and at **chevron.com/IPIECA**.

This report, previous editions and additional information can be found at **chevron.com/cr**. We welcome your comments and feedback.

# **Chevron Corporation**

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additional reporting on environmental, social and governance indicators can be found at chevron.com/reporting

# cautionary statement relevant to forward-looking information

This 2016 Corporate Responsibility Report Highlights by Chevron Corporation contains forward-looking statements relating to the manner in which Chevron intends to conduct certain of its activities, based on management's current plans and expectations. These statements are not promises or guarantees of future conduct or policy and are subject to a variety of uncertainties and other factors, many of which are beyond our control.

Therefore, the actual conduct of our activities, including the development, implementation or continuation of any program, policy or initiative discussed or forecast in this report, may differ materially in the future. The statements of intention in this report speak only as of the date of this report. Chevron undertakes no obligation to publicly update any statements in this report.

As used in this report, the term "Chevron" and such terms as "the Company," "the corporation," "their," "our," "its," "we" and "us" may refer to one or more of Chevron's consolidated subsidiaries or affiliates or to all of them taken as a whole. All of these terms are used for convenience only and are not intended as a precise description of any of the separate entities, each of which manages its own affairs.

# awards and recognition

# corporate responsibility

Corporate Responsibility Magazine 100 Best Corporate Citizens

Dow Jones Sustainability Index North America

Fortune Magazine 20 Most Generous Companies of the Fortune 500

Newsweek Green Rankings

# workforce

American Indian Science and Engineering Society Top 50 Workplaces for Native American STEM Professionals

Business Insider 50 Best Companies to Work For in America

CareerBliss 50 Happiest Companies in America

Human Rights Campaign Corporate Equality Index 100 Percent

Indeed Top Companies to Work For in 2016

National Business Inclusion Consortium Best-of-the-Best Top 30 Corporations for Inclusion

San Francisco Business Times 2016 Healthiest Employers in the Greater Bay Area

# select 2016 memberships and associations

American Fuel & Petrochemical Manufacturers\*

American Petroleum Institute\*

**Business for Social Responsibility** 

**Business Roundtable** 

Center for Responsible Shale Development

**Extractive Industries Transparency Initiative** 

International Association of Oil & Gas Producers

IPIECA, the global oil and gas industry association for environmental and social issues

National Association of Manufacturers\*

**United States Chamber of Commerce\*** 

Voluntary Principles on Security and Human Rights

Western States Petroleum Association\*

\*Chevron's corporate-level trade association memberships with dues paid of more than \$500,000, where dues may be used for lobbying.

Editor and writer Marian Macindoe Production manager Paige Gilbreath
Photography advisor Sarah Coon Copy editor Joan D. Saunders

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