ExonMobil

2016 Corporate Citizenship Report



Zach Myers, ExxonMobil drilling engineer, aboard the Stena Carron drill ship offshore Georgetown, Guyana.



On the cover: Since 2000, ExxonMobil has spent approximately \$8 billion to develop lower-emission energy solutions.

Throughout this report, additional content is available by clicking the icons below.



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This year, we have modified our *Corporate Citizenship Report* compared with prior reports. This PDF report focuses on our most material sustainability issues (see page 10) with links to additional content on *exconmobil.com*, identified with an icon throughout the report. The expanded content on *exconmobil.com* showcases our approach to managing key corporate citizenship topics and highlights additional 2016 examples of our activities.

Chairman's letter

For 135 years, ExxonMobil has been built on strong business fundamentals, including operational excellence, technology leadership, financial discipline and a world-class workforce. These strengths have enabled us to safely and reliably deliver energy to our customers and value to our shareholders, even in the low-price environment that our industry has experienced recently. We are committed to doing what is in the best interests of our company and society. This requires us to remain focused on safety, environmental performance, community engagement and corporate governance.

I am pleased to share ExxonMobil's 2016 Corporate Citizenship Report, which details our performance and commitments in several key areas. As you will read, we continue to apply a rigorous, results-oriented approach to corporate citizenship in our business.

Our efforts to protect the safety and health of our employees, contractors and communities are at the heart of what we do every day. We strive to ensure *Nobody Gets Hurt*. We are proud to be an industry leader in safety culture and performance. In 2016, we achieved our best-ever workforce lost-time incident rate of 0.029 incidents per 200,000 work hours, an improvement of more than 80 percent compared to our performance in 2000.

As we provide the energy to meet growing needs around the world, we are also working to manage the risks of climate change. Climate change risks warrant action by businesses, governments and consumers, and we support the Paris Agreement as an effective framework for addressing this global challenge.

For our part, ExxonMobil continues to take action to mitigate our emissions and help consumers lessen their greenhouse gas impact. Since 2000, our investments to develop lower-emission energy solutions totaled about \$8 billion. We are deploying technologies such as cogeneration and carbon capture and storage while researching next-generation energy sources such as algae biofuels. Continued research in technological breakthroughs will be critical to managing future environmental and climate change risks.

As a science and technology company with more than 2,200 Ph.D. scientists, we will continue pursuing technologies that benefit both our company and society. Through our research organization, I have seen the transformative power of innovation - I believe it is vital to achieving progress.

We also value our long-standing relationships with communities and host governments worldwide. We work to enhance the social benefits from our operations, placing an emphasis on hiring qualified local workers and supporting a variety of strategic community investments. In 2016, we contributed \$242 million to communities around the world.

I am proud of ExxonMobil's corporate citizenship performance, and I look forward to building upon our progress to secure an even stronger future for our company and the society we serve.

We welcome feedback from all of our stakeholders at exxonmobil.com/citizenship.

Darren Woods Chairman and CEO

About ExxonMobil

As the world's largest publicly held oil and natural gas company, ExxonMobil uses technology and innovation to safely and responsibly deliver the energy and products the world needs. Every day, our employees work diligently to address the challenges of meeting growing global energy demand. In 2016, ExxonMobil supplied about 1.5 percent of the world's energy demand, equivalent to about 10 percent of U.S. energy demand. The reliable and affordable energy we supply is vital to fueling economic activity and helping improve the living standards of people around the world.

As we make significant investments around the world to help meet the world's growing energy needs, we also invest in the communities in which we work. In 2016, we contributed \$242 million to communities around the world.

ExxonMobil has a diverse portfolio of high-quality assets, projects and resources across our Upstream, Downstream and Chemical businesses. Our technical expertise, global reach and integrated business model provide ExxonMobil with a competitive advantage. Our flexibility and focus on fundamentals enable us to deliver value irrespective of the industry environment.

In 2016, we continued to demonstrate strong financial and operating performance across our business despite very challenging industry conditions:

- Achieved earnings of \$7.8 billion and return on average capital employed of 3.9 percent.
- Spent \$19.3 billion on capital and exploration expenditures.
- Completed five major Upstream projects with a working interest production capacity of almost 250,000 oil-equivalent barrels per day.
- Made significant oil discoveries offshore Nigeria and Guyana, and a gas discovery onshore Papua New Guinea.
- Progressed construction of a new hydrocracker project at our refinery in Rotterdam, Netherlands.
- Advanced construction of a world-scale specialty polymers facility in Singapore that will produce halobutyl rubber and performance resins.

For more in-depth analysis of our financial performance and investment decisions, see our 2016 Summary Annual Report and 2016 Financial and Operating Review.





ExxonMobil's integrated businesses

Upstream

We have an active exploration or production presence in 39 countries.

We use our unique geoscience capabilities, technology and understanding of global hydrocarbon resources to identify and prioritize all quality opportunities.



million oil-equivalent barrels of net oil and gas production per day¹

Downstream

Our balanced Downstream portfolio includes refining facilities in 14 countries.

We are one of the largest integrated refiners and manufacturers of fuels and lube basestocks and a leading marketer of petroleum products and finished lubricants.











Research & & Specialties Engineering

million barrels of petroleum product sales per day²

Chemical

We manufacture high-quality chemical products in 16 countries.

Our unique portfolio of commodity and specialty businesses delivers strong returns across the business cycle.



Elastomer & Butyl



¹Gas conversion to oil-equivalent barrels using 6 million cubic feet to equal 1,000 barrels.

²Petroleum product sales data reported net of purchases/sales contracts with the same counterparty.

³Prime product sales are total product sales excluding carbon black oil and sulfur. Prime product sales include ExxonMobil's share of equity company volumes and finished-product transfers to the Downstream.



Introduction

The Outlook for Energy

The Outlook for Energy is ExxonMobil's global view of energy demand and supply through 2040. We use the data and findings in this annual publication to help guide our long-term investments. It also highlights the dual challenge of providing the world with access to affordable and reliable energy supplies while reducing emissions to address the risks of climate change. We share *The Outlook* with the public to promote a better understanding of the issues shaping the world's energy needs. Why is this important? Because energy is fundamental to modern life. It is critical to human progress and to improving living standards for 7.5 billion people across the globe, including those without electricity, clean running water and clean-burning cooking fuels.



The Outlook for Energy: A View to 2040

The world's energy to 2040: Seven things to know

Modern energy is one of mankind's most complex endeavors, and its path is shaped by countless forces. We see seven key themes that will play a major role in defining our global energy landscape through 2040.

Energy underpins economic growth:

High levels of growth mean rising living standards. Across the world, the middle class will more than double in the next 15 years. As this growth accelerates so does consumption. Demand for energy increases with more people expecting access to air-conditioned homes, cars and appliances like refrigerators, dishwashers and smartphones

Natural gas leads growth in energy:

Natural gas is the largest growing fuel source, providing a quarter of global energy demand by 2040. The abundance and versatility of natural gas is helping the world shift to less carbon-intensive energy for electricity generation while also providing an emerging option as a fuel for certain types of transportation.

Oil remains the world's primary energy source:

Oil will continue to play a leading role in the energy mix with demand being driven by fuel for transportation and feedstock for the chemicals industry. These feedstocks help to make plastics and other advanced materials that provide advantages to manufacturers and consumers including energy efficiency gains.

Cost-effective options to reduce CO₂ emissions:

Delivering on the increased demand for energy needs to go hand in hand with finding constructive solutions that mitigate the risks of climate change. This is supported by the continuing shift to less carbon-intensive energy for power generation and increased energy efficiency in every sector. Global energy-related carbon dioxide (CO_2) emissions are likely to peak during the 2030s, even as global GDP doubles by 2040.

Non-OECD countries lead the way for energy demand:

Continuing urbanization in China and India, with people moving from rural areas to cities, will help to drive economic growth. China is likely to be the largest contributor of gross domestic product (GDP) gains. India is also growing strongly with its share of global GDP doubling.

The global energy mix is evolving:

As global economies grow and government policies change, the energy mix will continue to diversify. Nuclear and renewables will grow strongly and natural gas will grow the most. The diversification of energy supplies reflects economics and advanced technologies as well as policies aimed at reducing emissions.

The potential of technology:

As the pace of technology development continues to accelerate, new — and still uncertain — solutions are likely to emerge to contribute to meeting energy and environmental goals. Recent advances in technology are promoting energy efficiency gains to slow demand growth, and also opening up new energy supply options including unconventional oil and natural gas, nuclear and renewables.

Sustainability

Sustainability is critical to our business. At ExxonMobil, we work to expand the supplies of reliable and affordable energy needed for economic progress. In doing so, we take a balanced approach that considers the impact of our operations on local economies, communities and the environment. We design our approach to sustainability around six key areas:

- Safety, health and the workplace
- Managing climate change risks
- Environmental performance
- Community engagement, human rights and strategic investments
- Local development and supply chain management
- Corporate governance

ExxonMobil is committed to aligning our long-term business objectives with these six areas.

In September 2015, the United Nations published the Sustainable Development Goals (SDGs), providing a framework for governments, civil society and business to work together in progressing sustainability. The SDGs cover a range of sustainable development issues — through 17 goals and specific targets — that will inform countries' planning through 2030. ExxonMobil, as a major provider of reliable and affordable energy and a partner in community health, education and economic development, helps achieve progress in many of the areas set forth in the SDGs.



Stakeholder engagement

We recognize the significant responsibilities we have to our shareholders, neighbors, customers and communities as we find ways to bring affordable energy to the global market. For a company of our size and scope, building and maintaining relationships with a diverse group of stakeholders is critical. Regular stakeholder engagement helps us understand a variety of perspectives and improve our company's performance.

Because our business directly affects many people around the world, we seek to understand their viewpoints. We interact with our diverse stakeholders through a variety of mechanisms, including community meetings, web and social media content, corporate publications, and one-on-one and group discussions. Examples of stakeholder engagement are included throughout this report. The following list provides examples of common areas of interest.

Communities

Community development; economic development; grievance management; human rights; operational impacts; environmental performance

Customers

Product safety and sustainability; supply chain management; greenhouse gas emissions

Employees

Benefits; diversity; development opportunities; safety, health and wellness

Governments

Taxes and other revenue sources; climate change; local supplier development; job creation; human rights; impact assessments; ethics; health; education; energy supply and security

Nongovernmental organizations

Biodiversity; water management; climate change; human rights; transparency; social issues

Shareholders

Governance practices; board composition; policy engagement; risk management; climate change

Suppliers

Expectations for suppliers; local business opportunities; supplier diversity; capacity building; environmental performance

External Citizenship Advisory Panel

ExxonMobil's External Citizenship Advisory Panel (ECAP) provides an annual independent review of the company's corporate citizenship activities, including this report. The ECAP consists of academics, nongovernmental organization (NGO) representatives and former government employees who have expertise in social, governance and environmental topics. In addition to providing input on ExxonMobil's annual *Corporate Citizenship Report*, the ECAP discusses key topics with company executives at least once a year. We thank Sarah Labowitz for sharing her perspectives with us as a member of the panel from 2014 to 2016.

Mark Cohen

Professor of Management and Law Vanderbilt University Owen Graduate School of Management

Frank Loy

Former Under Secretary of State for Global Affairs U.S. Department of State

Jane Nelson

Director of Corporate Responsibility Initiative Harvard University Kennedy School of Government

Salil Tripathi

Senior Adviser, Global Issues Institute for Human Rights and Business



ECAP members visited XTO Energy operations near Fort Worth, Texas, as part of the panel's December 2016 meeting with executives.

External Citizenship Advisory Panel statement

ECAP statement on 2016 Corporate Citizenship Report

To the readers of this report,

As in prior years, we were asked to share our independent opinion on ExxonMobil's 2016 *Corporate Citizenship Report*. We reviewed and provided feedback on a draft of the report. In addition, we had the opportunity to engage across all levels of the company, including senior business executives, through in-person meetings, a site visit to XTO Energy Inc., telephone and email to discuss policy and strategy issues.

This letter is not an official endorsement of the report, the corporation or its policies and strategies, but rather our individual and collective views on the quality and progress made in ExxonMobil's citizenship reporting and transparency. In recognition of the time spent, ExxonMobil provided a donation on behalf of the panelists to nonprofit organizations of our choice and reimbursed relevant travel expenses.

We would also like to recognize the valuable contribution of our colleague, Sarah Labowitz, who resigned from the ECAP in late 2016, and wish her well.

2016 Commentary

Taking strategic action and engaging with critics on climate change

As one of society's greatest challenges, climate change requires urgent action on the part of governments, business and civil society. The 2015 Paris Agreement, the world's first comprehensive climate agreement, adopted in the presence of leaders of 195 countries, became effective in 2016. ExxonMobil states that it shares the Paris Agreement's view of the seriousness of climate change, and we commend the company for urging the new U.S. administration to remain a party to the Agreement.

However, the company is engaged in a legal and public dispute with visible social actors centering on what the company knew about the implications of climate change, and when and what it decided to do about it. Although the company has every right to defend itself in the litigation, these criticisms highlight the need for more proactive and constructive dialogue with critics. The panel suggests that ExxonMobil's credibility on this issue would be strengthened if it took additional measures to promote public policies that reduce climate change-inducing greenhouse gas emissions, such as taking a leadership role to bring about a revenue-neutral carbon tax. Further, the company may want to more explicitly describe how it is aligning its long-term corporate strategy and research priorities with climate change risks and opportunities. Since this letter was originally drafted based on 2016 company performance, we take note of significant movements in that regard, such as the recent letter to the President urging continued U.S. participation in the Paris Agreement, the company's participation as a founding member of the Climate Leadership Council, and the appointment to the board of Susan Avery, a climate scientist.

Providing more data context and comparative analysis

We appreciate ExxonMobil's robust reporting, including the synthesis of its quantitative performance through a summary data table. To enhance its reporting, ExxonMobil could explain why the particular metrics reported were chosen and how they align with methodological sources such as the Global Reporting Initiative, IPIECA, CDP, reporting under the United Nations *Guiding Principles on Business and Human Rights*, etc. It is also important to show both aggregate and normalized metrics similar to the approach taken for emissions or injury rates.

Lastly, additional context could be provided to demonstrate the strength of performance over time and, where appropriate, comparative performance with industry standards or competitors.

Leading voluntary initiatives

The current regulatory landscape for a range of environmental, social, human rights and governance issues is complex and uncertain. In times such as this, it is particularly important that leading companies take proactive and constructive voluntary actions. With this in mind, the company may want to play a greater role in supporting collective action and advocacy on key issues and report on what it is doing. For example, we commend ExxonMobil's decade-long leadership in revenue transparency and encourage the company to continue to take a strong position on this topic, including ongoing support for initiatives such as the Extractive Industries Transparency Initiative, despite the potential repeal of the Dodd-Frank Wall Street Reform and Consumer Protection Act Section 1504.

We applaud ExxonMobil's recent advocacy efforts on amendments to the Toxic Substances Control Act. In other areas where regulations may be rolled back, it will be important for the company to discuss its position and the extent to which it supports regulatory or voluntary initiatives. Lastly, ExxonMobil has developed an impressive suite of national content programs, encompassing skills development, local businesses and strategic community investment. We encourage the company to continue to strengthen these strategies and communicate how it is aligning itself with national development goals in countries of operation and with the Sustainable Development Goals.

Keeping pace with the maturing human rights landscape

With the maturing of human rights initiatives, there is a need for the company to keep pace in responding to stakeholder expectations and building industry-wide or multi-stakeholder coalitions to address human rights issues. As a participant in the *Voluntary Principles* (VPs) on Security and Human *Rights*, we encourage ExxonMobil to share good practices and lessons learned and participate actively in efforts to develop common standards of performance. This will be particularly important as the VPs shift to on-the-ground implementation. The company is right in letting its suppliers and contractors know about what it expects from them with regard to human rights initiatives such as the VPs. In the future, ExxonMobil should communicate the extent to which these expectations are part of supply contract requirements.

Lastly, the company should continue to reach its own decisions, but it should engage in a meaningful dialogue with affected stakeholders, including critics, and respond to the feedback it receives.

Leadership transition

As the bar continues to rise for good corporate citizenship, ExxonMobil will face increasingly higher expectations from investors and other stakeholders related to the company's management of environmental, social and governance issues. Strong leadership is more important than ever to demonstrate a sound management approach to these issues. Early 2017 brought a number of important leadership changes to the company, including the appointment of two new board members, as well as a new chairman and CEO. These changes reflect a diversity of gender, background and perspective, which we hope will better position the company to address these demands. We welcome these new leaders and look forward to working with them and the company's senior executives as they set the direction for the years ahead.

Sincerely,

Mark Cohen, Frank Loy, Jane Nelson, Salil Tripathi June 2017

Discussion of challenges on key issues

ExxonMobil announced significant oil discoveries offshore Guyana. How does ExxonMobil approach social, environmental and safety considerations when starting offshore development and production activities?

We work in over 100 countries around the world that span a wide range of natural, economic and social conditions. In some places, our industry has had a long presence. In others, oil and natural gas is an emerging sector. Everywhere we work, we are committed to conducting business in a manner that is compatible with the environmental and economic needs of the communities in which we operate.

When we go into a new country for our major Upstream projects, we conduct research and engage with local stakeholders including government, communities and local experts to develop a thorough understanding of current conditions from a safety, social and environmental perspective. During this process, we undertake environmental, socioeconomic and health assessments to understand the potential impacts from our operations. We incorporate this understanding into our project design and management plans to effectively mitigate risks. Such assessments are often required by host-country governments, but we go through the process even when it is not mandatory. This allows us to identify opportunities and risks early on in the planning process and take appropriate steps.

We followed this approach in Guyana, where in 2015 ExxonMobil announced the first major oil and gas discovery in the country. Prior to drilling even the first exploration well, ExxonMobil engaged with government and community stakeholders, including local scientists and experts, to build an understanding of our potential project impacts and appropriate protective measures.

We also consulted with the Guyana Geology and Mines Commission and the Guyana Environmental Protection Agency to develop a technical workshop series on oil and gas development, globally recognized best practices, international standards and environmental management technologies. Our partnership will help Guyana develop the capabilities it needs to manage oil and gas development, and we will continue working with local stakeholders through the duration of our project in the country.

What is ExxonMobil doing to promote respect for human rights within its operations and in the supply chain?

ExxonMobil actively promotes respect for human rights everywhere we work. We operate in some challenging environments where human rights issues — such as security, land and water access, forced labor and treatment of indigenous peoples — are a key concern to local communities. We believe the quality of the relationships we develop with local communities has a direct impact on the long-term success of our activities, and that our business presence can and does have a positive influence. We work with suppliers and business partners who share our commitment to human rights. We also actively engage with host governments to support security and respect for human rights in and near our operations.

In 2016, we made progress in a number of human rights-related areas:

- We published our ExxonMobil Supplier Expectations, a set of guidelines for our contractors and suppliers that covers human rights. These Expectations include references to key international human rights frameworks such as the United Nations Guiding Principles on Business and Human Rights and the International Labor Organization Declaration on Fundamental Principles and Rights at Work. Starting in 2017, the Supplier Expectations will become part of ExxonMobil's annual letter to our suppliers.
- We supported the creation of an in-country network to support the further implementation of the Voluntary Principles on Security and Human Rights in Nigeria. This network will enhance local collaboration on security and human rights among governments, nongovernmental organizations, companies and other stakeholders.
- We continued to train our workforce on human rights issues. For example, since late 2015, more than 1,200 of our key employees in 46 countries have completed our new computer-based human rights training.



Suzanne McCarron, ExxonMobil vice president of public and government affairs, has worldwide responsibility for the company's public policy, government relations, communications, media relations and corporate citizenship activities. Suzanne authors the Perspectives blog on our Energy Factor website, which encourages discourse on constructive solutions to energy challenges.

There have been several safety incidents associated with contract labor in the oil and gas sector. What is ExxonMobil doing to ensure its contractors receive the same safety training as its employees?

Our efforts are driven by our world-class Operations Integrity Management System. This system sets the foundation for our company's focus on safety throughout our worldwide operations. Employees and contractors alike are properly trained to perform their work in a safe manner.

We develop work plans tailored to our projects to ensure our workers get both the basic and specialized safety training they need for their specific jobs. We provide standardized training at regional safety training centers and work directly with contractors to make sure everyone working at our sites understands ExxonMobil's safety procedures and is competent to perform assigned tasks prior to starting work. For higher-risk activities, we have more stringent expectations, such as requiring certification prior to engaging in a particular activity. In some locations, we have helped build training centers where none previously existed. For example, we sponsored Survival Systems Training Limited in Nova Scotia, Canada. This organization provides training to employees and contractors working offshore on topics such as helicopter safety and firefighting.

Safety briefings conducted at our operating sites give employees and contractors an opportunity to share safety observations and encourage safe behaviors.

In addition, our procurement staff uses safety criteria to screen potential contractors that will be working on construction projects or at our major operations. The guidelines include having a robust safety program and leadership commitment to strong safety performance. Our goal is to work with companies to promote excellent safety performance across all aspects of our business.

Our strong safety culture has proven results. For example, our global contractor lost-time incident rate continues to be well below the industry average.

In light of the recent repeal of the U.S. Securities and Exchange Commission's 2016 final rule regarding payment reporting for the extractive industry, how will ExxonMobil work to promote transparency and revenue accountability in countries where it does business?

ExxonMobil believes the most successful transparency initiatives are those that ensure each relevant public, private and societal entity is fully engaged and properly represented. In addition, initiatives must respect national sovereignty and local norms and apply to every company in all sectors: public, private, foreign and domestic. Therefore, we did not support the approach the U.S. Securities and Exchange Commission took in its final rule in late 2016.

ExxonMobil supports transparency initiatives that increase government engagement with citizens and improve governance and revenue accountability. We voluntarily disclose revenues paid to governments for the development of natural resources, subject to legal and contractual restrictions. Our long-standing efforts to promote revenue transparency help to reduce corruption, improve government accountability and promote greater economic stability worldwide.

For many years, we have actively supported the Extractive Industries Transparency Initiative (EITI), a global program dedicated to strengthening governance by improving transparency and accountability in the extractives sector. We support the EITI application, validation and implementation processes in countries where we operate, and we are working with governments in a number of other countries that are considering joining EITI. We will continue to work constructively with governments considering new reporting rules to promote transparency and revenue accountability where we do business.

Over the past year, ExxonMobil has been questioned about its research and positions regarding climate change. How is the company responding to the investigations in New York and Massachusetts?

In late 2015 and 2016, the state attorneys general from New York and Massachusetts launched investigations into our past research and policy positions on climate change. We reject allegations that ExxonMobil suppressed climate change research or misled consumers or investors. We are responding in good faith while we continue to vigorously challenge the legality of the investigations. As of May 2017, the company has provided more than 2.8 million pages of documents in response. We look forward to an outcome that will put these false allegations to rest.

ExxonMobil is a constructive participant in the discussion on climate change. We will continue to research the issue, support energy efficiency, work to reduce emissions, pursue new technologies and engage on effective policy approaches.

Last fall you stated that the Paris Agreement was an "important step forward." What is ExxonMobil doing to address the risks of climate change?

The Paris Agreement signed by world leaders in 2016 showed the global community's resolve to address climate change risks. We're encouraged that the Paris Agreement creates an effective framework for all countries to address rising emissions. In fact, our company's forecasts of greenhouse gas emissions are consistent with the aggregation of the Paris Agreement pledges.

The world already has powerful tools for meeting growing global energy demand while reducing emissions. One is natural gas. Today in the United States, nearly one-third of the electricity is produced using natural gas. Our role as the country's largest producer of natural gas — which can reduce carbon dioxide emissions by 60 percent versus power generation from coal — has helped bring carbon dioxide emissions in the United States to the lowest level since the early 1990s. Increasing use of natural gas means our overall energy mix is becoming less carbon intensive. Greater energy efficiency is also essential to addressing the risks of climate change. It might seem surprising, but a big part of ExxonMobil's business is developing products and technologies that help save energy. Examples include our advanced automotive materials that make cars lighter and more fuel-efficient, and improved plastic packaging that reduces the energy needed to ship goods around the world.

At the same time, the world will need breakthrough clean-energy technologies such as carbon capture and storage (CCS). ExxonMobil is investing heavily in CCS, including research in a novel technology that uses fuel cells that could make CCS more affordable and expand its use. We currently have an interest in a quarter of the world's CCS capacity.

We're also investing in a broad portfolio of other technologies that could significantly reduce greenhouse gas emissions. This includes pioneering research in next-generation biofuels, including sources like algae, which could reduce emissions without competing with food and water resources. And by installing equipment at our refineries and chemical plants to generate steam from waste heat — called cogeneration — we enable 6 million metric tons of greenhouse gases to be avoided each year. All told, we've invested approximately \$8 billion since 2000 to develop lower-emission energy solutions.

As our chairman and CEO Darren Woods has said, climate change is a serious topic, and it demands a serious approach. ExxonMobil is proud to be part of that discussion, and we will continue to be in the years ahead.



About this report and materiality

About this report

We developed the 2016 Corporate Citizenship Report in accordance with the reporting guidelines and indicators of IPIECA (the global oil and gas industry association for environmental and social issues), the International Association of Oil and Gas Producers (IOGP) and the American Petroleum Institute (API). ExxonMobil was a key contributor to IPIECA, IOGP and API's updated Oil and Gas Industry Guidance on Voluntary Sustainability Reporting (2015), and this report reflects the new common reporting-level metrics. The majority of these indicators are also consistent with the indicators used by the Global Reporting Initiative (GRI) in its G4 Sustainability Reporting Guidelines; this report is informed by the G4 guidelines but has not been prepared in accordance with a particular GRI model. To help interested stakeholders easily access our key sustainability indicators, we have mapped relevant IPIECA, GRI and United Nations Sustainable Development Goals (SDG) indicators on our website. Note that many of the standards and metrics used in preparing this report continue to evolve and are based on management assumptions believed to be reasonable at the time of preparation, but should not be considered guarantees.

Oil and Gas Industry Guidance on Voluntary Sustainability Reporting

IPIECA/GRI/SDG index

This report covers ExxonMobil's operations from January 1, 2016, through December 31, 2016, unless otherwise indicated. The report uses both qualitative descriptions and quantitative metrics to describe our policies, programs, practices and performance. For environmental and climate change data, units of measure are metric where noted. Financial information is reported in U.S. dollars. For information on forward-looking statements in the 2016 *Corporate Citizenship Report*, please see the cautionary note on the back cover.

To learn more about our corporate citizenship initiatives, view previous reports or provide comments, please visit **exxonmobil.com/citizenship** or email **citizenship@exxonmobil.com**.

Materiality

A key step in developing this *Corporate Citizenship Report* is ensuring the content reflects ExxonMobil's most material issues. According to IPIECA, material issues for sustainability reporting are those that, in the view of both the company's management and its external stakeholders, have the potential to affect sustainability performance significantly. ExxonMobil has been conducting a materiality assessment to guide our reporting since 2006.

For this 2016 report, we reevaluated and prioritized key sustainability issues for our business and key stakeholders. A cross-functional team of ExxonMobil managers reviewed stakeholder feedback and business information to prioritize sustainability issues. The issues that are most critical to the success of our business and to stakeholder interest are covered in detail in this report. Additional information is available on exxonmobil.com and in other company publications. Please see our IPIECA/GRI/SDG index for a detailed mapping of where information regarding all material issues is located. Our draft materiality assessment results were reviewed and updated by internal subject matter experts and the External Citizenship Advisory Panel during fall 2016. Note that the concept of "material issues" under IPIECA guidelines used for purposes of this report is not meant to correspond to the concept of materiality for purposes of securities laws and disclosures required by the U.S. Securities and Exchange Commission's rules. Our material issues are listed below.

2016 material issues

Safety, health and the workplace

- Emergency preparedness and response
- Employee benefits and practices
- Personnel and process safety
- Product safety and responsibility
- Product transportation safety
- Workforce engagement
- Workplace security
- Worksite health and wellness

Managing climate change risks

- Developing technology solutions
- Engaging on climate change policy
- Mitigating emissions
- Providing solutions for customers

Environmental performance

- Air emissions
- Biodiversity and ecosystem services
- Decommissioning and rehabilitation of the environment
- Environmental compliance
- Environmental management approach
- Spill performance
- Water management

Community engagement, human rights and strategic investments

- Community relations
- External stakeholder engagement
- Human rights
- Indigenous peoples

Local development and supply chain management

- Local economic growth and development
- Supply chain management

Corporate governance

- Board leadership
- Ethics and integrity
- Executive compensation and strategic advantage
- Political advocacy and contributions
- Shareholder relations
- Transparency

Business operations (included throughout report)

- Energy future and portfolio management
- Management systems
- Operating in sensitive environments



Heath Eddins, facility plant superintendent, inspects equipment at our LaBarge gas plant in Wyoming.

Safety, health and the workplace

Safety

A commitment to safety is a core value and an integral part of ExxonMobil's culture. Our aim is to ensure each employee and contractor leaves work each day safe and in good health. We will never stop working toward our goal of Nobody Gets Hurt. For additional information on ExxonMobil's approach to managing safety, including our Operations Integrity Management System, visit our safety and security webpage.

Safety and security

Personnel safety

ExxonMobil expects every employee and third-party contractor to identify, assess and mitigate the risks associated with our daily operations. In 2016, we achieved our best-ever safety performance. We have reduced our workforce lost-time incident rate by more than 80 percent since 2000.

While this number is declining, safety incidents and near-misses do occur. We deeply regret that three contractors were fatally





The Hoover-Diana platform in the Gulf of Mexico.

Up Close: Hoover-Diana celebrates personnel and process safety success

One of the most significant measures of success for ExxonMobil is our safety performance. In 1998, ExxonMobil began working to develop the Hoover-Diana field, a deepwater oil and gas development located in the Gulf of Mexico. At the time of completion, the platform was the first floating drilling and production platform to develop two fields simultaneously at a depth of 4,800 feet of water. This engineering feat required diligent personnel and process safety management. ExxonMobil personnel have successfully completed more than 950 work-years of safe operations at the platform.

"I am proud of the best-ever safety performance we achieved in 2016. Even so, there is still room for improvement, and we will never stop working toward our goal of Nobody Gets Hurt."

Lynne Lachenmyer

Safety, security, health and environment vice president

injured in separate incidents related to ExxonMobil operations in 2016. The incidents were related to a maintenance accident at one of our facilities, an incident at one of our onshore drilling sites and an incident aboard a marine vessel preparing to offload supplies at one of our offshore platforms. We thoroughly investigated each incident to determine contributing factors, then enhanced our work practices and facilities accordingly to help prevent future occurrences. We have processes in place to review all incidents, even those that did not result in injuries, to identify opportunities to improve. By applying this process, we continuously work toward our goal of *Nobody Gets Hurt*. For additional information on third-party supplier and contractor safety, see the personnel safety section of our safety and security webpage.



Process safety

ExxonMobil takes a comprehensive approach to managing process safety. Process safety refers to the equipment,



ExxonMobil workforce
American Petroleum Institute U.S. petroleu
industry workforce benchmark

In 2016, our workforce lost-time incident rate per 200,000 work hours was 0.029, a decrease from the previous year. Over the past decade, we have reduced this rate by 40 percent. When compared with the American Petroleum Institute U.S. petroleum industry workforce benchmark, ExxonMobil continues to be below the industry average.

¹Workforce includes employees and contractors. Incidents include both injuries and illnesses. Depending on the reporting year, illness-related incidents range from 2 to 13 percent. procedures and training that prevent the uncontrolled release of hydrocarbons and hazardous substances. We identify then eliminate or mitigate process safety risks associated with our operations by employing structured processes and procedures that serve as preventive safeguards and help us avoid incidents. For information on Tier 1 process safety events, visit the process safety section of our safety and security webpage.



ExxonMobil is committed to working with scientists and local partners to develop and commercialize technologies that enhance process safety. For example, in 2016, ExxonMobil Research Qatar, in partnership with Providence Photonics LLC, conducted field tests of a remote gas detection system in Qatar. The system provides a highly sensitive and accurate early warning of hydrocarbon leaks. We evaluated the system's durability and performance by challenging it in various environmental conditions such as high heat and humidity, dust, sand and dense fog during the field test.



In 2016, ExxonMobil's total recordable workforce incident rate per 200,000 work hours was 0.20, a slight decrease from 2015. Since 2007, we have reduced this rate by 47 percent. When compared with the American Petroleum Institute U.S. petroleum industry workforce benchmark, ExxonMobil continues to be below the industry average.

²Workforce includes employees and contractors. Incidents include both injuries and illnesses. Depending on the reporting year, illness-related incidents range from 3 to 10 percent.

Product stewardship

We recognize the importance of managing and communicating product safety information to those who handle and use ExxonMobil products. Our *Product Stewardship Information Management System* applies common global processes and computer systems to capture and communicate information on the safe handling, transport, use and disposal of our products, as well as emergency contact information.

This System enables ExxonMobil businesses to comply with changing regional and national hazard communication regulations, including the adoption of the Globally Harmonized System of Classification and Labelling Chemicals developed by the United Nations. As of year-end 2016, more than 55,000 safety data sheets for ExxonMobil products and manufacturing streams were authored and distributed as part of the implementation of this guidance by national and regional regulatory authorities in several countries. Due to the evolving nature of regulatory requirements, we continually monitor developments to make sure our products comply with applicable regulations.

2016 emergency response data

At ExxonMobil, we routinely train emergency support group personnel on a range of possible scenarios, including simulated spills, fires, explosions, natural disasters and security incidents. In 2016, our activities included the following:



Product transportation safety

As part of our commitment to product stewardship, we manage the safety, health and environmental aspects of transporting our products, including by marine, pipeline and rail transportation. ExxonMobil's worldwide marine business, which involves about 500 vessels in daily service, logged more than 20,000 voyages and 45,000 port calls in 2016, safely transporting approximately 1.4 billion barrels of crude oil and refined products, without a spill to water. The ExxonMobil Pipeline Company and its affiliates safely transport almost 3 million barrels per day of crude oil, refined products and other important products. We operate approximately 4,000 miles of active pipelines in the United States every day. We carefully maintain and monitor our infrastructure worldwide to identify and prevent corrosion, third-party damage or illegal intrusions onto our rights of way. For information on utilization of rail transport for crude oil, please see the product transportation safety section of our safety and security webpage.

Safety and security

Emergency preparedness and response

ExxonMobil maintains a strong emphasis on training for effective emergency response capabilities. We establish strategic emergency support groups (ESGs) around the world to develop and practice emergency response strategies and assist field responders. Regardless of the size of an incident, each ExxonMobil facility and business unit has access to an array of trained responders, including our regional response teams (RRT), which provide rapid tactical support when needed. Each RRT participates in annual training programs with business line personnel, response organizations and relevant government authorities in the designated region.

Severe wildfires in 2016 resulted in one of the largest fire-related evacuations in Canadian history, impacting residents in 12 local communities and requiring production to be shut down at Imperial Oil's Kearl oil sands mine and at its Syncrude joint venture operation. Imperial Oil is a majority-owned affiliate of ExxonMobil.

In response, an ESG was assembled by Imperial Oil to manage the impacts to our business and support efforts of the Alberta government to help the community. The ESG supported the evacuation of approximately 3,000 people without incident, developed an air quality monitoring process and conducted regular communications with employees and the community to ensure their needs were being met. In support of the community, the Imperial Oil Foundation also donated \$100,000 to the Canadian Red Cross, gasoline to the Royal Canadian Mounted Police and accommodations for evacuated employees, their families and other impacted residents of Northern Alberta.



"Since the beginning of the evacuation in May 2016, Imperial Oil employees were in contact with Fort McKay First Nation to lend their support and ensure the health and safety of our community. The commitment of Imperial Oil employees to assisting Fort McKay during this crisis is something to be commended."

Chief Jim Bouchier Fort McKay First Nation

Worksite health and wellness

ExxonMobil promotes a work environment that helps our employees and their families pursue healthy lifestyles, including prevention of infectious diseases. Our goal is to address the diverse health risks prevalent in the locations where we operate and to protect the health, safety and productivity of our workers while preserving our business operations. We have addressed the threats of malaria, tuberculosis, HIV/AIDS, Ebola, Zika and other outbreaks in our workplace through effective and efficient prevention and control programs. Since 2007, no malaria deaths have been reported among our workers. Additionally, none of the approximately 100 active tuberculosis cases diagnosed in our workforce since 2010 have infected another worker on our sites, and no operational disruption has been reported due to an outbreak during that time. For information on ExxonMobil's Culture of Health program, which supports the health, safety and wellness of our employees, please visit our health and wellness webpage.



Workforce engagement

ExxonMobil maintains a culture of diversity and inclusion, upholds disciplined employment practices, and offers robust training and benefit programs that promote employee retention. We cultivate a diverse workforce of highly talented individuals who are dedicated to integrity and high-quality work. We support voluntary, employee-led networks that foster a culture of diversity and inclusion by offering development programs, community service opportunities and mentoring. For information on ExxonMobil's employment practices, see our employment practices webpage.

Employment practices

Within ExxonMobil's executive employee population, 18 percent are women. This represents an increase of 50 percent over the past decade. This increase, in part, is a result of continued focus on early identification and focused development of high-performing female employees. Additionally, approximately 15 percent of our U.S. executives are minorities, an increase of 79 percent over the past 10 years, facilitated by a consistent focus on minority management development. For information on our local hiring practices outside the United States, see page 38.

To increase the representation of minorities and female employees in our U.S. operations, we implement a wide range of education programs and recruiting activities intended to reach a diverse pool of highly qualified candidates. In 2016,



"I was fortunate to be involved as a founding member of the Asian Connection for Excellence (ACE) chapter at the Chemical Company headquarters in Houston. When I relocated to Beaumont, Texas, I realized the need to establish a chapter in Beaumont as well. Understanding inclusion and diversity is one of the most important aspects in conducting business. ExxonMobil recognizes the importance of having an open dialogue about cultural differences and how that drives better business results."

Matthew Lim

ExxonMobil Chemical Company aromatics technical supervisor

we provided 38 technical scholarships to minorities across the United States. Additionally, 43 percent of engineering hires in the United States were women, higher than the U.S. percentage of female engineering students. For additional information on the percentage of women and minorities by position in the United States, see the performance data table.

As a global organization, the diversity and inclusion of thought, skill, knowledge and culture across our company facilitates innovation and is a key competitive advantage. As demand for science, technology, engineering and mathematics workers continues to increase worldwide, we support immigration policies that will help U.S. companies fill their high-skilled workforce needs.

ExxonMobil offers robust corporate and technical training programs designed to engage employees in professional development. Our major business units spent \$108 million on training employees during 2016. Of that, we directed 76 percent toward professional and technical training. In 2016, more than 4,600 employees at various levels of the company participated in ExxonMobil's leadership development training programs, of which 32 percent were women and 58 percent were employees from outside the United States. For additional information on training expenditures and the number of employees trained, please see the performance data table.

We retain and develop our diverse workforce by providing an environment where personal and professional growth is encouraged and career objectives are developed and achieved. For additional information on ExxonMobil's employment policies, as well as our approach to retention and engagement, please see our workforce engagement webpage.

Workforce engagement

Up Close: Promoting Zika awareness and preparedness among ExxonMobil employees

We believe proactive communication and awareness is critical to limiting the consequences of outbreaks on worker health, productivity and business operations. In 2016, the World Health Organization declared Zika a Public Health Emergency of International Concern.

We established a corporate working group to educate our workers on prevention, preparedness and response techniques across our global worksites. Preparedness strategies included mitigation in active Zika areas, traveler notification of potential risks, and employee access to referrals for Zika diagnosis and treatment. Additionally, ExxonMobil took proactive steps at all potentially impacted sites to establish mosquito control plans and to identify a site Zika contact in worksites located in high-risk areas. In 2016, 40 employees and contractors were impacted by the Zika virus. We will continue to enhance our education and awareness efforts to help reduce this number.



Malick Diara, Amanda Brown, Johnnie Richard and Cathy Simmons from ExxonMobil's medicine and occupational health group host an information session about Zika prevention.

2016 workforce by geographic region³

Thousands of employees Africa/Middle East 3.6 Canada 6.7 Total workforce 71.1 Asia Pacific 13.3

Our global reach directly contributes to the diversity of our workforce and the success of our business. In 2016, our total workforce was approximately 71,100, slightly lower than the total workforce in 2015. The largest concentration of ExxonMobil employees is in the United States with 29,100, followed by Europe and Asia Pacific with 14,900 and 13,300, respectively.

³Data exclude company-operated retail store employees



Cali Hatch, a process apprentice, monitors equipment at ExxonMobil's Baton Rouge refinery in Louisiana. 2016 female representation in ExxonMobil worldwide workforce

40%

of our worldwide management and professional new hires over the past decade were women

32%

of our management and professional population are women

35% of our worldwide engineering hires are women 2016 minority representation in ExxonMobil U.S. workforce

30%

of our management and professional new hires in the United States over the past decade were minorities

30%

of our management and professional population in the United States are minorities

36% of our engineering hires in the United States are minorities

^{Up Close:} Improving road safety in Nigeria

According to the World Health Organization, the total number of road traffic deaths in Nigeria is more than 35,000 per year. The Nigerian National Petroleum Corporation, Mobil Producing Nigeria and the Federal Road Safety Corps implemented the second phase of an ExxonMobil-supported road safety awareness campaign in 2016 that aims to foster safe driving practices and enhance overall safety among road users in Nigeria. This behavioral campaign utilizes a two-pronged approach that includes messaging on billboards as well as skills training for public transportation drivers and company logistics teams. The Federal Road Safety Corps cites a 20 percent reduction in road accidents due to the program's sustained efforts since 2014. We have implemented similar programs in other areas of our operations and continue to seek new opportunities to improve road safety.



In 2016, Mobil Producing Nigeria participated in a behavioral awareness road safety campaign.



ExxonMobil and Synthetic Genomics, Inc. are partnering to develop breakthroughs in algae biofuels, a critical step toward sustainable biofuel production.

Managing climate change risks

Climate change risk management strategy

Society continues to face the dual challenge of meeting the world's growing energy demand, while simultaneously addressing the risks of climate change. ExxonMobil believes the risks of climate change warrant thoughtful action.

We are committed to providing affordable energy to support human progress while advancing effective solutions to address climate change. Our climate change risk management strategy includes four components: developing technology solutions, mitigating emissions in our operations, providing solutions that reduce greenhouse gas emissions for our customers and engaging on climate change policy.



Managing climate change risks

Developing technology solutions

As society pursues energy solutions that will lower greenhouse gas emissions, technological advancements will be instrumental in providing the global economy with the energy it needs. Recognizing the challenges associated with most existing low greenhouse gas emissions energy technologies, particularly in delivering the necessary economy, scale and reliability, we are conducting fundamental research aimed at developing energy solutions that have the potential to be economically feasible without subsidies, standards or mandates. ExxonMobil is pioneering scientific research to discover innovative approaches to enhance existing — and develop next-generation — energy sources.

ExxonMobil's Emerging Technologies program brings together executives, scientists and engineers from across our businesses to identify and evaluate technology research opportunities with a long-term strategic focus. Our Emerging Technologies team seeks to understand a wide range of technology options and how they may shape the global energy system. Understanding the fundamental science serves as a basis for our broader research efforts and may lead to further technology development aimed at practical application. This awareness informs our internal analysis of the global energy landscape as reflected in our annual *Outlook for Energy*.



The Outlook for Energy: A View to 2040

At the center of our research is ExxonMobil's Corporate Strategic Research laboratory, a fundamental research institution with approximately 150 Ph.D. scientists and engineers focused on addressing the company's long-range science needs. Our in-house research portfolio includes a broad array of programs, including biofuels, carbon capture and storage, alternative energy and climate science.

In addition to in-house research, we partner with leading universities around the world — such as the Massachusetts Institute of Technology, Princeton University, the University of



"I believe, and my company believes, that climate risks warrant action and it's going to take all of us — business, governments and consumers — to make meaningful progress."

Darren Woods Chairman and CEO Texas and Stanford University – to broaden awareness of energy developments and support technology breakthroughs to reduce greenhouse gas emissions and improve energy efficiency.

Advanced biofuels

ExxonMobil funds a broad portfolio of biofuels research programs, including ongoing efforts to develop algae-based biofuels. These include programs for converting non-food based feedstocks — such as whole cellulosic biomass, algae-based feedstocks and cellulose-derived sugars — into advanced transportation fuels. We believe that additional fundamental technology improvements and scientific breakthroughs are still necessary in both biomass optimization and the processing of biomass into fuels. Specifically, further progress is needed to ensure that advanced biofuels can work on a commercial scale and be produced with lower life-cycle greenhouse gas emissions.

Our advanced biofuels research includes joint research collaborations with Synthetic Genomics Inc., Renewable Energy Group, the Colorado School of Mines, Michigan State University and the University of Wisconsin. For more information about our technology partnerships in 2016, see the Up Close on page 18.



ExxonMobil's approach to developing future energy technology



Carbon capture and storage

Carbon capture and storage (CCS) is the process by which carbon dioxide (CO_2) gas that would otherwise be released into the atmosphere is captured, compressed and injected into underground geologic formations for permanent storage. With a working interest in approximately one-quarter of the world's total CCS capacity, ExxonMobil is a leader in one of the most important next-generation, low-carbon technologies. In 2016, we captured 6.3 million metric tons of CO₂ for storage.

We believe the greatest opportunity for future large-scale deployment of CCS will be in the natural gas-fired power generation sector. While CCS technology can be applied to coal-fired power generation, the cost to capture CO_2 is about twice that of natural gas-fired power generation. In addition, because coal-fired power generation creates about twice as much CO_2 per unit of electricity generated, the geological storage space required to sequester the CO_2 produced from coal-fired generation is about twice that associated with gas-fired generation.

ExxonMobil is conducting proprietary, fundamental research to develop breakthrough carbon capture technologies that have the potential to be commercially feasible without government subsidies, standards or mandates.



FuelCell Energy plant in Bridgeport, Connecticut.

Up Close:

Next-generation technology partnerships

ExxonMobil continues to invest in research and development of next-generation technologies. Achieving large-scale changes in the energy sector will require long-term investments in research to develop cost-effective solutions that are capable of broad commercial application. We conduct cutting-edge research and development in-house and in collaboration with other industries. We also partner with approximately 80 universities around the world to explore next-generation energy technologies. Spending approximately \$1 billion per year on research and technology development over the past decade, ExxonMobil is maintaining a leading role in technological innovation in the energy industry. Below are examples of our technology partnerships announced in 2016.

FuelCell Energy

ExxonMobil and FuelCell Energy, Inc., are pursuing a novel technology in power plant carbon dioxide capture through a new application of carbonate fuel cells. A fuel cell is a device that converts chemical energy into electricity.

Advancing economic and sustainable technologies to capture carbon dioxide from large emitters such as power plants is an important part of ExxonMobil's suite of research into lower-emission solutions to mitigate the risks of climate change. ExxonMobil researchers



"The fuel cell carbon capture solution we are advancing with ExxonMobil could be a game-changer in affordably reducing carbon dioxide emissions from coal- and gas-fired power plants globally. The carbonate fuel cell solution uses a proven global platform to generate power while capturing carbon dioxide."

Chip Bottone

President and chief executive officer of FuelCell Energy, Inc.

conducted two years of comprehensive laboratory tests that demonstrated that the unique integration of two existing technologies — carbonate fuel cells and natural gas-fired power generation — allows the capture of carbon dioxide more efficiently than conventional technology. Through these tests, our scientists saw the potential for this exciting technology for use at natural gas-fired power plants to enhance the viability of carbon capture and storage while at the same time generating additional electricity. Following several years of experiments with FuelCell Energy, we advanced our research via a joint development agreement in 2016. This agreement allows scientists from both companies to work collaboratively to further develop this potentially game-changing technology.

University of Texas

ExxonMobil partnered with the University of Texas at Austin in 2016 to explore and progress innovative solutions to the world's energy challenges. As part of this effort, we are investing \$15 million in research initiatives over five years to build upon decades of research at the University of Texas and further develop existing and next-generation energy sources that have the potential to reduce emissions.

The university's renowned Energy Institute will help drive much of the research conducted through this partnership. Research projects are expected to cover a range of emerging



"The University of Texas at Austin is proud and deeply appreciative of its long history of collaboration in education and research with ExxonMobil. This investment further unites two of the world's leading energy organizations to pursue innovations for a better energy future."

Gregory L. Fenves President of the University of Texas

technologies and will take advantage of the university's capabilities in renewable energy, battery technologies and power grid modeling.

Georgia Institute of Technology

Research teams from ExxonMobil and the Georgia Institute of Technology have successfully developed a new method of reverse osmosis that filters hydrocarbons through synthetic carbon membranes at the molecular level. This is a critical step in the production of certain plastics that currently requires energy-intensive separation processes.

Because the new method works at low temperatures, it may one day replace existing separation technology, dramatically reducing the amount of energy required in plastics processing.

If brought to industrial scale, this breakthrough could reduce industry's global annual carbon dioxide emissions by up to 45 million metric tons, which is equivalent to the annual energy-related carbon dioxide emissions of about 5 million U.S. homes. It could also reduce energy costs used to make plastics by up to \$2 billion a year globally.

Chemical plants account for about 8 percent of global energy demand and about 15 percent of the projected growth in

demand to 2040. As populations and living standards continue to rise around the world, the demand for auto parts, housing materials, medical devices, electronics and other products made from plastics and other petrochemicals will continue to grow. Improving industrial efficiency is part of ExxonMobil's mission to meet the world's growing need for energy while limiting environmental impacts.

Renewable Energy Group

ExxonMobil is a global leader in advanced biofuels research. In 2016, we extended this leadership by partnering with Renewable Energy Group, Inc. (REG), to study the production of biodiesel by fermenting renewable cellulosic sugars from sources such as agricultural waste. This work is part of our many investments in new technologies with the potential to increase energy supplies, reduce emissions and improve operational efficiencies.

REG has developed a patented technology that uses microbes to convert sugars to diesel in a one-step fermentation process similar to ethanol manufacturing. The ExxonMobil and REG research will focus on using sugars from non-food sources to produce biofuels. Through this research, we will address the challenge of how to ferment real-world renewable cellulosic sugars that contain impurities capable of inhibiting fermentation. The research will explore the technical feasibility and potential environmental benefits of biodiesel produced from fermented sugars. Positive results could lead to expanded efforts to explore scalability of the technology.



"We look forward to this collaboration with ExxonMobil to advance our proprietary cellulosic sugar fermentation technology. This technology can enable us to capitalize on the combined power of cellulosic sugars and microbial fermentation to revolutionize the production of ultra-low carbon, cleaner-burning advanced biofuels."

Eric Bowen

Vice president and head of REG Life Sciences

Emissions reduction

Plastic possibilities

What if you could meet the growing demand for certain plastics while reducing energy consumption and cutting carbon emissions? A potentially game-changing process may do just that. It's called organic solvent reverse osmosis (OSRO). This breakthrough enables a building block of plastics (paraxylene) to be separated at the molecular level by using very little heat. If we used OSRO to help make certain plastics, it could:



Cut annual energy costs by



Reduce industry's annual carbon emissions by



Meet demand for plastics

RESPONSIBLY

45 MILLION METRIC TONS

Mitigating emissions in our operations

As we seek to increase production of oil and natural gas to meet growing global energy demand, we are committed to mitigating greenhouse gas emissions within our operations.

ExxonMobil has a robust set of processes to improve efficiency, mitigate emissions and contribute to effective long-term solutions to manage climate change risks. These processes include, where appropriate, setting tailored objectives at the business, site and equipment levels, and then stewarding progress toward meeting those objectives. Based on decades of experience, ExxonMobil believes this rigorous bottom-up approach is a more effective and meaningful way to drive efficiency improvement and greenhouse gas emissions reduction than simply setting high-level corporate targets. We also believe that continuing to use this approach will yield further improvements in all sectors of our business.

In the near term, we are working to increase energy efficiency while reducing flaring, venting and fugitive emissions in our operations. In the medium term, we are deploying proven technologies such as cogeneration and carbon capture and storage where technically and economically feasible. Longer term, we are conducting and supporting research to develop breakthrough technologies. Since 2000, ExxonMobil has spent approximately \$8 billion to develop lower-emission energy solutions.

In 2016, ExxonMobil's net equity greenhouse gas emissions were 125 million CO_2 -equivalent metric tons. Relative to our 2015 performance, our 2016 emissions increased by approximately 3 million CO_2 -equivalent metric tons. This increase was primarily driven by new facilities in our Upstream operations,

such as our Gorgon Jansz liquefied natural gas project in Western Australia.

2016 CDP response

Energy efficiency

In 2016, energy used in our operations totaled 1.5 billion gigajoules. Energy utilized in our operations generates more than 80 percent of our direct greenhouse gas emissions and is one of our largest operating costs. As such, we have focused on energy efficiency for many decades. Since 2000, we have used our *Global Energy Management System* in the Downstream and Chemical businesses, and our *Production Operations Energy Management System* in our Upstream businesses to identify and act on energy savings opportunities. Through our commitment to energy efficiency, application of structured processes and continued use of a bottom-up approach, we continue to yield industry-leading results.

Greenhouse gas emissions (net)¹

Net equity, $\rm CO_2$ -equivalent emissions Millions of metric tons



In 2016, ExxonMobil's net equity greenhouse gas emissions were 125 million CO_2 -equivalent metric tons. Relative to our 2015 performance, our 2016 emissions increased by approximately 3 million CO_2 -equivalent metric tons.

¹Our calculations are based on the guidance provided in API's Compendium of Greenhouse Gas Emission Estimation Methodologies for the Oil and Gas Industry and IPIECA's Petroleum Industry Guidelines for Reporting Greenhouse Gas Emissions. We report greenhouse gas emissions on a net equity basis for our business operations, demonstrating a share of emissions from any facility or operation in which ExxonMobil holds a financial interest, with the share reflecting the equity fractional interest.

Greenhouse gas emissions (normalized)

Net equity, CO_2 -equivalent emissions Metric tons per 100 metric tons of throughput or production



Our normalized greenhouse gas emissions from our Upstream, Downstream and Chemical operations totaled 24.5 metric tons per 100 metric tons of throughput or production in 2016. Over the past decade, increases in Upstream emissions have been largely offset by improvements in our Downstream and Chemical operations. We are committed to reducing our normalized greenhouse gas emissions through structured processes and the continued use of a bottom-up approach.

Greenhouse gas emissions avoided from ExxonMobil actions² Net equity, CO_2 -equivalent emissions Millions of metric tons



In 2016, greenhouse gas emissions avoided from ExxonMobil actions were 19.0 million metric tons, cumulative since 2007. This represents an additional avoidance of 0.8 million metric tons of greenhouse gas emissions compared with our 2015 performance.

²Cumulative since 2006.

For example, in the 2010, 2012 and 2014 Refining Industry Surveys, ExxonMobil's global refining operations achieved first quartile energy efficiency performance.*

Cogeneration

Cogeneration technology captures waste heat generated from the production of electricity for use in production, refining and chemical processing operations. Due to its inherent energy efficiency, the use of cogeneration leads to reduced greenhouse gas emissions. Our cogeneration facilities enable the avoidance of approximately 6 million metric tons per year of greenhouse gas emissions.

We have interests in approximately 5,300 megawatts of cogeneration capacity in more than 100 installations around the world. This capacity is equivalent to the annual energy needed to power 2.5 million U.S. homes. Over the past decade, we have added more than 1,000 megawatts of cogeneration capacity and continue to develop additional investment opportunities.

*The Solomon Survey provides a global benchmarking assessment of the refining industry and is conducted every two years. Results from the 2016 surveys are expected in mid-2017.

Emissions reduction

Flaring

Flaring is the process of burning natural gas as an alternative to releasing the gases directly into the atmosphere. Flaring is done for safety reasons or because barriers to the development of gas markets and gas infrastructure prevent natural gas from being used.

ExxonMobil is a charter member of the *Global Gas Flaring Reduction Partnership*, an initiative of the World Bank that seeks to reduce flaring by increasing the use of natural gas associated with oil production, by helping remove technical and regulatory barriers to flaring reduction, conducting research, disseminating best practices and developing regulatory country-specific gas flaring reduction programs. In addition, we put in place our own Upstream Flaring and Venting Reduction Environmental Standard for Projects in 2005. Our goal is to avoid routine flaring in new Upstream projects and to reduce "legacy" flaring in our existing operations.

In 2016, flaring volume from our combined Upstream, Downstream and Chemical operations totaled 5.0 million metric tons. This represents a decrease of 0.3 million metric tons compared with our 2015 performance. The decrease in flaring in 2016 was largely due to changes at our Usan field in Nigeria, where — since assuming operatorship in 2014 — we have implemented a program to eliminate routine flaring. Hydrocarbon flaring

Millions of metric tons



In 2016, flaring volume from our combined Upstream, Downstream and Chemical operations totaled 5.0 million metric tons. This represents a decrease of 0.3 million metric tons compared with our 2015 performance.



invested since 2000 at our Upstream facilities around the world on emission reduction efforts, including energy efficiency and flare mitigation



invested since 2000 at our refining and chemical facilities around the world to reduce greenhouse gas emissions



in support of Upstream and Downstream cogeneration facilities since 2001 to more efficiently produce electricity and reduce greenhouse gas emissions



Our Antwerp refinery in Belgium. ExxonMobil continues to take action to improve our energy efficiency and reduce emissions.



XTO Energy natural gas operations in Alberta, Canada.

Venting and fugitive emissions

Venting is the process of releasing methane and other gases into the atmosphere. Fugitive emissions occur when gases or vapors escape from pressurized equipment.

We recognize the importance of reducing these emissions and continue implementing cost-effective methods to reduce methane and other hydrocarbon emissions in our operations. This includes structured leak detection and repair programs in which we use optical gas imaging cameras to identify leaks for prompt repair. Additionally, we continue to replace high-bleed pneumatic devices with lower-emission technology and conduct reduced emissions completions in our ongoing efforts to enhance the environmental performance of our operations.

Our methane emissions in 2016 totaled 7 million CO_2 -equivalent metric tons, which is similar to our performance over the last several years. Most of our venting and fugitive emissions are methane, which represent approximately 6 percent of our direct greenhouse gas emissions.

Providing solutions for customers

Over the next few decades, population and income growth and an unprecedented expansion of the global middle class — are expected to create new demands for energy and hydrocarbon-based products. Meeting these demands will not just require more energy, but will also require energy to be used more efficiently across all sectors.

ExxonMobil is delivering solutions that enable our customers to reduce their emissions and improve their energy efficiency, including:

- Expanding the supply of cleaner-burning natural gas to reduce emissions in power generation;
- Creating highly efficient plastics and other chemical materials that can be applied in a range of consumer products; and
- Developing premium, high-efficiency fuels and lubricants.

Natural gas

One of the greatest opportunities for society to reduce greenhouse gas emissions is through the use of natural gas in power generation. Natural gas is a flexible, abundant and low-emissions fuel that is available across the globe. On a life-cycle basis, from extraction through electricity consumption, using natural gas yields up to 60 percent fewer greenhouse gas emissions than coal. Natural gas is also the ideal partner for intermittent renewable energy sources, such as solar or wind, as it can provide reliable power when these renewable sources are not available. We predict natural gas will be one of the most important energy sources to drive reductions in greenhouse gas emissions.

ExxonMobil is one of the largest natural gas producers in the world. Coupled with our leadership in the development of liquefied natural gas, we are well-positioned to meet growing demand for this cleaner-burning energy source.

Chemical materials

Materials developed by ExxonMobil provide manufacturers with quantifiable benefits in many consumer applications, including resilient, lightweight plastics that are used by automotive manufacturers to reduce vehicle weight and deliver greater efficiency for drivers. We have also developed advanced tire technologies that help maintain optimal tire pressure, improve rolling resistance and aid fuel efficiency, as around 25 percent of vehicle tires in the United States are underinflated. By addressing this issue, drivers could collectively save up to 1 billion gallons of gasoline per year.

Additionally, our next-generation plastic packaging reduces total product weight and allows more products per shipment, fewer trucks on the road, less gasoline and energy used, fewer greenhouse gas emissions and ultimately less material to be reused, recovered or recycled. ExxonMobil plastic products also contribute to safety within the food industry. Plastic packaging is lightweight, durable and flexible, which makes it ideal for preserving food. According to the Food and Agriculture Organization of the United Nations, one-third of the food produced in the world goes to waste each year. Plastic packaging can help reduce spoilage, increase access to food and improve food safety for consumers around the world.



ExxonMobil employees Barb Whittaker and Joan Axelrod work to develop Synergy fuels at our laboratory in Paulsboro, New Jersey.

Fuels and lubricants

ExxonMobil produces fuels and lubricants that deliver higher vehicle efficiency and lower emissions. In addition, we continue working on research and development of new fuels and lubricants. Our family of high-performance lubricants includes synthetic lubricants that have sustainable customer benefits, such as longer drain intervals than conventional mineral oils. Synthetic lubricants can be replaced with less frequency, therefore reducing the volume of used oil for disposal or recycle. In addition, extending lubrication service intervals increases efficiency and lowers maintenance costs while reducing potential risks from worker and machine interactions. There are also specific application advantages for these products, including in wind turbine applications where machinery is several hundreds of feet in the air. Mobil lubricants are used in more than 40,000 wind turbines worldwide.

Engaging on climate change policy

ExxonMobil believes the long-term objective of effective policy should be to reduce the risks of climate change at minimum societal cost, in balance with other priorities such as poverty eradication, education, health, security and affordable energy. Climate change is a global issue that requires the collaboration of governments, companies, consumers and other stakeholders to create worldwide solutions. We engage with stakeholders directly and through trade associations around the world to encourage sound policy solutions for addressing climate change risks.

Effective climate change policies

We believe that free markets, innovation and technology are essential in addressing the risks of climate change. Success in developing and deploying technologies will be highly dependent on governments creating a policy environment that enables innovation and competition. Policies should be clear and guard against duplicative, overlapping and conflicting regulations, which may distort markets and impose unnecessary costs on consumers. We believe that effective policies are those that:

- Promote global participation;
- Let market prices drive the selection of solutions;
- Ensure a uniform and predictable cost of greenhouse gas emissions across the economy;
- Minimize complexity and administrative costs;
- Maximize transparency; and
- Provide flexibility for future adjustments to react to developments in climate science and the economic impacts of climate change policies.

Given the wide range of societal priorities and limited global resources, all policies should be as economically efficient as possible. ExxonMobil believes that market-based systems that place a uniform, predictable cost on greenhouse gas emissions are more effective policy options than mandates or standards. Market-based policies more effectively drive consumer behavior and technology innovation, while mandates and standards limit consumer choice and can perpetuate ineffective technologies.

We recently joined the Climate Leadership Council as a founding member. The council advocates for a revenue-neutral carbon tax and aligns closely with our longstanding principles.

Stakeholder engagement

We engage a variety of stakeholders on climate change issues including policymakers, investors, consumers, nongovernmental organizations (NGOs), academics and the public to actively advocate for responsible policies that would be effective in addressing the risks of climate change. We offer data and policy analysis on proposals and engage in constructive debate. For example, we have had hundreds of meetings with policymakers around the world to share our views on carbon pricing policy. For additional information on ExxonMobil's approach to political advocacy and contributions, see page 45.

Our chairman and members of our management committee have primary responsibility for managing climate change risks for ExxonMobil and our operations. The board of directors receives annual in-depth briefings that cover updates on public policy, scientific and technical research, and company positions and actions related to climate change. To drive improvement, our merit-driven employee development and compensation systems integrate performance in environmental areas, including emissions and energy efficiency.

As issues related to climate change arise at the local, state, national and regional levels, our global team of experts evaluates and develops a company position consistent with our principles. ExxonMobil employees also hold key leadership positions, including board of director positions, with many trade associations that engage on climate change issues, including the American Petroleum Institute (API), the International Association of Oil and Gas Producers (IOGP) and IPIECA, the global oil and gas industry association for environmental and social issues.

We believe an effective policy response to climate change requires a thorough understanding of the climate system. Our scientists have been involved in climate change research and related policy analysis for more than 30 years, resulting in hundreds of publicly available documents on climate-related topics, including more than 50 peer-reviewed publications.

Peer-reviewed articles on climate research

ExxonMobil experts have participated in the United Nations Intergovernmental Panel on Climate Change (IPCC) since its inception. Most recently, our scientists contributed to the IPCC Fifth Assessment Report in lead author, review editor and reviewer roles. Our scientists also participated in the work of the U.S. National Academy of Sciences, including its work to review the third U.S. National Climate Assessment Report and to provide advice to the U.S. Global Change Research Program.



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Industry engagement

ExxonMobil understands that stakeholders seek a better understanding of the positions of the oil and gas industry, as well as how individual companies approach the management of climate change risks within their own businesses.

As an active IPIECA member, ExxonMobil engaged with member companies in advance of the 2015 Conference of Parties (COP) 21 meeting in Paris to develop a common industry position on global efforts to address climate change risks. That work culminated in *The Paris Puzzle* — a publication on the challenges and responses the industry believes are needed to mitigate the risks of climate change. In advance of the 2016 COP 22 meeting in Marrakech, ExxonMobil further engaged with IPIECA members to explore solutions for transitioning to an energy system with lower greenhouse gas emissions. This work resulted in *Exploring low-emissions pathways: Advancing the Paris Puzzle*, which was published in November 2016.

Exploring low-emissions pathways: Advancing the Paris Puzzle

In 2015, we also took a key role collaborating with IPIECA and its member companies to create a voluntary reporting framework for oil and gas companies to publish their climate change risk management approach in a simple, straightforward and transparent manner. The resulting framework — which is currently being piloted by several IPIECA members, including ExxonMobil — covers a wide range of climate-related issues and provides a consistent reporting methodology for the oil and gas industry. This framework enables interested stakeholders to understand an individual company's views on the issues central to addressing climate change risks.

IPIECA Climate Change Reporting Framework

Up Close:

Outlook for Energy and business planning

Each year, we update our long-term energy demand projection in our *Outlook for Energy*, taking into account the most up-to-date demographic, economic, technological and climate policy information available. This analysis serves as a foundation for our long-term business strategies and investments, and is consistent with other credible forecasts such as the International Energy Agency's (IEA) New Policies Scenario.

Our Outlook reflects increasingly stringent climate policies and is consistent with the aggregation of pledges that were submitted by signatories to the United Nations Framework Convention on Climate Change (UNFCCC) 2015 Paris Agreement. Our Outlook seeks to identify potential impacts of climate-related policies — which often target specific sectors — by using various assumptions and tools, including application of a proxy cost of carbon to estimate potential impacts on consumer demands. Key insights from The Outlook include:

- From 2015 to 2040, global demand for energy is expected to increase by about 25 percent and will require all forms of energy;
- Oil will remain the world's primary fuel through 2040 due to transportation and petrochemical demand;
- Natural gas will grow more than any other energy source, overtaking coal as the world's second-largest energy source, due to power generation and industrial use;
- Wind, solar and biofuels will average combined growth of about 5 percent per year — by 2040 these resources will comprise about 4 percent of global energy demand;
- Conventional cars will remain most popular due to cost, functionality and increasing fuel efficiency through technology improvements. Decreasing battery costs are likely to enable small, shorter-range electric cars to account for approximately 10 percent of new car sales by 2040; and
- Energy-related CO₂ emissions will peak in the 2030s, then gradually decline.

To enhance the robustness of our *Outlook*, we assess a wide range of assumptions for key supply-and-demand drivers to test the range of potential energy mix outcomes. Many third-party scenarios that represent a 2-degree Celsius pathway, including IEA's 450 Scenario, show natural gas demand continuing to grow and oil continuing to play a prominent role in meeting the world's energy demand through 2040. Even under the 450 and the New Policies scenarios, substantial upstream oil and gas investment of \$11 trillion to \$18 trillion will be needed through 2040 to meet global demand. While ExxonMobil currently contributes less than 3 percent of global production, we are well-positioned to support additional development required to meet demand as a result of our diverse resource base, superior project execution capabilities and industry-leading long-term returns on capital employed.

We evaluate potential investments and projects using a wide range of economic conditions and commodity prices; we also financially stress test our investment opportunities, which provides an added margin against uncertainties and further enables us to consider various market environments and investment drivers in our planning and investment process. All business segments are required to include, where appropriate, an estimate of the costs associated with greenhouse gas emissions in their economics when seeking funding for capital investment.

The Outlook for Energy

Energy and carbon — managing the risks

Global liquids supply

Millions of oil-equivalent barrels per day (MOEBD)





The Stena Carron drill ship located offshore Georgetown, Guyana.

3 Environmental performance

Environmental management approach

We conduct our business in a manner that is responsive to the environmental and economic needs of the communities in which we operate. ExxonMobil considers risks at every stage of development, and we continuously work to mitigate those risks and improve our environmental performance. We employ an environmental management strategy to monitor our performance in five key areas, as depicted on the right, which are discussed throughout this chapter. To describe our holistic approach to environmental management, we have ordered the topics discussed in this chapter to reflect the typical life cycle of our operations.

Our approach requires our facilities to be designed, operated and managed with the goal of mitigating adverse environmental impacts.



Our Operations Integrity Management System (OIMS) is a management framework that helps put our Corporate Environment Policy into action and establishes common worldwide expectations for addressing risks inherent in our business, including environmental risks.

Our approach is grounded in a scientific understanding of the environmental impacts of our operations and a commitment to develop, maintain and operate projects and decommission assets using appropriate standards.

For additional information on how ExxonMobil manages environmental performance, see the following resources:

Environmental management

Standards of Business Conduct

Environmental Aspects Guide

Biodiversity and ecosystem services

Biodiversity refers to the number and variety of living organisms in a given area. Ecosystem services are the food, water, shelter, clean air and cultural identity that people obtain from the environment. Safeguarding the ability of the environment to support biodiversity and provide ecosystem services is a priority for ExxonMobil.

Our approach to managing biodiversity and ecosystem services recognizes several factors, including the rarity of individual species, their roles in different ecosystems and habitats, their vulnerabilities and their cultural significance. To protect particular species and sensitive habitats, we take steps such as modifying engineering design, construction and operating practices, and enhancing wildlife habitats at our properties.

ExxonMobil closely examines the environmental context of the areas where we operate to identify biodiversity and ecosystem services risks and appropriate protective measures. We also periodically screen the locations of our major operating facilities against databases of the International Union for Conservation of Nature and World Protected Areas. In 2016, an estimated 25 percent of our major operating facilities were within 5 kilometers of designated environmentally sensitive areas. By tracking these data, we are able to ensure prioritized areas receive special protection.

Up Close: Environmental management across an asset life cycle

We believe a comprehensive approach to environmental management includes a thorough assessment of potential environmental impacts. Based on these assessments, we then implement plans to avoid or reduce impacts across an asset's life cycle.

This approach is exemplified by environmental management activities at Imperial Oil's Kearl operations in Alberta, Canada, where reducing the environmental footprint is incorporated throughout the asset life cycle. For example, the site takes advantage of electricity generated by energy-efficient cogeneration systems, an alternative dust treatment process to reduce water usage and wastewater treatment flocculation technology for accelerated tailings consolidation.

Imperial Oil's holistic environmental management strategy also includes progressive reclamation. As operational areas at Kearl are no longer needed, they are prioritized for reclamation to prevent erosion in the short term and to allow the land to return to its natural boreal forest state much earlier. Reclamation planners at Kearl aim to achieve a maintenance-free, self-sustaining landscape, which takes into account traditional knowledge, wildlife habitat and biodiversity. To date, more than 250 acres of land have been permanently reclaimed at Kearl.

Muskeg Lake, which is connected to and adjacent to Kearl Lake, was designed to provide spawning, rearing, feeding and overwintering habitat for native fish species. Construction of Muskeg Lake commenced in 2008 and was completed in 2010. Lake filling was completed in 2013. This is the first of three lakes that will be constructed to replace the fish habitat disrupted as operations in the area progress. In 2016, Imperial Oil completed four years of fish and fish habitat monitoring at Muskeg Lake. Monitoring activities included sampling of fish populations to assess natural colonization and habitat productivity of the lake. Key findings indicate the population sizes and number of fish species has steadily increased from five species in 2014 to eight species in 2016.



A northern pike found at Muskeg Lake near Imperial Oil's Kearl operations in Canada.



A frog discovered near Moro during a biodiversity survey in Papua New Guinea, currently in the process of being named.

In addition to our commitment to protecting biodiversity in our operating areas, we support advocacy, research and partnerships to protect biodiversity outside our fence lines. In 2016, we contributed approximately \$4 million to organizations, such as those focused on biodiversity protection and land conservation.

Our Papua New Guinea biodiversity offset program, which provides a strategic roadmap for the sustainable use and management of the country's biological resources, exemplifies our approach to managing biodiversity. For more information on the Papua New Guinea biodiversity offset program, see our biodiversity and ecosystem services webpage.

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Biodiversity and ecosystem services



A plant found growing on trees high above the ground. This species is known to be found only in the Hides Ridge region of Papua New Guinea.

Water management

In 2016, the net freshwater consumption at our operations was 290 million cubic meters, a decrease of more than 3 percent from the 2015 consumption of 300 million cubic meters and a more than 9 percent decline since 2007. ExxonMobil works to manage our water use and to limit adverse impacts to water resources and consumers from our withdrawals and discharges, taking into consideration factors such as quality and availability.

For example, when the Banyu Urip, Indonesia, operations required increased injection water volumes to maintain adequate reservoir pressure, we developed a large reservoir to capture and store excess water available in the wet season that would have otherwise not been used. Using the reservoir helped mitigate potential effects of our water usage on the local population during the drier months when water resources are scarcer.

Using the latest version of the global oil and gas industry association for environmental and social issues (IPIECA) global

Global freshwater consumption¹

Millions of cubic meters



ExxonMobil's global freshwater consumption in 2016 was 290 million cubic meters. This represents a 10 million cubic meter decrease when compared to our 2015 global freshwater consumption. Since 2012, we have actively maintained our freshwater consumption below our 2011 performance.

¹We report freshwater intensity alongside consumption data in our performance data (pages 46-48). Freshwater intensity is the ratio of net freshwater consumption to the amount of throughput or production. Normalized in this way, we can better understand how efficiently we are using freshwater in our operations. Data collection began in 2007. Includes XTO Energy data beginning in 2011. ExxonMobil's total freshwater consumption includes use by refineries and chemical plants, oil and gas production, and onshore shale resources development in the United States, principally onshore shale resources development.

water tool, we identified that almost 35 percent of our major operating sites are located in areas with the potential for water scarcity. We pursue opportunities to reduce our water use and develop site-specific management strategies such as the deployment of water conservation technologies, the use of alternative freshwater sources, recycling of municipal and industrial wastewater, substitution with lower-quality water sources and harvesting of rainwater.

Water management is an important aspect of hydraulic fracturing operations. Water use by basin differs due to geologic and reservoir characteristics and optimization of drilling and completion designs. For example, a Williston Basin well in North Dakota requires 6 million gallons for hydraulic fracturing, whereas a Permian Basin well in western Texas requires 15 million gallons of water. For information on how this water use compares to other forms of energy, see the infographic on our water management webpage.



Seismicity

In some instances, due to unique geological conditions, oil and gas operations may trigger seismic activity. Such operations may include underground wastewater disposal injection, reservoir depletion and, in rare situations, hydraulic fracturing. We support risk management and mitigation approaches to seismicity that take into consideration the relative risks associated with the specific context and geography of the proposed operation. Mitigation methods include assessing factors such as fluid volume, formation character, tectonic setting, operating experience and local construction standards. At XTO Energy, a subsidiary of ExxonMobil, we follow a disciplined injection well siting protocol prior to siting a disposal well using available data — including federal, state or internal seismic information — to conduct a risk assessment.

ExxonMobil and Stanford University jointly developed a freely available software modeling tool assessing the potential risk of induced seismicity from industry saltwater disposal wells. Using data such as underground stress levels and reservoir parameters, the tool evaluates the potential for fault slip near disposal well locations. The tool is being used by regulatory agencies and energy companies to reduce the risk of induced earthquakes. For information on ExxonMobil's recent seismicity research initiatives, visit our water management webpage.

🐠 Water management

Spill performance

We take a rigorous approach to assessing and managing the potential impacts of a spill on water or land with a particular emphasis on risk management, operations integrity and containment capabilities. We are proud to report that, as a result of these efforts, we had fewer spills in 2016 compared with 2015. Over the past 10 years, ExxonMobil has reduced the global number of spills greater than 1 barrel by more than 13 percent.*

We are continuously working to improve our ability to ensure a rapid and comprehensive response if a spill does occur. The total volume of hydrocarbons spilled on soil and water was 4,700 barrels in 2016, with more than 50 percent recovered at the spill sites. The majority of these spills did not affect third parties or the communities that surround our assets. For additional information on ExxonMobil's emergency response capabilities, please see page 13.

*This statistic is presented as an absolute number across ExxonMobil's global operations.

Because a significant portion of our Upstream operations are located offshore, we have developed specialized capabilities and tactics to improve offshore oil spill response and risk management. ExxonMobil has the industry's only dedicated, in-house oil spill response research program, which includes a focus on cold water and remote locations, such as the Arctic.

In 2016, we successfully stewarded completion of a field test of a full-scale prototype technology that uses nuclear magnetic resonance in the Earth's field to remotely detect oil that might be trapped in ice. The technology is designed to detect the presence of oil to allow responders to monitor and more effectively respond to oil under ice.

For information on ExxonMobil's joint industry partnerships to enhance industry offshore spill response capability, visit the following resources:

Spill performance



Air emissions

In accordance with regulatory requirements and our commitment to maintaining operational excellence, we work to reduce air emissions associated with our operations and the products we deliver. ExxonMobil's combined emissions of volatile organic compounds (VOCs), sulfur dioxide (SO₂) and nitrogen oxides (NOx) have decreased by almost 40 percent over the past 10 years across all of our businesses. In 2016, our combined emissions totaled less than 0.4 million metric tons. For additional information on ExxonMobil's air emissions, please see the performance data table on page 46.

Decommissioning

Throughout the life cycle of a producing oil field or other asset, we work to limit disruptions to local communities and protect the environment. Effectively decommissioning onshore and offshore assets is essential to reducing our overall environmental impact. We ensure that decommissioning activities are planned and conducted to appropriately manage risks and, where possible, create beneficial land use opportunities.

Recognizing the unique challenges associated with offshore assets, ExxonMobil created an offshore decommissioning center

of expertise in 2015 that is responsible for planning and managing the safe decommissioning of our offshore assets.

Rehabilitation

An important element of ExxonMobil's decommissioning strategy is rehabilitation. This is the process of safely repurposing assets that are no longer productive resources. Whenever possible, we look for opportunities to repurpose former ExxonMobil sites for environmental and societal benefits. We support science-based, cost-effective approaches to remediation that take into consideration the interests of various stakeholders.

We are committed to the sustainable stewardship of surplus properties. ExxonMobil Environmental Services (EMES) – our global organization that provides guidance and supports the remediation and stewardship of surplus sites – has managed more than \$6.6 billion of remediation work and returned more than 2,300 property parcels to beneficial end uses since 2008. In 2016, EMES monitored 5,600 active sites in more than 30 countries.

In 2016, EMES received the U.S. Environmental Protection Agency's (EPA) **Region 4 Excellence in Site Reuse Award** for our efforts to remediate and redevelop former Virginia Chemical Company (VCC) fertilizer manufacturing sites. VCC sites produced phosphate fertilizer from the late 1800s to the 1960s. While ExxonMobil never owned or operated the VCC sites, we became responsible as a corporate successor. In 2000, ExxonMobil and EPA Region 4 formed a collaborative agreement known as the VCC Initiative to address the contamination at the properties where these facilities once operated. Since then, ExxonMobil has cleaned up 27 of the 30 former VCC sites, and worked with property owners and local communities to ensure the land can be redeveloped.



Experimental fieldwork for engineered wetland research in Qatar to help improve water quality.

Up Close:

Advancing the use of engineered wetlands to treat industrial wastewater

Over the past five years, ExxonMobil Research Qatar (EMRQ) has conducted extensive research to understand the feasibility of utilizing engineered wetlands to treat industrial wastewater for beneficial reuse in arid environments. Water quality characterization, influent and effluent water management and system maintenance are just a few of the important factors that need to be considered when designing such a system. In 2016, EMRQ commissioned a microbiology laboratory to study the functions and structure of microbial communities in wetlands to optimize wetland water treatment systems. EMRQ then completed a design for an experimental wetland to study the treatment of gas field-produced water to better understand the feasibility of using such systems for large-scale applications. For information on how ExxonMobil works to manage water quality from our operations, see our water management webpage.



Water management



Local fishermen in East Java, Indonesia. In 2016, ExxonMobil Cepu Limited helped build a jetty and fish monitoring station to support the local fishing community.



Community engagement, human rights and strategic investments

Managing community engagement

Understanding and addressing the interests of communities where we operate is critical to maintaining a sustainable business. ExxonMobil's multifaceted approach to engaging with communities helps us create and sustain productive relationships with the communities near our areas of operation. We work in communities all over the world, each with their own unique cultures, needs and sensitivities. In all cases, we maintain our corporate-wide commitment to responsibly managing our social and environmental impacts, upholding respect for human rights and making social investments by tailoring our engagement efforts to individual communities. In this chapter, we focus on three key socioeconomic elements: human rights, community relations and strategic investments.





Sahabat Maritim participants engaging with Malaysia Maritime Enforcement Agency officials about community safety.

Up Close:

Social outreach to support local fishermen in Indonesia and Malaysia

ExxonMobil's offshore platforms and related facilities in Indonesia and Malaysia are located near areas frequently visited by local fishermen. Social outreach efforts in both countries reduce the potential risks of fishing near oil and gas operations.

For example, in 2016, ExxonMobil Exploration and Production Malaysia Inc. joined the Malaysian Maritime Enforcement Agency to engage local members of a village in Terengganu, Malaysia, where fishermen represent around 40 percent of the population. The initiative, known as Sahabat Maritim or Maritime Mate, consisted of a two-day outreach program designed to increase safety awareness and strengthen relationships with members of the local community. Community engagement activities included a "gotong-royong" – or voluntary community clean-up – to refurbish the local jetty where fishermen can dock or moor their boats. ExxonMobil volunteers also distributed educational brochures that illustrate the 500-meter restricted zone around platforms, conducted a series of talks and exhibitions on safely fishing near offshore operations and provided attendees with life jackets. In response to Sahabat Maritim and other such education initiatives, the number of fishing vessel encroachments at our platforms in the region has been reduced by almost 60 percent in the last three years.



"This Sahabat Maritim program achieves our Operations Integrity Management System objective of building community awareness among our key stakeholders and managing risk to ensure operations integrity."

Sukiman Mohamed

Public and government affairs manager, ExxonMobil Malaysia

Respecting human rights

Our approach to human rights is consistent with the goals of the United Nations (UN) *Guiding Principles on Business and Human Rights*. These principles outline governments' duty to protect human rights and businesses' responsibility to respect them. ExxonMobil works closely with governments, civil society and industry to help advance the goals of the UN *Guiding Principles*.

ExxonMobil operates in regions where engagement with host governments is undertaken to support security and respect for human rights in local operations. The Voluntary Principles on Security and Human Rights are a set of principles designed to guide companies in maintaining the safety and security of their operations within an operating framework that encourages respect for human rights. Participants include representatives from governments, civil society and the extractives industry. We have been a member of the Voluntary Principles since 2002, and have served on multiple occasions as one of the corporate representatives on its steering committee. In 2016, we supported the *Voluntary Principles* through the facilitation of pilot groups in Nigeria, Ghana and Myanmar, which were designed to enhance local collaboration on human rights among governments, nongovernmental organizations (NGOs), companies and other stakeholders. ExxonMobil is actively participating in the Nigeria pilot group.

Our Statement and Framework on Security and Human Rights states our commitment to conduct business in a way that protects the security of our personnel, facilities and operations. It also affirms our commitment to respect human rights. The *Framework* provides guidance to all of our employees on working with both host governments and private security personnel in a manner that respects human rights. We also have agreements with private security firms with which we work that contain requirements to uphold human rights. These agreements include expectations for training and compliance with relevant local, UN and other security-related frameworks.

We expect our employees, officers and directors to comply with all applicable laws and regulations and seek to work with suppliers and business partners who share our commitment to human rights. Within our own workforce, our commitment to human rights is supported by our *Standards of Business Conduct* and our *Statement on Labor and the Workplace*. Our *Statement* reinforces support for the principles of the International Labor Organization 1998 Declaration on Fundamental Principles and Rights at Work, notably the elimination of child labor, forced labor and workplace discrimination.

ExxonMobil has conducted human rights training for our employees in select regions for many years. We believe providing human rights training helps build an understanding and awareness of potential impacts. In 2015, we launched a new computer-based human rights training module to further enhance internal awareness of human rights. To date, more than 1,200 of our key employees in 46 countries have completed the training.

Statement on Labor and the Workplace

Standards of Business Conduct

ExxonMobil is committed to respecting human rights, and we expect the same of our suppliers. In 2016, we published our ExxonMobil *Supplier Expectations*, a set of guidelines that outlines our expectations of contractors and suppliers inclusive of human rights. These *Expectations* include references to key international human rights frameworks such as the United Nations *Guiding Principles on Business and Human Rights* and the International Labor Organization *Declaration on Fundamental Principles and Rights at Work*. Starting in 2017, the *Supplier Expectations* will become part of ExxonMobil's annual letter to our suppliers.

Internally, we delivered human rights awareness training tailored to procurement professionals in the supply chain. Through early 2017, we have trained approximately 100 ExxonMobil procurement professionals, and will continue training through the rest of 2017.

ExxonMobil works closely with IPIECA, the global oil and gas industry association for environmental and social issues, to monitor human rights trends in supply chains that are relevant to the oil and gas industry. We also work with IPIECA to collect information on best practices in human rights supply chain management from the oil and gas industry as well as other industries. For additional information on ExxonMobil's approach to supply chain management, see page 39.

Community relations

We actively engage with stakeholders in local communities and include their feedback in our decision-making processes to identify any issues or concerns early on in a project. We provide local groups and individuals with communication channels — including open houses, community meetings and individual meetings — to voice concerns so interested stakeholders and community members have the opportunity to be heard. We invite interested stakeholders and community members so they are fairly represented in our public consultation activities.

We are informed by guidance from the International Finance Corporation and IPIECA, which provides for systematic and transparent grievance management processes to address concerns related to projects. Our community-tailored grievance management processes are clearly communicated through our ongoing community engagement, and allow us to track, analyze and respond to community grievances in a timely and effective manner. In 2016, we received and responded to 31 grievances concerning our liquefied natural gas project in Papua New Guinea, which has been operating for two years. At our Sakhalin-1 facilities, where we have been operating for more than 10 years, we received and responded to five grievances in 2016. By working collaboratively and transparently with local communities, we can help avoid or reduce our impacts on communities, enhance benefits, avert delays, reduce costs and prevent the escalation of issues.

Indigenous peoples

Our operations sometimes take place in areas inhabited or historically used by indigenous peoples. In these locations, we start by identifying indigenous populations and then engage with them in open and inclusive consultation, including the consideration of their traditions and cultures. In 2016, our Sakhalin-1 project in Russia received a national corporate citizenship award at an annual meeting of indigenous peoples for our efforts to develop a tripartite agreement with local government officials and indigenous peoples to restore the local reindeer population.

ExxonMobil employs practices and policies to respect property rights in the locations where we operate, and we pay particular attention to those areas populated by indigenous peoples. ExxonMobil was not involved in the resettlement of any individuals from indigenous populations in 2016. For more details on working with indigenous communities as well as information on ExxonMobil's approach to managing land use, resettlement and cultural heritage, please see our community relations webpage.



Up Close: Supporting indigenous communities in Alaska

With ExxonMobil's support, the University of Alaska at Fairbanks is creating the Northern Alaska Indigenous Leadership Academy (NAILA), which will help Alaska Natives develop the skills to implement sustainable community development initiatives and fulfill leadership roles in their communities. This new program includes a one-week on-campus training course designed to strengthen wellness, leadership and community sustainability among indigenous peoples living in the Interior and North Slope of Alaska, where our Point Thomson facilities are located. ExxonMobil's contribution will provide scholarships covering travel, tuition and fees for 25 NAILA program participants.



"Without the generosity of ExxonMobil, NAILA wouldn't be possible. Their gift underscores our shared commitment to developing a new generation of Alaska Native leaders and building sustainable rural communities."

Evon Peter

Vice chancellor of rural, community and native education for the University of Alaska, Fairbanks



The University of Alaska at Fairbanks campus.

Strategic community investments

In addition to addressing community priorities where we do business, we partner with governments and nongovernmental organizations to help enhance the quality of life in the communities where we operate around the world. Whether through the ExxonMobil Foundation, our corporation or our international affiliated company operations, we strategically invest in social programs that consider community needs and host country economic and social goals. In 2016, we contributed \$242 million to communities around the world.

We focus our efforts on our signature initiatives: improving education, combating malaria and advancing economic opportunities for women. We concentrate on these three areas because research shows they help build a foundation for economic prosperity and human progress.

Education initiative

Education is a fundamental building block for individual opportunity and economic growth. Science, technology,

engineering and mathematics (STEM) skills, in particular, are critical to ensuring today's students are prepared for the jobs of the 21st century. Additionally, we hire highly skilled scientists and engineers to perform a variety of jobs in our company. For these reasons, we invest in education and teacher development programs designed to encourage students to pursue careers in the STEM fields. Since 2000, we have contributed nearly \$1.2 billion to education programs around the world, with \$72 million invested in 2016 alone.

Up Close:

Helping prepare students for careers of the 21st century

Founded in 2007, the National Math and Science Initiative (NMSI) is a U.S.-based nonprofit organization that works to expand access to challenging coursework, improve student achievement and boost teacher effectiveness, particularly in the fields of STEM.

NMSI's College Readiness Program enables schools to improve participation in rigorous Advanced Placement[®] (AP[®]) coursework to better prepare students for college and the STEM-intensive careers of the 21st century. To date, the program has been implemented in more than 1,000 schools across 34 states. After one year, schools participating in NMSI's College Readiness Program have increased the number of qualifying AP[®] exam scores in math, science and English by 10 times the national average, while demonstrating significant gains among female, African-American and Hispanic students, who are traditionally underrepresented in STEM fields.

In 2015, with financial assistance from ExxonMobil, NMSI began expanding its College Readiness Program in Louisiana, North Dakota and Pennsylvania. ExxonMobil's partnership with NMSI will help provide schools in these states with extensive training for teachers and resources for students to support AP° coursework. In Pennsylvania alone, seven new schools joined the program for the 2015 to 2016 school year. After one year, these schools experienced a combined 51 percent increase in qualifying math, science and English AP° exam scores.



"The College Readiness Program is raising the academic bar in Pennsylvania and across the nation. We're grateful that companies like ExxonMobil realize the value of STEM education and are committed to ensuring that our future workforce is better equipped with the knowledge and skills they need to be successful."

Gregg Fleisher President of the National Math and Science Initiative

Education initiative: program spotlight National Math and Science Initiative



Up Close:

ExxonMobil's long-standing commitment to antimalarial efforts

Each year, malaria claims the lives of more than 400,000 people around the world. Thankfully, significant progress has been made in the global fight against this disease, and the number of malaria-related deaths and infections continues to decline. To continue this progress, an integrated approach is needed, including strengthened health care systems, improved prevention techniques, expanded research capabilities and increased access to proper diagnosis and treatment.

Since 2000, we have supported research and development into new front-line therapies, the search for a vaccine and improved diagnostics. We support leading product development partnerships like Medicines for Malaria Venture in its program designed to advance new drugs in the fight against P. vivax malaria, the strain most commonly found in Asia. Because there is still no approved vaccine for malaria in wide usage, we have also worked with the Malaria Vaccine Initiative at PATH since 2005 to support informed policy decision-making as the development of malaria vaccines is accelerated.

As a result of these and other such global efforts, the World Health Organization's annual *World Malaria Report* found that malaria mortality rates decreased by 29 percent around the world between 2010 and 2015. Additionally, steady declines in mortality and incidence rates have averted about 1.3 billion malaria cases and saved about 6.8 million lives since 2001. However, the significant progress in reducing malaria deaths since 2000 could be reversed by a number of looming challenges. One of the most alarming is the threat of resistance to front-line antimalarial drugs emerging in Southeast Asia and its potential spread into Africa. Accordingly, we support Dr. Dyann Wirth's laboratory at Harvard University to investigate new compounds that could overcome this drug resistance — as well as the Worldwide Antimalarial Resistance Network — which provides comprehensive, timely, quality-assured evidence to track the emergence and spread of antimalarial drug resistance.



"We're at a very special time in malaria research. If we continue to inspire health leaders, reduce knowledge gaps and translate findings into practice, we can end malaria in our lifetime."

Dr. Dyann Wirth Director of the Harvard Malaria Initiative

The World Health Organization's World Malaria Report



Several tools, such as raising awareness, using long-lasting, insecticide-treated bed nets, indoor residual spraying, and rapid diagnostics and treatments, have been key in reducing the number of malaria cases and deaths. Photo credit: Ben Moldenhauer, Medicines for Malaria Venture

Malaria initiative

We support the health of our employees, their families and members of the communities where we operate, which is why we invest in health programs aimed at combating preventable and treatable illnesses. In 2016, ExxonMobil contributed nearly \$10 million to support a variety of malaria research, educational and treatment programs. Since 2001, the antimalarial programs we have funded have reached more than 125 million people, and our support has resulted in the distribution of approximately 14.3 million bed nets, 4.3 million doses of antimalarial treatments and nearly 3 million rapid diagnostic kits, as well as the training of more than 589,000 health workers. Our cash grants during the past 15 years total \$155 million, making us one of the largest private-sector grant-makers in the fight against malaria.

Women's economic opportunity initiative

Empowering women economically is a key element to enhancing local and national development. Investing in women helps support broad economic transformation in developing regions and contributes to a more equitable society. In the developing countries where women are more fully participatory in their national economies, we find lower infant mortality, improved health and nutrition, increased educational opportunities, enhanced economic growth and food security, and lower rates of poverty.

Since 2005, ExxonMobil has invested — through our women's economic opportunity initiative — approximately \$104 million in programs that support research to identify the most effective

ways to improve women's economic status; develop women farmers, entrepreneurs and business leaders; and improve women's access to technology. Our support has reached tens of thousands of women in more than 90 countries. In 2016 alone, our contributions totaled \$10 million.



2016 community investments by focus area¹ and geographic region²

Up Close:

Expanding economic opportunities for women farmers in Mozambique

In Mozambique, women face pervasive obstacles to achieving economic empowerment. To help overcome those barriers, in 2016, the ExxonMobil Foundation partnered with Opportunity International to launch the *Projecto para Empoderamento das Mulheres e Desenvolvimento da Agricultura* (PEMA) program to expand economic opportunities for women farmers in Mozambique.

The initiative includes both theoretical and practical application of strategies for helping women more effectively benefit from commercial agricultural markets in Mozambique. Since the program launched in January 2016, PEMA has provided support to more than 400 farmers and gained valuable insight into the delivery of agricultural inputs, services and finance to women farmers. In 2017, we aim to significantly increase the number of program participants through innovations in agricultural finance, comprehensive agricultural support services and technology to improve the productivity, income, financial inclusion and overall empowerment of women farmers in Mozambique.



Women in Mozambique participate in the PEMA program to learn about commercial agriculture.



ExxonMobil seeks to make meaningful community investments in a variety of focus areas. In 2016, total community investments were \$242 million, with the greatest investment in civic and community initiatives.

¹Total contributions include donations from Exxon Mobil Corporation, our divisions and affiliates, and the ExxonMobil Foundation, as well as employee and retiree giving through ExxonMobil's matching gift, disaster relief and employee giving programs. Investments do not include environmental capital and operating expenditures, which totaled approximately \$4.9 billion in 2016. ExxonMobil's community investments span across the many geographic regions in which we operate. In 2016, we invested a total of \$242 million in communities around the world.

²Total contributions include donations from Exxon Mobil Corporation, our divisions and affiliates, and the ExxonMobil Foundation, as well as employee and retiree giving through ExxonMobil's matching gift, disaster relief and employee giving programs.

Local community investments

In addition to our education, malaria and women's economic initiatives, we provide local investments tailored to address community-specific needs such as access to skills training and health care and support for disaster relief, including our \$500,000 contribution to the American Red Cross and the Greater Baton Rouge Food Bank to support local flooding disaster relief in 2016. For additional information on our local community investments, see page 39.

Employee participation

Volunteering and charitable giving are important values for ExxonMobil. In total, more than 19,000 ExxonMobil employees, retirees and their families donated more than 550,000 volunteer

hours to nearly 4,500 charitable organizations in 29 countries in 2016.

Our educational matching gift program matches employee and retiree donations to U.S. higher education institutions at a ratio of 3-to-1. In 2015, nearly 4,600 employees and retirees donated more than \$13 million to 864 colleges and universities, as well as minority scholarship programs — which, in 2016, the ExxonMobil Foundation matched with more than \$32 million. For information on how ExxonMobil's volunteer involvement program helps facilitate employee participation, visit our employee participation webpage.





Case Study ExxonMobil's Growing the Gulf investment program

Over the past decade, technology pioneered by the energy industry has unlocked vast oil and natural gas resources that were previously difficult to produce. In particular, the production of natural gas in U.S. shale basins, including those found in Gulf Coast states such as Texas, has grown significantly in recent years. These opportunities have spurred local and regional economic activities in the United States.

In addition to helping grow the economy, increased natural gas production also generates environmental benefits. Natural gas is the least carbon-intensive of the major energy sources, emitting up to 60 percent fewer carbon dioxide emissions than coal when used for electricity generation.

We operate three refineries located along the U.S. Gulf Coast in Baton Rouge, Louisiana; Baytown, Texas; and Beaumont, Texas. These and other facilities will support ExxonMobil's expanded refining, chemical, lubricant and liquefied natural gas operations. Our Gulf Coast refineries have the combined capacity to process nearly 1.5 million barrels of crude oil per day to produce a range of products, including gasoline, diesel, jet fuel, lubricating oils, adhesives and resilient, lightweight plastics used in a variety of applications.

ExxonMobil plans to invest more than \$20 billion over 10 years, beginning in 2013, in our refining, chemical and joint venture businesses along the Gulf Coast as part of our Growing the Gulf investment program. ExxonMobil's U.S. Gulf expansion includes 11 major chemical, refining, lubricants and liquefied natural gas projects along the Texas and Louisiana coasts. This includes the expansion of existing facilities and construction of new facilities that will increase our refining and chemical capacity.

These projects are expected to create more than 45,000 jobs in the region. Many of these are highly skilled, high-paying jobs averaging about \$100,000 per year.

We are partnering with local, state and national leaders to positively contribute to the Gulf Coast communities. The company also partners with colleges in the Baytown, Beaumont and Baton Rouge areas to train students for high-skilled jobs in the Gulf Coast manufacturing sector.

ExxonMobil also works to maintain strong relationships with Gulf Coast communities through strategic investments and employee-driven initiatives. In Baton Rouge alone, employees, retirees and family members annually volunteer more than 40,000 hours with community organizations, earning more than \$760,000 in ExxonMobil Volunteer Involvement Program grants for local agencies and groups. ExxonMobil also annually donates nearly \$1 million to nonprofits and schools and about \$1.5 million to colleges and universities in Louisiana.

As we help drive economic progress and support local communities in the Gulf Coast, we remain committed to operating safely, protecting the environment, maintaining the highest levels of operational integrity and remaining a good corporate citizen.



ExxonMobil field engineer Teni Sulaiman at the Mont Belvieu plastics plant in Texas.



Esso Exploration and Production Nigeria employees Kanu Okechukwu and Michael Gideon discuss safety plans offshore Nigeria.

5 Local development and supply chain management

Managing our economic impact

ExxonMobil's local content and supply chain management strategies are designed to deliver lasting and shared value to host countries and local communities — as well as our business — by employing systematic processes and global best practices that support local economic growth and development.

Local economic growth and development

We work to contribute to the economic and social development of the countries in which we operate. We believe local content the added economic and social value brought to a host nation through the activities of the oil and gas industry — provides shared value to ExxonMobil and to local communities.





Local economic growth and development

Supply chain management

Our local content approach focuses on three key areas: employing and training a local workforce, supporting local suppliers and improving livelihoods of community members through local community investments. The goal of this multi-tiered approach is to provide sustainable economic benefits and ensure local participation is embedded into our daily processes.

To integrate local content into overall project planning and execution, we develop a plan specific to each country or area, taking into account social and economic conditions, the nature of the project and the community's needs. Part of this effort includes working to align our goals with those of our partners and host country governments. We also actively participate in external organizations and initiatives that improve local content around the world. These organizations include IPIECA, the global oil and gas industry association for environmental and social issues, and the Organization for Economic Cooperation and Development.

Up Close:

Local supplier development in Indonesia

ExxonMobil is committed to providing local vendors with tools and training opportunities to compete in a global supply chain. For example, in 2016, ExxonMobil conducted three capacity-building training programs for local vendors in Bojonegoro Regency in East Java, Indonesia. We shared detailed information about invoice procedures and the electronic bidding process to assist local contractors by clarifying ExxonMobil requirements and procedures. A total of 185 local contractors attended the training programs. As a result, local vendor capacity to meet internal bidding requirements has improved. In 2016, we provided contracts valued at approximately \$6 million to local vendors in Indonesia. For additional information on ExxonMobil's approach to training and developing local suppliers, see the local supplier development section of our local economic growth and development webpage.

Local economic growth and development

Local hiring and training

Hiring and training a local workforce in our areas of operation is a long-standing priority for ExxonMobil. We provide locally hired individuals with opportunities to develop technical and leadership skills that will benefit them throughout their careers, both with ExxonMobil and with future employers. By doing so, we aim to enhance the long-term capability of local workforces in areas where we operate. Our training programs include the provision of information on ethical business conduct, health and safety, management skills and fundamentals of the oil and gas industry, as well as relevant technical and vocational skills. As illustrated below, in 2016, we continued to make progress in hiring and training host country nationals. For more information, visit the local hiring and training section of our local economic growth and development webpage.



2016 local hiring statistics

Local supplier development

We understand the importance of building and maintaining a qualified and globally competitive supply chain in host countries. ExxonMobil works with a range of stakeholders, including host country governments, nongovernmental organizations (NGOs) and local communities to support the development of local vendors. To be a supplier for ExxonMobil, a local vendor must agree to meet our robust safety, technical, environmental and human rights expectations and requirements. When appropriate, ExxonMobil works with entrepreneurs and local businesses to help them understand our requirements and become competitive vendors capable of contributing to our project and the sustainable economic progress of their local community.



Local community investments

Our local community investments are designed to support social and economic development in the host countries where we operate. As we invest in communities, we pursue programs that are aligned with community and business priorities.

In addition to supporting local supplier development, in 2016, ExxonMobil established a microcredit union that helps entrepreneurs in Bojonegoro Regency in East Java, Indonesia, access capital to expand their existing businesses. The microcredit union, which has more than 400 members, also offers management assistance and training to members.

As part of this effort to invest in the community, ExxonMobil is also specifically supporting women entrepreneurs because of the unique challenges to economic development they face. ExxonMobil supports a microfinance program in Indonesia that provides technologies and training on key topics that accelerate women's economic advancement. Women in the program were provided with sustainable lighting and cooking technologies to assist in their daily lives, as well as the opportunity to become resellers of the technology in their communities. In 2016, ExxonMobil held several group training sessions for more than 500 women, covering topics such as microfinance, sales and marketing, and basic accounting. For additional information on ExxonMobil's strategic community investments, see page 33.

Supply chain management

The success of our business is influenced by the many valued suppliers who support our operations. In 2016, ExxonMobil made payments to more than 90,000 suppliers of goods and services worldwide. We strive to promote a healthy supply chain that respects human rights and the environment while creating opportunities for historically underrepresented groups.

As part of our supply chain management efforts, we have taken steps to foster a commitment to sustainability with our key suppliers. In 2016, we included a sustainability discussion in our supplier relationship management meetings with strategic suppliers representing more than \$850 million in annual spending across nine commodity groups. These discussions which cover human rights, environmental performance, local content and supplier diversity topics — opened the door to potential future collaborations to improve our mutual sustainability performance with these suppliers. For information on how ExxonMobil respects human rights in the supply chain, please see page 32.

Promoting supplier diversity

ExxonMobil seeks to build long-lasting and mutually beneficial relationships with diverse suppliers to contribute to the economic development of historically underrepresented groups. In the United States, we have cultivated diversity across our supply chain for more than 40 years.

In 2011, our spending with minority- and women-owned business enterprises (MWBEs) reached \$1 billion in the United States. We have been able to maintain that level of spending with diverse suppliers for the past five years. In 2016, we exceeded our target with a total of \$1.4 billion in spending with diverse suppliers in the United States. This represents the highest annual spending with diverse suppliers in our program's history. These suppliers included minority-owned businesses; women-owned businesses; small businesses; lesbian-, gay-, bisexual- and transgender-owned businesses; veteran-owned businesses; service-disabled veteran-owned businesses; and businesses owned by people with disabilities. Suppliers from these groups have contributed to our total diverse spending in order to ensure a more inclusive supply chain. To help identify diverse suppliers, our supplier diversity database allows businesses from traditionally underrepresented groups in the United States to register an interest in being an ExxonMobil supplier.

Supplier diversity database

We consider the full reach of our supply chain, not just our direct spending, by tracking the progress of our primary suppliers in the use of diverse suppliers in their businesses. We refer to this as our Tier 2 program. This approach helps promote the sustainability of our supplier diversity program by encouraging our primary suppliers to join in our efforts.

Beyond spending with diverse suppliers, we aim to provide long-term growth and development opportunities to diverse suppliers through coaching, training and workshops. In 2016, we continued to increase ExxonMobil leadership engagement in our supplier diversity program. Sara Ortwein, president of XTO Energy, hosted a "CEO Academy," an executive development session at the ExxonMobil Houston Campus in partnership with the Houston Minority Supplier Development Council. At the session, Ms. Ortwein shared leadership thoughts and the company's philosophy.

We work closely with the National Minority Supplier Development Council (NMSDC) and the Women's Business Enterprise National Council (WBENC) to help identify and develop relationships ExxonMobil spending with U.S. diverse suppliers¹





In 2011, our spending with minority- and women-owned business enterprises reached \$1 billion in the United States. We have maintained that level of spending with diverse suppliers for the past five years. In 2016, we spent a total of \$1.4 billion with diverse suppliers in the United States, an increase of more than 30 percent from 2015.

¹Includes direct ExxonMobil spending and that of our suppliers (Tier 2 spending). Total spending includes suppliers classified as minority-owned businesses; women-owned businesses; small businesses; lesbian-, gay-, bisexual- and transgender-owned businesses; veteran-owned businesses; service-disabled veteran-owned businesses; and businesses owned by people with disabilities.



"Many businesses, while achieving success, can struggle with transitioning from operational to strategic leadership. Overcoming this challenge is critical for sustainable growth. I was glad to share my insights from my own leadership experience in order to help diverse business leaders in the Houston area grow and develop themselves as leaders, as well as expand their businesses. Developing a stronger, more diverse supply base not only helps the community, but also ExxonMobil's business."

Sara Ortwein President of XTO Energy

Local development and supply chain management

with certified diverse suppliers in the United States. ExxonMobil is consistently recognized as a leader in supplier diversity efforts. WBENC named ExxonMobil among **America's Top Corporations for Women's Business Enterprises** in 2016 for the 10th year in a row. For the first time, we received a Platinum Distinction, which is reserved for companies with leading supplier diversity programs in the top quartile. This national award recognizes corporations with world-class programs and leadership in supplier diversity that are setting higher standards and driving innovation in support of women's business enterprises.

National Minority Supplier Development Council

Women's Business Enterprise National Council

Our supplier diversity program continues to expand into the international arena. In 2016, we spent a total of \$203 million with women-owned and indigenous-owned businesses outside the United States. Of this, we spent \$170 million with indigenous-owned businesses in Canada. Outside of Canada, we spent \$33 million with women-owned businesses, representing a 57 percent increase from 2015. We continue to work with WEConnect International to increase the participation of women-owned businesses in our supply chain around the world. Women's economic development is a global priority for ExxonMobil, and our international supplier diversity program currently focuses on women in a number of countries where we operate. For additional information on our efforts to increase women's economic development, see page 34.

WEConnect International





Participants at a recent WEConnect women's supplier conference in Lagos, Nigeria, sponsored by ExxonMobil.

Up Close:

Improving environmental performance across the supply chain

We encourage our suppliers to take action to improve environmental performance, as outlined in ExxonMobil's *Supplier Expectations*. We work in collaboration with key suppliers, where possible, to identify opportunities for continuous improvement in environmental performance that improve efficiencies and create shared value for our business and our suppliers. For example, we have worked with several suppliers in the U.S. Gulf Coast to reduce waste and improve waste handling at our facilities in Beaumont, Texas, and Baton Rouge, Louisiana.

By collaborating with Waste Management National Services, Inc., and its affiliates, to apply its comprehensive waste profiling and analysis methods across ExxonMobil's plants, we enhanced our waste disposal practices and achieved significant cost savings at our Baton Rouge and Beaumont locations. Our partnership with Waste Management has resulted in more than \$2 million in cost savings due to increased recycling, improved waste classification and container optimization. In addition, Waste Management personnel have worked more than 100,000 person-hours without incident at the ExxonMobil refineries and achieved world-class safety standards.

Through our partnership with a valued supplier to the ExxonMobil Chemical Company, we were also able to reduce waste by reusing and recycling large polypropylene bags capable of holding 500 to 2,000 pounds of product at our Baton Rouge refinery. Rather than being disposed of in landfills, used bags are now collected, cleaned and repaired by a third party before being sold back to the supplier at a lower cost. Not only does this initiative result in an 80 to 90 percent reduction in the number of bags sent to landfill, but it also results in cost savings for our supplier and our own business. We value suppliers who can help us improve our own environmental performance, and we are now looking to expand these waste initiatives to other locations.

Up Close:

ExxonMobil receives award for corporate social responsibility

In 2016, Esso Exploration and Production Nigeria Limited (EEPNL), an ExxonMobil affiliate in Nigeria, was awarded the **Best Company in Corporate Social Responsibility in West Africa** and recognized as one of the **Most Socially Responsible Companies** by Social Enterprise Report and Awards (SERAs). SERAs is an annual project that raises awareness about the roles organizations play in the social development of Nigeria and Africa.

These awards recognize several local community investment projects in Nigeria, including a back-to-school program that has provided school supplies to more than 32,500 students across the country. Additionally, our investments supported the building of science libraries to promote the development of future STEM professionals at 22 primary schools; e-learning centers at 12 schools to teach children computer skills; 32 solar-powered water pumps to provide access to clean, potable water; and general capacity-building workshops for local entrepreneurs. Overall, we have invested more than \$1.3 million into the local community through these projects.

Up Close:

Partnering to celebrate America Recycles Day

ExxonMobil works to promote women-owned businesses and, where possible, include them in our supply chain. For example, CompuCycle, a women-owned company, began working with ExxonMobil in the area of electronic waste removal and recycling in 2015. CompuCycle was the first company in the Houston area to achieve R2 Certification, the recycling industry's leading certification for electronic waste handling. This certification ensures that the electronic waste removed from ExxonMobil sites is handled in a safe, environmentally responsible and fully transparent manner.

In November 2016, ExxonMobil and the Houston campus sustainability team worked with CompuCycle to host an electronics collection event to celebrate America Recycles Day. The event helped educate ExxonMobil employees and local community members about the importance of responsible electronic waste disposal, and resulted in more than 11,000 pounds of electronic waste being disposed of safely and responsibly.



"To celebrate America Recycles Day, the Houston campus sustainability team wanted to educate ExxonMobil employees and the local community about the benefits of recycling. CompuCycle helped us accomplish this, while also giving people an easy way to responsibly dispose of their electronic waste from home."

David Willis

ExxonMobil Houston campus sustainability team recycling lead



The ExxonMobil campus near Houston, Texas.

6 Corporate governance

Governance practices

Good corporate governance creates a business environment conducive to long-term investments and sustainable economic growth. ExxonMobil implements a variety of corporate governance practices, underpinned by a board comprised predominantly of independent directors. Our *Standards* of *Business Conduct*, adopted and administered by the board of directors, cover a range of topics including labor, diversity, the environment and anti-corruption.

Ethics and integrity

We observe the highest standards of integrity and ethics to develop, approve and implement projects around the world. ExxonMobil requires that employees, officers, directors and those working on our behalf comply with all applicable laws, including the U.S. anti-corruption, anti-trust, anti-boycott, trade sanctions and export controls laws, as well as laws in other countries applicable to our business. In 2016, nearly 47,000 employees and contractors participated in anti-corruption



training and business practice reviews. For additional information on how ExxonMobil works to uphold the highest ethical standards, see the *Standards of Business Conduct*.

Standards of Business Conduct

Transparency

ExxonMobil supports multi-stakeholder engagement for the purpose of increasing transparency of government revenues from the extractive industries. Our long-standing efforts to promote revenue transparency have helped reduce corruption, improve government accountability and promote greater economic stability worldwide. In order to be successful, a transparency initiative should:

- Apply to all companies;
- · Protect commercially sensitive and proprietary information; and
- · Not violate host government laws or contractual obligations.

The Extractive Industries Transparency Initiative (EITI) is a global program dedicated to strengthening governance by improving transparency and accountability in the extractives sector. Companies and governments participating in EITI separately report payments and revenues, respectively, allowing EITI to reconcile any differences between the totals and publish validated total government revenues. ExxonMobil has held an active role at both the secretariat and country levels since EITI's inception more than a decade ago. An ExxonMobil representative has served on the EITI board as either a primary or alternate member since it began.

ExxonMobil supports the EITI application, validation and implementation processes wherever we operate. We are also currently working with governments in several countries, including Guyana and Mexico, which are considering joining EITI. There are currently about 51 countries that are compliant members or have been accepted as candidates to begin reporting under the *EITI Standard*.

Board leadership

ExxonMobil's affairs are managed independently under the direction of our board of directors. All directors are required to stand for election each year at our annual meeting of shareholders. At year-end 2016, 11 of 13 directors, including the presiding director and all members of the audit, compensation, public issues and contributions, and board affairs committees, were independent as defined by New York Stock Exchange guidelines. In 2016, the board met 12 times. Independent leadership is also supported by the presiding director, a non-employee director who, in consultation with the chairman, reviews board agendas and materials to be distributed to directors before board meetings, among other responsibilities. For more information about our board structure, visit the corporate governance section of our website.



Up Close: Board PICC trip to Baytown, Texas

Each year, members of the public issues and contributions committee (PICC) visit a company site to gain a deeper understanding of ExxonMobil operations and to view first-hand the execution of ExxonMobil standards, principles and capabilities. In 2016, the PICC visited our Baytown and Mont Belvieu facilities in Texas to view progress on the North American Growth Project. The project is part of a larger Gulf Coast investment program, called Growing the Gulf, that will create or support 45,000 construction and full-time jobs. For more information, see the case study on page 36.

Founded in 1919, the Baytown refinery and petrochemical complex is located about 25 miles outside of Houston, along the Houston Ship Channel. The refinery consists of manufacturing sites, chemical plants and a global technology center. These sites employ more than 7,000 workers, and the refinery has a potential capacity of 561,000 barrels of crude oil per day. Within the Baytown area, our Mont Belvieu plant manufactures the film that bundles water bottles and heavy-duty sacks used to store food, and the Baytown olefins plant is one of the largest ethylene-producing plants in the world.

The trip included a reception and dinner at Lee College, a community college that is part of ExxonMobil's Petrochemical Initiative, to engage with local community and civic leaders, including the Baytown mayor and the chair of the Houston Port Authority. Additionally, the PICC attended a lunch with employees from Mont Belvieu and the Baytown olefins plants.



ExxonMobil directors (bottom row) attending the PICC trip to Baytown and Mont Belvieu, along with ExxonMobil executives. From left: (Top row) Woody Paul, Paul Fritsch, Mike Dolan, Jeff Woodbury, Paul Guilfoyle, Cindy Shulman, (Bottom row) Peter Brabeck-Letmathe, Henrietta Fore, Kenneth Frazier, Steven Reinemund, Angela Braly and Douglas Oberhelman.

Percent vote for¹

Good corporate governance is an essential element of corporate	
social responsibility. Corporate citizenship topics typically	
all under the purview of the public issues and contributions	
committee, the board affairs committee and the compensation	
committee, and are routinely reviewed at board meetings.	
While risk oversight is the responsibility of the entire board,	
committees help the board focus on risk aspects relevant	
o each committee. For example, the PICC is charged with	
reviewing the effectiveness of the company's policies, programs	
and practices with respect to the environment, among other	
duties. The committee hears reports from operating units	
on environmental activities and also visits operating sites	
o observe and comment on current practices. The entire	
poard receives briefings by internal experts on environmental	
stewardship and climate change.	

Board selection process

We value the diversity of the board in regard to gender, race, geography, experience and fields of expertise. We believe maintaining this diversity is critical to our success in a globalized market. In 2016, 45 percent of the board's independent directors were female, African-American or from outside the United States. Four of the seven most recent additions to the board demonstrate this cultural and intellectual diversity.

Below we introduce our most recent board member additions: Angela Braly and Susan Avery.



Angela Braly was elected to the ExxonMobil board in 2016. Ms. Braly served as president and chief executive officer of WellPoint from 2007 to 2012 and chairman from 2010 to 2012. Her current company directorships include Brookfield Asset Management, Lowe's and Procter & Gamble.

Susan Avery was elected to the board in early 2017. Dr. Avery, an atmospheric scientist, is the former president and director of the Woods Hole Oceanographic Institution. In 2013, she was named to the Scientific Advisory Board of the United Nations Secretary-General, which provides advice on science, technology and innovation for sustainable development. With our most recent board additions, the ExxonMobil board stands at 13 directors, 12 of whom are non-employee directors. We describe current director qualifications in our proxy statement, and the guidelines the board employs in selecting board candidates are published on our company website and regularly reviewed.

2017 proxy statement

Board committees overview

Executive compensation and strategic advantage

ExxonMobil's business model is reflective of a capital-intensive industry, requiring long investment lead times and a significant focus on risk management. Our executive compensation program supports this business model and focuses our executives on continuous improvement, effective risk management, operations integrity and sustainable growth in shareholder value.

Our compensation committee carefully considers the feedback on executive compensation we receive from our shareholders, some of whom have held ExxonMobil stock for more than a decade. During the 2016 proxy season, the advisory vote on executive compensation received 89 percent of votes "For" the company's program. For more details on our executive compensation program, see our board leadership webpage.



Shareholder relations

We value the dialogue we have with our shareholders on a variety of governance, social and environmental topics throughout the year. Our direct engagement with shareholders provides an effective forum to address issues, share relevant information and viewpoints, and align on the facts.

In 2016, we held 51 shareholder engagements on environmental, social and governance issues with institutional investors, pension funds, and labor, religious and nongovernmental organizations, representing almost 40 percent of outstanding stock held by institutional investors. These engagements have frequently allowed us to reach common ground with our shareholders, in some cases avoiding the need for more formal shareholder proposals at the annual shareholders meeting. The board has established procedures for shareholders and

	Item	2016
1.	Election of directors (average) ²	95.9
2.	Ratification of independent auditors ²	98.9
3.	Advisory vote on executive compensation ²	89.3
4.	Independent chairman	38.7
5.	Climate expert on board	20.9
6.	Hire an investment bank ³	2.0
7.	Proxy access bylaw ⁴	61.9
8.	Report on compensation for women	8.4
9.	Report on lobbying	25.7
10	. Increase capital distributions	4.1
11	. Policy to limit global warming to $2^{\circ}C^{3}$	18.5
12	. Report on impacts of climate change policies ³	38.1
13	. Report reserve replacements in BTUs ³	5.6
14	. Report on hydraulic fracturing	24.5

¹Abstentions count for quorum purposes, but not toward voting on these proposals. ²Proposals submitted by the board.

³First-year proposal. ⁴ExxonMobil adopted a proxy access bylaw on November 1, 2016.

2016 proxy vote summary

other interested parties to communicate with them, which further underpins the importance that the board places on shareholder input. At the corporation's 2016 annual meeting, shareholders owning approximately 3.5 billion — or more than 85 percent — of outstanding shares were represented. In 2016, shareholders voted on directors, independent auditors, executive compensation and 11 shareholder proposals. The summary table above shows the 2016 proxy vote results.

Political advocacy and contributions

Because public policy decisions made at all levels of government can have significant effects on our current and future operations, ExxonMobil communicates its positions to the U.S. Congress, state legislatures and governments around the world.

In the United States, lobbying activities include direct communication with members of Congress, state legislators, administration and regulatory officials, as well as support for trade associations and other groups that engage in lobbying activities. We fully comply with registration and reporting regulations related to our lobbying activities. In 2016, we reported total federal lobbying expenses of about \$12 million in our disclosure reports to Congress.

We make political contributions to candidate committees and political organizations as permitted by applicable laws. We refrain from making political contributions in any countries other than the United States and Canada. In 2016, we contributed almost \$222,000 to state candidates and caucuses in 12 U.S. states.* ExxonMobil's political action committee (PAC) disbursed more than \$957,000 to federal and state candidates.* Corporate political contributions are subject to an internal review process that requires approval from the chairman. The political contributions of the corporation, as well as the contributions from the company-sponsored PAC, are reviewed by the board of directors annually and are routinely verified during internal audits of the corporation's public affairs activities. As shown on the right, ExxonMobil engaged last year on a variety of issues in support of responsible economic, energy and environmental policies. For additional information on political contributions, the issues ExxonMobil engaged on in 2016 and our associated positions, visit our political advocacy and contributions webpage.



Political advocacy and contributions

ExxonMobil Energy Factor

Торіс	ExxonMobil's position
Climate change	ExxonMobil supports the Paris Agreement, which addresses climate change as a global challenge for all nations.
Education	ExxonMobil supports science, technology, engineering and mathematics (STEM) education initiatives as part of a path to global competitiveness and advocates for efforts to raise academic standards.
Energy infrastructure	ExxonMobil supports the continued development of necessary energy infrastructure
Hydraulic fracturing and horizontal drilling	ExxonMobil supports the global use of horizontal drilling and hydraulic fracturing.
International trade	ExxonMobil supports lifting restrictions on exports of energy products because expanding markets can benefit all consumers.
Regulatory improvement	ExxonMobil supports common-sense reforms to improve transparency, accountability and objectivity of regulations that would enable effective enforcement, improve public safety and minimize economic costs.
Renewable fuel standard	ExxonMobil opposes fuel mandates such as the renewable fuel standard because they distort free markets, do not provide claimed environmental benefits and increase costs to consumers.
Tax policy	ExxonMobil supports stable tax policies that enable the energy industry to remain competitive in the global marketplace.
Toxic Substances Control Act	ExxonMobil supported the Toxic Substances Control Act reauthorization and modernization to strengthen safety standards.

Up Close:

Engaging on TSCA modernization

The primary law overseeing the safety of chemical products in the United States — the Toxic Substances Control Act (TSCA) — provides the U.S. Environmental Protection Agency authority to review and regulate chemicals in commerce. TSCA was designed to ensure that products are safe for intended use. In 2016, ExxonMobil and the American Chemistry Council strongly advocated in support of the bipartisan legislation to enhance the TSCA process and provide for a uniform national system of chemical regulation. In June 2016, the president signed into law the Frank R. Lautenberg Chemical Safety for the 21st Century Act, which reauthorized and modernized TSCA to strengthen safety standards.

*Totals may not reflect some candidates' failure to deposit, or returned contributions not yet posted.

Performance data

We assess our performance at many levels of the organization, from individual operational sites to the business lines, to support continual improvement in all areas of corporate citizenship. Starting in 2011, performance data include XTO Energy information. As part of our commitment to transparently communicate our performance, in 2014 we started reporting our data over a 10-year period to demonstrate performance trends over time. For data that is discussed in more detail in this report, we reference the corresponding page number in the table. Data included in the performance table is guided by the reporting guidelines and indicators of IPIECA's *Oil and Gas Industry Guidance on Voluntary Sustainability Reporting (2015)*. For additional information on our corporate citizenship reporting, please see the IPIECA/GRI/SDG index.



IPIECA/GRI/SDG index

Performance data table*	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Page #
Safety, health and the workplace											
Fatalities – employees	0	0	4	0	0	1	0	0	0	0	12
Fatalities – contractors	8	5	4	3	9	4	6	3	2	3	12
¹ Fatal accident rate — total workforce (per 1,000,000 work hours)	0.018	0.011	0.017	0.006	0.017	0.010	0.011	0.006	0.004	0.008	N/A
¹ Fatal incident rate — total workforce (per 1,000,000 work hours)	0.013	0.011	0.012	0.006	0.017	0.010	0.009	0.006	0.004	0.008	N/A
² Lost-time incident rate — employees (per 200,000 work hours)	0.031	0.054	0.043	0.048	0.064	0.042	0.051	0.032	0.043	0.027	N/A
² Lost-time incident rate — contractors (per 200,000 work hours)	0.065	0.049	0.040	0.031	0.086	0.049	0.041	0.030	0.029	0.030	N/A
² Lost-time incident rate — total workforce (per 200,000 work hours)	0.048	0.051	0.041	0.038	0.077	0.046	0.044	0.031	0.034	0.029	12
² Total recordable incident rate — employees (per 200,000 work hours)	0.33	0.37	0.32	0.25	0.30	0.25	0.22	0.19	0.21	0.16	N/A
² Total recordable incident rate — contractors (per 200,000 work hours)	0.43	0.49	0.39	0.34	0.41	0.37	0.32	0.29	0.26	0.23	N/A
² Total recordable incident rate — total workforce (per 200,000 work hours)	0.38	0.43	0.36	0.30	0.37	0.33	0.29	0.25	0.24	0.20	12
Process Safety Tier 1 Events (API RP 754 guidance)	N/A	N/A	69	62	70	63	62	65	74	64	N/A
^{3,4} Number of regular employees at year end, thousands	81	80	81	84	82	77	75	75	73	71	15
⁴ Percent of workforce – outside the United States	63	63	63	60	61	59	59	58	59	59	15
⁴ Percent women — global workforce	25	25	26	26	26	28	28	28	28	28	N/A
Percent management and professional new hires — women	38	39	38	40	44	39	39	40	41	44	N/A
Percent management and professional new hires — outside the United States	71	69	63	70	79	68	66	61	61	74	N/A
Number of non-unique employee participants in corporate and technical training, thousands	35	48	52	61	65	76	87	79	85	83	N/A
Total corporate and technical training expenditures, millions of dollars	61	69	71	77	80	88	96	117	124	108	14
Managing climate change risks											
$^{\mathrm{s}}$ Greenhouse gas emissions, absolute (net equity, CO $_{\mathrm{2}}$ -equivalent emissions), millions of metric tons	135	126	123	126	128	126	127	123	122	125	20
⁶ Direct (excluding emissions from exported power and heat)	125	117	114	117	119	118	119	115	114	117	N/A
⁷ Emissions associated with imported power	10	9	9	9	9	8	8	8	8	8	N/A
Greenhouse gas emission consituents (excludes emissions from exported power and heat), millions of metric tons											
CO_2 (excluding emissions from exported power and heat)	131	122	119	122	124	120	119	116	115	118	N/A
Methane (CO ₂ -equivalent)	3	3	3	3	3	5	7	6	6	7	N/A
Other gases (CO ₂ -equivalent)	1	1	1	1	1	1	1	1	1	<1	N/A
Emissions from exported power and heat	14	13	14	13	15	15	16	7	4	3	N/A
By-region greenhouse gas emissions (net equity, CO_2 -equivalent emissions), millions of metric tons											
Africa/Europe/Middle East	50	45	43	45	45	44	44	43	44	44	N/A
Americas	65	62	62	64	66	68	70	66	65	65	N/A
Asia Pacific	20	19	18	17	17	14	13	14	13	16	N/A

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Page #
Managing climate change risks (continued)											
By-division greenhouse gas emissions (net equity, CO ₂ -equivalent emissions), millions of metric tons											
Upstream	53	49	47	50	54	56	58	56	56	59	N/A
Downstream	59	57	56	55	54	51	49	47	45	45	N/A
Chemical	23	20	20	21	20	19	20	20	21	21	N/A
Carbon dioxide – captured for storage, millions of metric tons	N/A	N/A	N/A	N/A	5.0	4.8	5.9	6.9	6.9	6.3	18
⁵ Greenhouse gas emissions, normalized (net equity, CO ₂ -equivalent emissions), metric tons per 100 metric tons of throughput or production											
Upstream	21.7	21.0	20.1	20.5	20.7	22.3	23.2	23.9	23.9	24.6	20
Downstream	21.5	21.0	21.0	20.8	20.0	19.6	19.7	19.2	18.9	19.5	20
Chemical	62.1	59.8	60.7	57.9	57.2	56.3	57.0	53.4	53.6	52.2	20
Energy use (billion gigajoules)	1.6	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.5	1.5	20
Energy intensity, normalized versus Global Energy Management System (GEMS) base year (2002) — refining	94.2	93.7	92.8	91.8	90.9	90.0	90.5	90.3	91.2	90.7	N/A
Energy intensity, normalized versus GEMS base year (2002) — chemical steam cracking	89.6	90.4	88.6	87.6	87.3	88.2	88.8	86.4	86.6	84.2	N/A
Hydrocarbon flaring (worldwide activities), millions of metric tons	8.0	5.7	4.4	3.6	4.1	3.6	3.7	4.5	5.3	5.0	21
⁸ Cogeneration capacity in which we have interest, gigawatts	4.5	4.6	4.9	4.9	5.0	5.2	5.3	5.5	5.5	5.3	21
Environmental performance											
⁸ Number of acres of managed wildlife habitat	370	370	380	6,400	6,900	7,000	7,000	7,200	7,100	7,200	N/A
Freshwater withdrawn, millions of cubic meters	N/A	N/A	N/A	N/A	540	520	420	420	450	440	N/A
Freshwater consumption, millions of cubic meters	320	350	340	330	370	330	280	270	300	290	27
Freshwater intensity, metric tons of water consumed per metric tons of throughput or production											
Upstream	0.07	0.08	0.09	0.10	0.26	0.26	0.24	0.19	0.35	0.30	N/A
Downstream	0.81	0.90	0.85	0.87	0.88	0.82	0.74	0.74	0.73	0.76	N/A
Chemical	2.36	2.56	2.46	2.41	2.64	2.41	1.98	1.79	1.83	1.75	N/A
Marine vessel spills (owned and long-term leased), number of hydrocarbon spills > 1 barrel	0	0	0	0	0	0	0	0	0	0	N/A
[°] Significant spills to the environment	N/A	N/A	N/A	N/A	N/A	20	17	19	11	9	N/A
Spills (not from marine vessels), number of oil, chemical and drilling fluid spills > 1 barrel	253	211	242	210	484	356	330	334	319	220	N/A
Oil spills, number of oil spills > 1 barrel	224	185	208	186	387	294	280	288	280	188	N/A
Other spills, number of chemical and drilling fluid spills > 1 barrel	29	26	34	24	97	62	50	46	39	32	N/A
Hydrocarbons spilled (oil spilled), thousands of barrels	7.5	20.3	17.4	7.7	17.8	8.5	9.3	9.1	10.8	4.7	28
Other spills, thousands of barrels	0.5	0.4	0.5	40.4	2.0	1.6	0.9	4.1	0.4	3.7	N/A
Controlled hydrocarbon discharges to water, thousands of metric tons	1.7	1.8	1.4	1.3	1.3	1.2	1.1	1.3	1.1	1.1	N/A
Upstream	1.2	1.3	1.1	1.1	1.1	1.0	1.0	1.2	1.0	1.0	N/A
Refining	0.5	0.5	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	N/A
Sulfur dioxide (SO ₂) emitted, millions of metric tons	0.21	0.19	0.16	0.14	0.13	0.13	0.12	0.10	0.11	0.10	N/A
Nitrogen oxides (NOx) emitted, millions of metric tons	0.16	0.15	0.13	0.12	0.15	0.14	0.14	0.14	0.14	0.13	N/A
Volatile organic compounds (VOCs) emitted, millions of metric tons	0.26	0.20	0.18	0.18	0.18	0.15	0.15	0.16	0.16	0.15	N/A

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Page #
Environmental performance (continued)											
VOCs emitted, metric tons per 100 metric tons of throughput or production											
Upstream	0.059	0.044	0.042	0.044	0.049	0.044	0.054	0.059	0.058	0.055	N/A
Refining	0.015	0.012	0.011	0.012	0.011	0.010	0.009	0.008	0.008	0.008	N/A
Chemical	0.039	0.043	0.036	0.036	0.032	0.036	0.034	0.029	0.027	0.027	N/A
Environmental expenditures, billions of dollars	3.8	5.2	5.1	4.5	4.9	5.5	6.0	6.2	5.6	4.9	27
Total dollars spent on environmental penalties and fines, billions of dollars	0.002	0.011	0.002	0.011	0.003	0.004	0.002	0.018	0.015	0.006	N/A
Total hazardous waste disposed from remediation, millions of metric tons	0.1	0.2	1.2	0.6	1.3	1.7	1.1	1.0	1.4	1.4	N/A
¹⁰ Total hazardous waste disposed from operations, millions of metric tons	0.1	0.4	0.8	1.3	1.9	2.0	0.3	0.3	0.2	0.1	N/A
Community engagement, human rights and strategic investments											
¹¹ Community investments, millions of dollars	206.6	252.2	235.0	237.1	278.4	255.6	269.5	279.5	272.3	241.5	35
United States	124.1	144.6	143.0	154.8	161.3	156.5	156.3	150.2	145.5	131.1	35
Rest of world	82.5	80.6	92.0	82.3	117.1	99.1	113.2	129.3	126.8	110.4	35
Local development and supply chain management											
¹² ExxonMobil spending with U.S. diverse suppliers, millions of dollars	582	615	887	841	1,068	1,001	1,024	1,108	1,064	1,442	39
Corporate governance											
¹³ Number of Extractive Industries Transparency Initiative (EITI) participating countries	6	8	8	7	7	7	9	10	11	15	N/A
Percent of shares represented at Corporation's Annual Meeting	84.9	84.8	82.9	80.7	81.9	83.0	82.3	82.9	83.9	85.1	44
Corporate political contributions — U.S. state campaigns and national 527s, millions of dollars	0.27	0.45	0.49	1.10	0.51	1.03	0.70	1.17	0.58	0.52	N/A

Notes on performance table:

¹Workforce includes employees and contractors. Accidents or incidents include both injuries and illnesses. From 2007 through 2016 all fatalities were injury-related.

²Workforce includes employees and contractors. Incidents include both injuries and illnesses. Depending on the reporting year, illness-related incidents range from 2 to 13 percent.

³Reduction from 2011 is primarily due to divestment and restructuring activity in the Downstream business.

⁴Regular employees are defined as active executive, management, professional, technical and wage employees who work full-time or part-time for ExxonMobil and are covered by ExxonMobil's benefit plans and programs. Employees at our company-operated retail stores are not included.

⁵The net equity greenhouse gas emissions metric was introduced in 2011 as a replacement for the direct equity greenhouse gas metric. Information has been restated back to 2005 according to the new metric. The net equity greenhouse gas metric includes direct and imported greenhouse gas emissions and excludes emissions from exports (including Hong Kong Power through mid-2014). ExxonMobil reports greenhouse gas emissions on a net equity basis for all our business operations, reflecting our percent ownership in an asset.

⁶The addition of direct emissions and emissions associated with exported power and heat is equivalent to World Resources Institute (WRI) Scope 1.

⁷These emissions are equivalent to WRI Scope 2.

⁸Cumulative figure.

[°]ExxonMobil began measuring significant spills to the environment, the number of spills of any fluid type that warrant greater focus, in 2012.

¹⁰The value for hazardous waste from ongoing operations includes produced water classified as hazardous waste by one local authority, which is approximately 95 percent of the reported figure in 2008 through 2012.

¹¹Total contributions include ExxonMobil corporate and foundation donations, and employee and retiree giving through ExxonMobil's matching gift, disaster relief and employee giving programs.

¹²Beginning in 2015, our spending encompassed an expanded set of diverse classifications that includes: minority-owned businesses; women-owned businesses, small businesses; lesbian-, gay-, bisexual- and transgender-owned businesses; veteran-owned businesses, service-disabled veteran-owned businesses; and businesses owned by peoples with disabilities. Prior to 2014, spending included minority- and women-owned businesses.

¹³In countries where ExxonMobil has an Upstream business presence.

*Some uncertainty exists in performance data, depending on measurement methods. Data in the report and performance data table represent best available information at the time of publication. Performance data are reported for our affiliates and those operations under direct ExxonMobil management and operational control. Includes XTO Energy performance beginning in 2011. N/A is used to indicate that data are not available, or not detailed in this report outside the performance data table.



LRQA Assurance Statement

Relating to Exxon Mobil Corporation's Corporate Citizenship Report for the calendar year 2016.

This Assurance Statement has been prepared for Exxon Mobil Corporation 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 Exxon Mobil Corporation (ExxonMobil) to assure its processes for reporting safety, health and environmental IPIECA performance indicators used in the *Corporate Citizenship Report* (CCR) for the calendar year 2016, to a reasonable level of assurance using LRQA's verification approach.

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

- Verifying the integrity of the processes used for determining which material issues to report;
- Evaluating consistency with the following industry guidelines:
 - IPIECA/API, Oil and Gas Industry Guidance on Voluntary Sustainability Reporting (2015),
- API, Compendium of Greenhouse Gas Emission Estimation Methodologies for the Oil and Gas Industry (2009).

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

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

LRQA's opinion

Based on LRQA's approach, we believe that ExxonMobil's reporting processes were effective in delivering safety, health and environmental indicators that are useful for assessing corporate performance and reporting information consistent with IPIECA/ API Guidance.

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 procedure¹; the following tasks were undertaken as part of the evidence gathering process for this assurance engagement:

- Reviewing the reported information to confirm the inclusion of all core safety, health and environmental performance indicators referenced in the IPIECA/API Guidance;
- Reviewing the documented reporting requirements against the applicable industry guidelines to assure consistency of scope, definition and reporting for each of the relevant indicators;
- Reviewing the reporting processes at Headquarters and at each of the functional business levels to evaluate the processes used by ExxonMobil to assure completeness, consistency and conformance to reporting requirements across its global operations;
- Reviewing the stakeholder engagement processes;
- Reviewing the processes used to aggregate the data and information at the corporate level for inclusion in the CCR;
- Reviewing ExxonMobil's data collection tools to assess use in the reporting processes;
- Reviewing the data-reporting processes at a sample of nine operating sites selected by LRQA to assess local understanding and implementation of reporting requirements. Sites selected were SARPOM Trecate Refinery, Italy; Exxon Neftegas, Sakhalin, Russia; Mont Belvieu Plastics Plant, Texas; Beaumont Chemical Plant, Texas; and lubricant facilities in Apapa, Nigeria; Tianjin, China; Port Allen, Louisiana; Edmonton, Canada; and Jurong, Singapore.

Observations

Further observations and findings made during the assurance engagement are:

- Processes were in place to ensure that sites contributing to core safety, health and environmental metrics understood corporate reporting obligations and were included in corporate safety, health, environmental and climate change reporting;
- Methods used for calculating each metric were defined clearly and communicated;
- Processes were in place to ensure that the quantitative indicators were checked for completeness, consistency and accuracy;
- Responsibility for annually reviewing and updating reporting guidelines was clear, with improvement in methodology regularly undertaken;
- Guidelines for greenhouse gas emissions reporting were consistent with, and specifically refer to, the API Compendium

for Greenhouse Gas Emissions Methodologies for the Oil and Gas Industry (2009);

• Active engagement with external stakeholders provided information for determining material issues.

Observations and areas for potential improvement were provided in a report to ExxonMobil's 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 ExxonMobil's certification body for ISO 9001 and ISO 14001 (lubricants operations) and Responsible Care® (chemical operations) and the California Air Resources Board greenhouse gas verification. The certification and verification assessments are the only work undertaken by LRQA for ExxonMobil and as such do not compromise our independence or impartiality.

Signed

Dated: March 30, 2017

from from

Andrea M. Bockrath LRQA Lead Verifier On behalf of Lloyd's Register Quality Assurance, Inc. LRQA Reference: UQA0110889

¹ LRQA's Verification procedure is based on current best practice and uses the principles of AA1000AS (2008) — Inclusivity, Materiality, Responsiveness and Reliability of performance data and processes defined in ISAE3000.

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Explore our complete 2016 Corporate Citizenship Report at exxonmobil.com/citizenship.

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Statements of future events or conditions in this report are forward-looking statements. Actual future results, including future energy supply, demand, and mix; the future effectiveness of safety, health, environmental, and other risk management processes; efficiency gains; and the impact of future technologies could differ materially due to factors including changes in supply and demand for oil and gas and other factors affecting long-term oil and gas prices; political and regulatory factors including the impact of international accords and treaties; changes in consumer preferences; actions of competitors including the development of competing technologies; the outcome of current and future research efforts; technical and operating factors; and other factors discussed under the heading "Factors Affecting Future Results" available through the Investors page of our website at *exxonmobil.com*.

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