Letter From Our Chairman & CEO

Governance
Our governance is foundational to our sustainability, and we hold all employees to the highest ethical standards.

Operating Excellence
We’re proud to be one of the energy industry’s safest and most reliable companies.

Environmental Stewardship
We have strong environmental programs and innovative research and development, including in renewable fuels.

Climate Change and TCFD Analysis
Here we share our position on climate change, principles for climate policy and TCFD disclosures.

Social Responsibility
The people of Phillips 66 work for the greater good every day, serving our company, their families and the communities where we live and work. We value our diverse stakeholder relationships.

Financial Performance
In 2019, we delivered earnings of $3.1 billion and generated strong distributions for our shareholders.

Performance Data and SASB Content Index
Metrics help us track our progress on things that matter to us as a responsible company, as members of our communities and as global citizens.
To our employees, communities and investors,

We are pleased to share sustainability highlights from our 2019 operations. We would be remiss, however, if we did so without acknowledging the incredibly challenging start to 2020, which makes the importance of sustainability even clearer.

As we undertook collecting, measuring and explaining these disclosures, the world shifted. Global issues — efforts to protect people from the spread of COVID-19, geo-political turmoil in global energy markets, and an oversupply of crude oil — dominated our landscape.

Our response was swift, safety-focused and science-based. We have always known our products are essential to global stability and our people provide services that need to be delivered reliably and safely, so we plan relentlessly for emergencies and for the need to pivot quickly. We activated business continuity plans we had prepared and practiced to protect people, the environment and the global systems that depend on our assets — in that order — and kept our operations going uninterrupted. Our governance, social responsibility, focus on safety and environmental stewardship helped us navigate this difficult landscape. We provided emergency operating center expertise and support, donated personal protective equipment, manufactured hand sanitizer, loaned 3-D printers to health care facilities to make masks for their communities and increased our social impact investment.

This is sustainability in practice.

It will take time for people, communities and economies to recover. The rate of recovery and the lasting impacts are uncertain; however, a few things are clear.

We remain committed to making, transporting and selling energy products to the world in a safe, environmentally responsible and economical way. Energy needs and usage have changed continually throughout human history. That change continues, but almost every forecast source shows that our products will continue to play a critical role in meeting the energy needs of the rising global population. This report describes some of our policies, programs and practices that we believe position us to fill this need safely, responsibly and efficiently.

Our people demonstrate great leadership, and I believe they are the best in the industry. They focus on safety and care for each other and their communities. Our board of directors reviews our sustainability activities and provides strong leadership. Our company culture emphasizes the greater good, creates an environment of trust with stakeholders, seeks different perspectives and achieves excellence while remaining loyal to our values of safety, honor and commitment.

Our strategy of operating excellence, a high-performing organization, disciplined growth and returns, and shareholder distributions is the foundation for our business. It is core to environmental and social sustainability. Additionally, we are proud that we are known as an industry leader in safety, reliability and innovation; in the community, we show up as neighbors, supporters, collaborators and problem solvers.

We value your interest and welcome feedback on our report.

In safety, honor and commitment,

Greg Garland
Chairman and CEO
June 2020
Corporate Strategy

Our corporate strategy is founded on our values of safety, honor and commitment; it is structured to enable us to achieve our vision of providing energy and improving lives. Our strategy assures a sustainable, resilient business and creates long-term stakeholder value. Our priorities are clear.

Operating Excellence
Operating with safety, reliability and environmental stewardship while delivering shareholder value.

Growth
Enhancing our portfolio by capturing growth opportunities in Midstream and Chemicals.

Returns
Improving returns by maximizing earnings from existing assets and investing capital efficiently.

Distributions
Achieving financial strength, disciplined capital allocation, dividend growth and share repurchases.

High-Performing Organization
Building capability, pursuing excellence and doing the right thing.

We achieved numerous milestones and successes in 2019, and we continue to identify opportunities for improvement. We are pleased to discuss both our achievements and future opportunities in this report.

Asset Map
Our Approach to Sustainability

At Phillips 66, we work to mitigate risk and ensure rigorous governance. The pillars that guide sustainability are integral to our strategy and require proactive, consistent and ongoing effort. They are: our commitment to operating excellence throughout our business, environmental stewardship, social responsibility and engagement, and strong financial performance.

Operating Excellence

Our Health, Safety & Environment (HSE) Policy grounds our continuous evaluation of our operations in order to maintain and improve safety and reliability. We consistently implement robust governance policies and programs to manage risks across our Midstream, Chemicals, Refining, and Marketing & Specialties businesses and our corporate staff functions.

Environmental Stewardship

Protecting the environment goes hand in hand with our commitment to operating safely. Companywide, we make proactive investments in assets, including capital and maintenance projects, and we make improvements in operating standards and procedures, and business assurance programs. Business units and functions follow standards, procedures and guidelines, which meet and often exceed regulatory requirements. We make environmental and conservation social impact contributions.

Social Responsibility

We report our social responsibility from two perspectives: our workforce and external stakeholders. Enhancing education and career training, addressing stakeholder questions and concerns, and supporting safe communities are the foundation of our social responsibility and engagement.

Financial Performance

Our economic strength comes from our high-quality diversified asset base, safe and reliable operations, strong balance sheet and disciplined approach to capital allocation.

Our company policies, programs and practices ensure ethical business and good governance. We expect every one of our approximately 14,500 employees to work for the greater good and to act with integrity. These expectations are central to our philosophy around performance management.
5 AMERICAN FUEL & PETROCHEMICAL MANUFACTURERS

DISTINGUISHED SAFETY AWARDS

- BAYWAY REFINERY
- FERNDALE REFINERY
- LAKE CHARLES REFINERY
- SANTA MARIA REFINERY
- BORGER REFINERY

Industry leading total recordable rate (TRR) of 0.15

4 ENERGY STAR® AWARDS

Rodeo facility in San Francisco; Sweeny Refinery in Texas; Ferndale Refinery in Washington; Billings Refinery in Montana for performance in the top 25% of similar facilities nationwide for energy efficiency and meeting environmental performance levels established by the EPA

Trinitas Regional Medical Center honored Bayway Refinery with the Humanitarian Award for consistent support and funding for programs, equipment, office needs and toys and clothing for patients in need

Phillips 66 Midstream earned International Liquid Terminals Association’s (ILTA) Safety Excellence Award

In Germany, JET® won Best Brand among consumers for the 10th straight year

*ICX is the Interactive Customer Experience
Named one of Military Times’ **Best for Vets** Employers

**Forbes:** Among America’s Best Large Employers

Named one of Houston Chronicle’s **Top Workplaces**

Received the **Corporate Citizenship Award** from **Crime Stoppers** Houston

**Texas by Nature 20:**
best work in conservation from Texas-based company

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Billings Refinery named as **City of Billings EMPLOYER OF CHOICE** for businesses with more than 50 employees, for outstanding commitment to the community

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**Ferndale Refinery** in Washington

**Large Business Member of the Year** by the **Ferndale Chamber of Commerce**

**Boys & Girls Clubs** of Whatcom County **Community All Star Award** for outstanding commitment to young people, and a gift to improve their tech labs and implement a county-wide STEM program

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**Lake Charles Manufacturing Complex** earned from SOWELA Technical Community College: **Excellence in Leadership** award for leading innovative workforce programs and **Philanthropic Honoree**

**Phillips 66** was awarded the **Coast Guard Foundation Honor** for **Exceptional Support** for long-standing and generous corporate support meeting all core areas of impact for Coast Guard members and families, including scholarships and grants, morale and recreation gear, and tragedy assistance and disaster relief
This Sustainability Report

Phillips 66 was founded in 2012, and since the beginning, we have published annual sustainability metrics and information on our website. More recently, we have enhanced our reporting and added easy-to-download sustainability highlights brochures.

This report details our governance, oversight, policies and programs and highlights our sustainability achievements. In short, this report explains what we do and why, with examples of how we do it.

Unless otherwise explicitly stated, this report covers Phillips 66’s performance in 2019 and focuses on outcomes from our operated assets, including our master limited partnership, Phillips 66 Partners. Non-operated joint ventures, such as Chevron Phillips Chemical Company and DCP Midstream, publish publicly available sustainability reports, and interested readers may consult those firms’ webpages.

In addition to providing critical performance data and describing the investments and resources that we believe are vital to the long-term sustainability of our business, this report also reflects feedback from our stakeholder engagement programs and processes, along with our review of, and adherence to, many standards and best practices put forth by organizations in the sustainability field.

• We have assessed our operations against Sustainability Accounting Standards Board (SASB) materiality criteria, addressing those that are most relevant to our business and our stakeholders. We provide a SASB content index in the last chapter of this report.

• We have incorporated here our updated Taskforce for Climate-Related Financial Disclosures (TCFD) in the Climate Change and TCFD Analysis chapter.

• We considered industry trade association publications, including the American Petroleum Institute’s Oil and Gas Industry Guidance on Voluntary Sustainability Reporting, the Association of Oil Pipe Lines’ Corporate Social Risk Management & Reporting, and recommendations from the International Petroleum Industry Environmental Conservation Association (IPIECA).

• Phillips 66 also receives guidance on sustainability strategy and reporting as a member of the Boston College Center for Corporate Citizenship.

We manufacture, transport and market the products and energy that help people go farther and faster, fly higher, dream bigger and live more productive lives.
Governance

Rigorous, consistent corporate governance practices contribute positively to long-term shareholder value. Our governance and ethics are robust, and they underpin every level and aspect of the organization.

**Board & Managerial Oversight**

Our board of directors and executive leadership team are committed to ethical business practices, which are premised on our company values. Our board regularly reviews evolving corporate governance best practices, changing regulatory requirements and feedback from shareholders, and authorizes actions it believes are in the best interest of Phillips 66 and its shareholders. Our Public Policy Committee, comprised of all board members, oversees the company’s long-term business objectives and global reputation, focusing on company compliance with policies and practices related to HSE protection and identifying environmental, social as well as political trends and risks. The Audit & Finance Committee monitors our enterprise-wide risk management program and our controls, compliance and ethics. The Human Resources and Compensation Committee (HRCC) of the Board oversees our executive compensation programs that drive and reward performance and behaviors, and oversees the company’s succession planning practices.

The diversity in talent and composition of our board of directors augments this governance. Our board is 30% female and 90% independent. Every member has served for fewer than 10 years with Phillips 66, which is a positive factor in managing risk and performance, according to data-backed research published on the Harvard Law School Forum on Corporate Governance and Financial Regulation website.

We also maintain strong governance through written policies and auditing programs throughout the company and our supply chain. For ease of reference, many of our key policies and governing documents, including board governance documents and charters, can be found online and listed at the end of this chapter. These, and many other written procedures and controls, set the standards that guide our actions and ensure the highest levels of responsibility, integrity and compliance across our businesses.
Culture
The Phillips 66 culture is built on our values of **safety, honor and commitment**. Each employee upholds these values with a sense of integrity and purpose.

The backgrounds and experiences of our diverse teams sustain our vibrant culture and reflect who we are, the environment we create, how we work together and the results we deliver.

We work for the greater good, create an environment of trust, seek different perspectives and strive to achieve excellence. Our workforce is evolving, and our business is transforming and growing, enabling us to purposefully shape our culture to adapt to change. After gathering input from our employees and learning about how they experience our culture, we developed a set of behaviors that both preserve the best of who we are and challenge us to improve. These simple, practical and intuitive behaviors were rolled out companywide in 2019 as “Our Energy in Action.” Leadership and management across the company led the adoption, and we are actively embedding Our Energy in Action into all talent and business processes to drive accountability.

**Our Energy in Action**

- We embrace our values as a common bond.
- We depend on each other to do our jobs.
- We create space for possibilities.
- We challenge ourselves and never settle.

**Work for the greater good.**

Living our values earns us the confidence of our business partners, communities and co-workers.

**Create an environment of trust.**

Trusting each other makes us more productive and agile.

**Seek different perspectives.**

Championing inclusion enables us to innovate and thrive.

**Achieve excellence.**

Continuing to improve ensures we deliver extraordinary performance.

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**EVERY PHILLIPS 66 EMPLOYEE IS EXPECTED TO:**

- Comply with all laws, regulations and company policies
- Maintain ethical behavior
- Demonstrate the principles of Our Energy in Action
- Report any suspected misconduct, illegal activity, fraud, abuse of company assets or other violation of ethical standards
- Submit an annual ethics compliance certification
Ethics and Business Conduct

At Phillips 66, we are proud of the work we do and how we do it. We do not compromise our integrity. We recognize that questions can arise in today’s increasingly complex global business environment. Therefore, our Code of Business Ethics and Conduct describes our operating guidelines and ties our company’s values to the way we make decisions.

Our Code of Business Ethics and Conduct covers topics including, but not limited to, human rights, conflicts of interest, discrimination, harassment, confidentiality, anti-bribery, anti-boycott, employee grievances, insider trading, competition and fair dealing. All employees, including management, participate in annual training, during which they must attest that they will comply with the code. Phillips 66’s senior financial officers adhere to both this and a supplemental code of ethics. Both codes can be found on our website.

“It is our responsibility to uphold our code — to set a high standard for ourselves and be seen by our peers, customers, business partners, investors and communities as a company that does the right thing, always.”

– Greg Garland, Chairman and CEO

The code references human rights and our stance against human trafficking. We recognize and respect the dignity of all human beings. We believe business has a role in promoting respect for human rights throughout the world. We embrace the right of all people to live their lives free from social, political or economic discrimination or abuse. Our human rights position is informed by the Universal Declaration of Human Rights.

Our core value of honor means we choose business partners objectively and fairly and act with honesty in all business dealings with them. In turn, our business partners are expected to work with Phillips 66 employees in a way that upholds our standards. Business partners and suppliers who enter into contracts with Phillips 66 are expected to comply with contractual obligations and the expectations laid out in our Business Partner Principles of Conduct.
Company Ethics
We are committed to the highest ethical standards because we want people in our communities and elsewhere to know they can count on us.

Employees, suppliers and customers are all empowered through our whistleblower program to raise questions or concerns about our operations and business practices without fear of punishment. They are expected to report behaviors that they believe violate the company Code of Business Ethics and Conduct. Various federal and state laws provide legal protection to certain types of whistleblowers. Additionally, Phillips 66 has a policy of nonretaliation, which helps foster an ethical workplace and a culture of integrity.

The Ethics Office telephone and web-based HelpLines are confidential and operated by a third party. Both are available 24 hours a day, seven days a week, 365 days a year, and are staffed by representatives fluent in many languages. Employees, contractors, suppliers and community members can access the HelpLine toll-free from any location around the world, or they can file a report online. Employees and others making reports are encouraged to identify themselves, but they may choose to remain anonymous.

One indicator of confidence in the independence and integrity of our ethics program is a decline in the percentage of incidents reported anonymously. Of the 218 reports made in 2019, 62% of reporters felt comfortable identifying themselves. This is a 6% increase in self-identified reports from 2018.

Reports are entered directly onto an independent, secure server and are not traced. Reports are shared only with the specific people designated to handle the issue.

Toll-free Grievance or Ethics HelpLine: 855.318.5390

Any potential violation of our Code of Business Ethics and Conduct or other company policies is brought to the attention of the Global Compliance and Ethics Office and handled through our reporting process. This includes all potential violations reported through HelpLine calls, online reports and in-person accounts.

Led by our chief compliance officer, our Compliance and Ethics Office personnel are trained to conduct investigations into potential violations. Phillips 66 Human Resources professionals also are trained to assist or lead investigations.

All allegations are investigated, and appropriate action is taken based on the findings. Issues involving a violation of regulation, law or the Code of Business Ethics and Conduct are reported to the board of directors’ Audit and Finance Committee.

Political and Public Policy Process
Phillips 66 participates in the legislative and regulatory policy development and political process legally, responsibly and ethically to serve the best interests of our shareholders, workforce and other stakeholders. Our operations are highly regulated and are affected by actions at many levels of government. Our public policy activities include education and advocacy efforts at the local, state and federal government levels. We are committed to complying with all applicable state and federal rules on lobbying and disclosures. Our Political Giving and Activity Policy governs our actions in the political and public policy process.
Policy List

Our values and purpose are demonstrated in everything we do. Below are links to company policies, information and key governance documents that guide our business every day.

GOVERNANCE

2019 Annual Report
2020 Proxy Statement
Audit & Finance Committee Charter
Code of Business Ethics & Conduct
Code of Ethics for the Principal Executive Officer and Senior Financial Officers
Company Bylaws
Corporate Governance Guidelines
Executive Committee Charter
Human Resources & Compensation Committee Charter
Nominating & Governance Committee Charter
Public Policy Committee Charter

Policies & Positions

Business Partner Principles of Conduct
Equal Employment Opportunity Position
Health, Safety & Environment Policy
Health, Safety & Environmental Management System

Human Rights Position
Philanthropy Grant Application Process
Phillips 66 Employment Benefits
Phillips 66 U.K. Modern Slavery Statement
Political Giving and Activity Policy
Supplier Diversity Position
Supply Chain Transparency
Workplace Diversity Position

DATA AND COMMUNITY AWARENESS

2019 Fact Book
Gray Oak Pipeline website
News Releases
Phillips 66 Partners LP website
Pipeline Awareness & Safety 811 website
Safety Data Sheets
Securities & Exchange Commission Filings

OTHER POLICIES

Phillips 66 Partners Senior Officer Code of Conduct
Phillips 66 Partners Audit Committee Charter
Operating Excellence: Health And Safety

Phillips 66 is proud to be one of the energy industry's safest and most reliable companies. We believe that a zero process safety incident and zero injury workplace is achievable. Operating excellence, including personal and process safety, environmental stewardship and asset availability, is critical to meeting our corporate strategy of growth, returns and distributions. While our Combined (employees and contractors) Total Recordable Rate increased slightly from 0.14 in 2018 to 0.15, the severity of injuries decreased in 2019. Our Lost Workday Case Rate improved from 0.05 in 2018 to 0.03 in 2019.

Safety is at the forefront of every decision we make and every action we take. Safety and environmental performance are so important that they are part of our compensation structure for executives and all employees. We use benchmark data to measure ourselves against others in our industry and target improved performance in safety, environmental stewardship and effective management of unplanned downtime.

Our view is that safety is not defined by the absence of failure, but by the presence of positive controls and a willingness to learn.

We are committed to protecting the health and safety of everyone at our worksites and in the communities where we operate. Our HSE policies, programs and procedures embody this priority. Our commitment is reflected in our investment in asset maintenance and integrity.
Policies and Management Systems

Our HSE policy defines our commitment to protecting our workforce, customers and communities while executing our strategies for growth, returns and distributions. The policy applies to anyone working in our facilities, including contractors.

We integrate our health, occupational safety, process safety and environmental principles throughout our businesses, with a commitment to continuous improvement that minimizes our potential impact on our neighbors and the environment. We also consult with stakeholders on environmental issues.

The Health, Safety & Environment Management System (HSEMS) provides the framework to reduce risks and improve performance. It establishes a continuous improvement process for policy implementation, leadership expectations and core values. The HSEMS guides our entire workforce, including labor and management, experienced workers and new hires, contractors and subcontractors.

The HSEMS focuses on operating excellence and facilitates HSE performance and compliance with regulations, key standards, procedures and guidelines. Our rules apply to all of our business units and are often stricter than regulatory requirements. Core standards include reporting, metrics, crisis management, emergency response, due diligence, incident investigation, risk assessment and corporate auditing.

Our rigorous auditing protocols enable us to assess our performance and progress frequently. On-site inspections are conducted by both third-party auditors and Phillips 66 internal auditors who are trained to recognize health and safety best practices and are committed to report and investigate deviations or noncompliance. We share examples of this important work in the sections that follow.

All Phillips 66 sites have HSE controls and practices, along with HSE management and staff dedicated to excellence and risk mitigation. Our senior vice president of HSE and Projects has direct responsibility for the HSEMS and reports directly to the CEO. HSE considerations are embedded into every task and business decision.

If we can’t do something safely, we won’t do it.
“Every person walking through our gates has the right to stop unsafe work, and if the job can’t be done safely, then we just shouldn’t do it.”

– Greg Garland, Chairman and CEO

Anyone working at or visiting our sites is empowered, and expected, to stop any work they believe poses a risk to themselves, the people around them or the environment. We train our whole workforce to “stop when unsure.” No employee or contractor will ever receive negative consequences for using their stop-work authority in good faith, even if it turns out that there wasn’t actually a hazard. Employees and contractors are rewarded through the company’s Good Catch program. This is another way we hold ourselves accountable for everyone’s safety, every day.

In conjunction with the HSEMS, our 10 Life Saving Rules (LSR) program is fundamental to Phillips 66’s safety culture. All employees are trained on LSR. These rules are clear and concise, and apply to all routine and critical activities. They enhance safety performance, and they benefit both individuals and communities by preventing injuries.

LIFE SAVING RULES

• Protect against falls & dropped objects
• Verify line-up & containment
• Control hazardous energy
• Follow safe rigging & lifting practices
• Operate vehicles & industrial equipment responsibly
• Perform excavations safely
• Assess & mitigate hazards before working
• Properly plan & execute hot work
• Work in confined spaces safely
• Maintain safety system protection
Asset Integrity

Ensuring the integrity of our assets is a crucial HSEMS component. To minimize asset integrity risks associated with operations and equipment failure, we have developed programs and procedures to ensure proper asset design, fabrication, installation, operation and maintenance. Asset integrity programs include quality assurance/quality control, defined inspection and maintenance intervals for process equipment, and meeting required company standards. These high-tech integrity programs and processes are designed to prevent unintentional releases of product and protect everyone at our facilities and in the surrounding communities. Many of our company’s process safety and environmental standards exceed industry requirements, promoting our goal of an incident-free workplace.

Over the last five years, we have funded $17 billion in capital through investing $10.2 billion in growth projects and $6.8 billion in environmental protection projects and sustaining capital.

We invested more than $1 billion in safety, environmental and reliability projects in 2019. Of that total, approximately $600 million was spent on projects in refining.

DIGITIZING OUR FIELD PROCESSES

The Digital Operations and Maintenance (DOM) project uses analytics and digital technologies to enhance field activities and increase reliability, productivity and safety. The project includes elements such as digitizing operator rounds, improving mechanical integrity data integration, using machine analytics to improve equipment monitoring, and improving energy management by increasing data visibility to operators.

In 2019, Phillips 66 completed 115 workstream implementations across 12 refineries and six midstream regions, positively affecting the work of more than 5,000 employees, or 34% of the Phillips 66 workforce. Improved processes use mobile devices such as smart phones, tablets and mobile apps to capture data real time, streamline and digitize field activities, and eliminate the need for paper forms.

Before implementing these processes companywide, Phillips 66 ran six digital pilots at the Lake Charles Refinery to optimize each process. We then conducted on-site trainings and addressed employees’ questions and concerns to promote collaboration and adoption of the new processes.

The effective teamwork across business units and our Information Technology organization resulted in cutting-edge solutions for our field processes and set the foundation for sustained operating excellence.
Pipeline Integrity

We manage more than 22,000 miles of pipeline and deliver over 1 billion barrels of crude and liquid products annually through our pipeline systems, making Phillips 66 one of the largest liquids pipeline operators in the United States by barrel-miles.

More than 1 billion barrels of crude and products were delivered safely through our operated pipelines in 2019.

That’s about 3 million barrels each day.

Over the past five years, pipeline operators have reduced the number of liquids pipeline incidents impacting people or the environment by 36%, even as pipeline miles and barrels delivered have risen. More information about our community engagement with regard to pipelines can be found in Chapter 4 of this report.

Pipelines remain one of the safest ways to deliver the energy we use every day, delivering products safely without incident 99.999% of the time.

Our approach to safety is rooted in prevention, maintenance and emergency preparedness. Elements of these programs include exacting design and construction standards, comprehensive pipeline maintenance, 24/7 remote line monitoring, leak detection, community education programs and strong relationships with emergency response teams across our asset footprint.

We visually inspect pipeline rights-of-way bi-weekly, primarily using aerial pipeline patrols. We look for potential signs of leaks and any other pipeline integrity threats, such as unauthorized digging or exposures. We are recognized for our efforts to go beyond regulatory requirements. We conduct real-time monitoring of our pipelines. Our highly trained control room staff continuously monitors the operations and pressure in each pipeline. At the first sign of a pressure change, which could indicate a leak, an employee will shut down the pipeline as a precautionary measure until the matter is understood and resolved. Our proactive approach in this area continues to draw positive attention from government and other partners.

We also have an industry-leading maintenance program using smart tools that enable us to inspect and assess the interior of our pipelines and identify maintenance needs from the inside before any leak can occur.

When we build or repair pipelines, we use a variety of state-of-the-art techniques to ensure asset integrity. As an example, horizontal directional drilling (HDD) technology is used in environmentally sensitive areas, allowing us to bury pipelines deep underneath riverbeds, preventing pipeline exposures. We have spent approximately $130 million to enhance resilience at river crossings.
ADVANCING PIPELINE INSPECTION RESEARCH AND TECHNOLOGY

Phillips 66 is a long-time member of the Pipeline Research Council International (PRCI), a global collaborative research development organization by and for the pipeline industry.

The PRCI recently started the Technology Development Center (TDC) that is a pipeliner’s “technology playground.” Pipeline companies send pipe samples with numerous types of defects to the TDC and conduct tests which can’t be done while a pipeline is in operation.

We have worked with TDC since 2017, and in 2019, our involvement and leadership in PRCI went to the next level, working for the greater good of the industry by creating a pipe defect repository.

We replaced eight segments of pipe from locations that have historically presented challenges to collecting inline inspection (ILI) data. We sent the pipe segments with defects to the TDC and invited vendors to inspect them using smart pigs and laser scanning robots inside the pipe and advanced nondestructive examination methods to scan the exterior of the pipe. The vendors created 3-D images of the pipes, providing “truth data” of actual defects and a more accurate ILI validation set than traditional ILI tools.

The response from vendors was overwhelming, and Phillips 66 extended the availability of the pipe sections at TDC. The many positive outcomes include shaping the company’s dig criteria based on actual learnings, helping select the most appropriate ILI tools and service providers for future integrity work, and improving analysis of complex defects.

As an early adopter of new technologies and a learning organization, Phillips 66’s Midstream group brought engineering interns, newly-hired engineers and cross-functional business unit partners from Refining and Marketing to the TDC for technology demonstrations and engineering development programs.

The TDC research has the potential to benefit all aspects of sustainability – communities, environment, safety and economic performance.
Safety Performance

Our safety culture, comprehensive HSE policies, management systems and the commitment of employees and contractors who work for us resulted in an Occupational Safety and Health Administration (OSHA) TRR of 0.15 in 2019, which is 25 times lower than the overall U.S. manufacturing average. The chart below shows the safety performance rate of Phillips 66 and the refining industry compared to several other sectors.

Process Safety

Process Safety Events (PSEs) are unplanned or uncontrolled releases of a hazardous material. We closely monitor and measure our performance in this area. Phillips 66 works to eliminate PSEs by applying best practices in design, engineering, operations and maintenance. We also perform hazard analyses and use change management procedures to mitigate risk.

We routinely audit our safety, mechanical integrity, operating and maintenance programs. We investigate serious incidents and near misses in order to develop corrective actions and capture learnings. We create and improve our procedures to ensure employees and contractors are aware of hazards and how to address and mitigate them.

We measure our performance in process safety and use metrics to look for trends. American Petroleum Institute (API) Recommended Practice 754 defines Tier 1 and Tier 2 PSEs. Tier 1 PSEs are the most significant type of unplanned or uncontrolled release of material from primary containment. Each Tier 1 event is investigated to determine the underlying causes so we can act to prevent recurrences. Analysis of our Tier 1 PSEs has informed our continued focus on mechanical integrity and human performance to address the causes of these events. Our goal is zero process safety events.

FOCUS ON PROCESS SAFETY

Our 2019 Tier 1 PSE rate of 0.06 was higher than the rate achieved over the last three years, but still close to industry average. We recognize the need to be proactive and continually improve. Our focus areas are:

- Strengthening safeguards against the highest risks; for example in 2019 we established a new group of eight Phillips 66 Process Hazard Analysis facilitators to improve consistency and quality to drive a reduction in risk for our highest consequence scenarios
- Applying industry-leading techniques to improve human performance and prevent process safety events
- Reducing risk through improved learning. This includes leveraging participation in trade associations to build a database of industry incidents and learnings which can be used to provide targeted safety advice to front line workers at the right time in the right place
Overall HSE Performance

Phillips 66’s progress in HSE performance is evident in our recordable rates, number of process safety events and reduction in environmental events. It is our goal that everyone who works at or visits our facilities goes home safely every day. Performance is the outcome of relentless focus on details and on our programs, such as the 10 Life Saving Rules, mechanical integrity audits, and continued training on leadership skills in our business units.

All of our business units complete an annual report on risks. It includes a list of risks and corrective actions, risks identified and closed during the year, and a separate explanation of all risks that have been open five years or longer. Business unit managers verify compliance with company risk management requirements. The reports are reviewed and signed off by each subsequent level of management. Ultimately, a complete report is developed containing the status of the risk items throughout the company and is reviewed with the CEO and summarized for the Public Policy Committee.

We operate 24/7/365, and our work can be complex. We recognize that achieving zero incidents requires continuous vigilance, so we proactively perform focused audits on major work activities such as energy isolation, startup/shutdown activities, valves in proper position to prevent releases, procedures and human performance tools.

OSHA’S VOLUNTARY PROTECTION PROGRAM

Across our refining, midstream and lubricants assets, 29 facilities have achieved OSHA Voluntary Protection Program (VPP) STAR recognition. VPP STAR status recognizes effective safety and health management systems, visible and committed safety leadership, and employee involvement to prevent injury and illness. Achieving VPP STAR status is only possible when labor, management, and regulators cooperatively work together for the greater good.

Continuous Improvement

Each of our sites conducts a monthly safety committee meeting during which employees, managers and union representatives review goals, safety practices and audit results and work together to keep an open dialogue focused on continuous improvement. It is an important forum to discuss key safety topics such as the 10 Life Saving Rules program and continuing education opportunities. These meetings are also an opportunity to share specialized knowledge from experts such as industrial hygienists and OSHA representatives. We hold more frequent meetings within our field staff groups and perform job safety analyses for each field job.

We hold large-scale company training summits every three years; the latest training was held in 2018. We gather people from every health and safety committee in the company to share best practices, goals and performance milestones. Attendees gain new techniques and skills and capture learnings that can be implemented at their home facility. The summits have also been a great way for union leaders and Phillips 66 management to maintain open dialogue and speak with a unified voice about safety. Our next summit is planned for 2021.

We also hold periodic contractor safety summits, during which all of our major contracting companies meet with us to set expectations and goals, share best practices and keep lines of communication open. Our October 2019 contractor safety forum set clear safety expectations and shared Phillips 66’s safety systems, processes and intelligence with senior leaders from the 50 largest contracting companies that support Phillips 66. Together, these companies employ 200,000 workers. Because Wnot all of those employees work at Phillips 66, the potential positive impact broadens and these events are an opportunity to serve the greater good throughout the industry.
HSE Audits and Assurance

Our facilities are subject to rigorous internal and external audits and government inspections; our operations are actively managed to ensure continued asset integrity. HSE performance is verified through robust assurance processes that involve corporate staff and business unit employees. Each business unit establishes and maintains auditing processes to assess the adequacy and effectiveness of HSE controls and compliance with legal requirements and standards of operation. Joint venture partnerships and contractors are included in the auditing process.

There are hundreds of audits conducted each year across our assets. These include corporate HSE audits, audits of specialized operations, such as hydrofluoric acid alkylation units, business unit self-audits, trade association assessments and third-party safety audits. Audits are documented and include a process for communicating results to management as well as provisions for periodic review and corrective actions.

We are also involved in numerous industry-improvement and standard-setting committees of the American Petroleum Institute (API), American Fuel & Petrochemical Manufacturers (AFPM) and the Association of Oil Pipe Lines (AOPL). Our facilities follow industry-leading quality management systems, and many are certified to international standards. These efforts have made our sector, and specifically Phillips 66, safety leaders across U.S. industries.

Through our occupational health and industrial hygiene program, we evaluate our workplaces for health hazards to ensure that we protect everyone at our facilities. Employees and contractors report both actual incidents and near misses that have or could have resulted in injury, property damage or environmental impact. We learn from these situations, identifying and addressing the causes to reduce the risk of recurrence.
Emergency Preparedness

While we strive to eliminate incidents, we are prepared to respond to emergencies and work with local, state and federal agencies. Our Emergency Response Management System provides a model for building and maintaining crisis management and emergency response plans.

Each facility has a written emergency response plan that includes a process for identifying potential emergencies and planning for mitigation and control. Employees are trained for their responsibilities and assignments under each scenario. Drills are conducted frequently and critiqued so plans can be adjusted as needed. Emergency response plans and documents are fully reviewed each year. At the corporate level, the company maintains a Crisis Management Plan with personnel in place to provide useful and prompt support to supplement actions taken in response to an emergency. The company also utilizes Regional Response Teams to support businesses during significant emergencies.

In our annual emergency response drills, we use realistic scenarios to ensure that both our Emergency Response Organization and the community around our facilities are prepared to respond to emergencies. Participation by local and corporate leaders ensures high standards for training and competence for our on-site first responders.

Our teams of first responders protect people’s lives and secure the area in an emergency. We invest in training, sending emergency responders to premier institutions such as the Fire Service Institute at the University of Illinois and the Emergency Services Training Institute at Texas A&M University. We extend this specialized training beyond our first responders, covering the costs for firefighters based near our refineries so they can train alongside our teams. This partnership better serves the communities where we operate.

In 2019, we conducted more than 350 exercises and emergency response drills based on real-life scenarios across our Refining, Midstream and lubricants operations. Each of our business units also completes multiple notification accountability drills for emergencies and one tabletop exercise every year. Tabletop drills are discussion-based sessions which simulate emergencies and roles and responses. At Midstream and lubricants sites, there were 204 qualified individual/incident commander notification drills, 36 equipment deployment exercises and 51 tabletop exercises.

In addition, we hold dozens of exercises for other scenarios, including process safety management and risk management fire or vapor cloud scenarios, at least two annual supervisory control and data acquisition (SCADA) failure exercises, responses to real world events, government initiated unannounced exercises, earthquake responses, hurricane exercises, continuity of business, or pandemic exercises.

If there’s ever an interruption of operations, we have written business continuity plans to responsibly resume manufacturing and transporting energy products to markets around the world.

This video from Pipeline and Hazardous Materials Safety Administration (PHMSA) shows how pipeline operators work with local, state, tribal and federal agencies.
Community Safety and Preparedness

Our core safety value means we are also committed to working together to help protect communities. We believe that preparation and emergency management systems are crucial to safety and security. We participate in community safety and preparedness programs and proactively support local police, fire and emergency management personnel to bolster community safety departments. Building local capacity for resilience and preparedness is part of our commitment to our values, human rights, environmental protection and rapid response. To this end, we provide every community where we have facilities with equipment, experience or other resources.

ENDURING COMMITMENT TO WATER SAFETY

In partnership with the USA Swimming Foundation, we continued support for the Make a Splash Tour presented by Phillips 66, a swim program that tours U.S. cities each year, raising awareness for water safety and aiming to teach every child in every U.S. community how to swim. In 2019, three Olympians attended an event in Corpus Christi, Texas, teaching children how to swim and hosting drowning prevention classes.

A national research study by the USA Swimming Foundation and the University of Memphis found that 64% of African-American children, 45% of Hispanic/Latino children and 40% of Caucasian children can’t swim. Studies show that children who learn to swim are not only safer near water, but they’ll also teach their own children to swim in the future, propagating a cycle of safety.

Since 2007, the Make A Splash program has raised $6.2 million to provide swim lessons and has reached over 7 million children. Programs like this serve the greater good for generations.
Emergency Preparedness Donations

In 2019, we supported community needs, including the American Red Cross’ tornado and flood relief in northeast Oklahoma, Tropical Storm Imelda relief and California wildfire relief. Our donations also include national and community organizations, local first responders, and other programs, such as these:

**TRAINING AND TRAINING EQUIPMENT**
- Billings Police Department, Montana
- Blackwell Fire Department, Oklahoma
- Karnes City Volunteer Fire Department, Texas
- Linden Fire Department, New Jersey
- University of Illinois, Illinois Fire Service Institute

**VEHICLES AND VEHICLE EQUIPMENT**
- Kinney County Fire & Rescue, Texas
- Lasalle County Fire and Rescue, Texas
- Monahans Volunteer Fire Department, Texas
- Rodeo-Hercules Fire Protection District, California
- Whatcom County Sheriff’s Office, Washington

**FUEL AND SUPPLIES**
- Copan Fire Department, Oklahoma
- Elk City Fire Department, Oklahoma
- Houston Police Foundation, Texas
- Oglesby Civil Defense Volunteer Fire Department, Oklahoma
- Osage Hills Rural Firefighters Assoc., Inc., Oklahoma
- Ramona Volunteer Fire Department, Oklahoma
- Volunteer Fire Department of Ochelata, Oklahoma
- Washington County Fire Department, Oklahoma

**SAFETY, COMMUNICATIONS AND MEDICAL EQUIPMENT**
- American Red Cross of Greater Los Angeles, California
- Brazoria County Fire Fighters Association, Texas
- City of Bartlesville Fire Department, Oklahoma
- City of Westlake Fire Department, California
- Coalinga Fire Department, California
- Crockett-Carquinez Fire District, Contra Costa County, California
- Laramie County, Wyoming, Fire District #6
- Morgan County Ambulance, Colorado
- Morgan County Fire & EMS, Colorado
- Old Ocean Volunteer Fire Department, Texas
- Osage County 911/Emergency Management Agency, Oklahoma
- Plaquemines Parish Sheriff's Office, Louisiana
- Platte Valley Fire District Foundation, Colorado
- Reagan County Fire and EMS, Texas
- River’s End Volunteer Fire Department, Texas
- Scott County Emergency Management, Kansas
- South Adams County Fire Department, Colorado
- Southland Volunteer Fire Department
- Sweetwater County Fire District #1, Wyoming
- Uinta County School District #1, Wyoming
- Veteran Fire District in Goshen County, Wyoming
- Whatcom Hospice Foundation, Washington

**DISASTER RELIEF**
- American Red Cross, National
- American Red Cross - Northeast Oklahoma Chapter
- Tri Lakes Volunteer Fire Department, Montana
- United Way of Central Missouri
- Washington County Emergency Management, Oklahoma
- York Volunteer Fire Department, Montana

**COMMUNITY AND NATIONAL HEALTH AND SAFETY INITIATIVES**
- American Red Cross, National
- Belle Chasse YMCA, Louisiana
- Big Brothers Big Sisters Lone Star, Texas
- Boys & Girls Clubs of Union County Partnership, New Jersey
- City of Linden Police Department, New Jersey
- Crime Stoppers of Houston, Texas
- Crisis Text Line, National
- Kaw Lake Education Foundation, Oklahoma
- Los Angeles Metropolitan YMCA, California
- Memorial Hermann Foundation, Texas
- Ponca City, Oklahoma Fire Department
- Truckers Against Trafficking, National
- United States Coast Guard Foundation, National
- Wichita Festivals Inc., Kansas
ANATOMY OF A SAFE, RELIABLE INFRASTRUCTURE PROJECT TO ENHANCE ENERGY SECURITY

During the planning for all pipeline projects, we take environmental and social considerations into account and work to identify community needs and wants. Here are a few key steps:

• We seek existing pipeline corridors where feasible to minimize the impact on the environment, local communities, wildlife and cultural resources. We use advanced construction techniques like horizontal directional drilling to reduce or avoid impacting natural habitats and waterways.

• From the early stages in the planning process, we work with key agencies to ensure a project complies with all applicable regulations and laws, including the Clean Water Act, Endangered Species Act, National Historic Preservation Act and others. To make this happen, we coordinate and engage with many agencies, including the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and state and local-level regulators.

• We have collaborated with Native American tribes and historical associations to identify any archeological or other sites of significance along the route.

• We partner with environmental conservation and biodiversity groups in the region and support education and emergency response efforts in local communities along a pipeline’s planned route. For example, we’ve invested in STEAM (science, technology, engineering, arts and math) education and school district support and provide training and funding to local emergency response agencies to purchase equipment.
Environmental Stewardship

Operating excellence leads to strong environmental performance. We proactively work to protect the environment and minimize our impact by focusing on process safety and operating with advanced environmental controls. Our industry is highly regulated, and Phillips 66 complies with the many local, state and federal regulations that affect our operations, including air emissions, water effluent and solid waste handling. We strive to eliminate all environmental events, especially those that result in exceedances of permit or regulatory limits, and work to prevent significant releases of hydrocarbons or chemicals.

Compliance with our HSEMS, as detailed in the Operating Excellence chapter, helps ensure our operations minimize the impact on the environment. The HSEMS creates environmental awareness internally and serves as the framework for consistently implementing and maintaining an environmental management system and monitoring our environmental performance.

Over the last five years, from 2015 to 2019, we invested approximately $7 billion in environmental protection projects and sustaining capital. These investments in assets improve our operating standards, procedures, and business assurance programs. We use energy and resources efficiently, invest in research and development, and support habitat and conservation programs. Our investments in technology improve our assets, products, and processes to be more efficient and to capitalize on emerging opportunities as the energy market transforms.

**FUEL STATIONS WITH A SMALLER ENVIRONMENTAL IMPACT**

Our JET® stations across Europe demonstrate environmental consciousness through use of energy and water and other innovations to protect the environment. We’re conserving resources through several efforts including:

- Station design that includes energy-saving LED lights
- Seals and doors on store refrigerators to reduce cooling-related energy consumption
- Climate controls that heat and cool fuel station buildings more efficiently
- Technical standards that meet the highest environmental standards at the service stations for all parts of the system and continuously improve these standards
- Car wash facilities that keep fresh water usage to a minimum through biological water treatment
- BlueDEF, an exhaust fluid to help lower emissions from diesel-powered vehicles
- Reducing packaging waste by investing in ways to help consumers refill BlueDEF via pump

$6.8B invested in environmental and sustaining capital 2015-2019
Environmental Stewardship and Excellence

Continually improving the management of our operations also results in a steady reduction in the number of immediately reportable environmental events, which are defined as the exceedance of a permitted environmental limit or regulation.

Our business units have internally audited multiyear plans for environmental improvement. Our business unit operations are dynamic, and our “Plan-Do-Assess-Adjust” approach allows our HSEMS to be proactive and achieve environmental improvement.

We have an efficient operating model that helps us drive consistent performance and achieve excellent financial results while also stewarding significant environmental improvements and standardizing compliance practices where it makes sense.

Yet we want to improve further.

Our Environmental Steering Teams network champions site-level improvement, tracks and reviews key metrics and assists development of local improvement plans. Those plans are then assessed at the corporate level for holistic implementation that ensures effective use of resources. Leadership directs efforts to reduce environmental events and increase work practice consistency.

Additionally, peer reviews of air permits, along with active environmental networks, allow subject matter experts in areas such as air monitoring, leak detection, waste management and water treatment to work across functions. They share best practices and lessons learned to define “what good looks like” and drive sustainable improvement.

Monitoring Environmental Performance

Operations at each of our sites are monitored around the clock to ensure compliance with numerous environmental and operating permit requirements. We have established, and adhere to, environmental operating limits (EOLs), which require personnel to take action before reaching our permit limits. The Environmental Protection Agency (EPA) has positively recognized our use of EOLs at our refineries. We believe EOLs allow operations to respond quickly to eliminate some environmental events and help reduce the severity and impact if events do happen.

ISO Certifications

Our facilities follow quality management systems, and many are certified to International Organization for Standardization measures.


Bayway Refinery’s polypropylene business in Linden, New Jersey, is certified to LRQA ISO 9001:2015 for the design and manufacturing of pellets. We take great care to contain pellets and mitigate any loss. Pellets are transported via pipe to an on-site storage silo, which creates a closed system. From there, product is blended and fed into rail cars for transportation to customers. We inspect the rail cars for operable and closed caps and valves. Environmental performance also includes collecting scrap and vacuuming sumps to recycle pellets and keep them at our facilities, along with booms and vacuum trucks for clean-up should a spill occur. Our Bayway facility management and employees are committed to Operation Clean Sweep and support the goal of zero plastic pellet loss.

Humber Refinery in North Lincolnshire, U.K., is working to transition to the new ISO 14001 standard and is currently certified to the 2015 version.

**Air Emissions**

We have made significant investments to reduce air emissions. Since 2012, air emissions of sulfur oxides (SOx), nitrogen oxides (NOx), particulate matter (PM) and volatile organic compounds (VOCs) have decreased 28% company-wide, including 22% from our refining business unit.

Our actions and resulting decrease in criteria pollutant emissions are part of an overall, long-term reduction from all industrial sectors in the United States. The EPA National Emissions Inventory data chart above illustrates that the refining sector emissions (right hand axis) are on an order of magnitude lower than total industrial emissions (left hand axis). These environmental improvements occurred while national refining throughput increased over the same time period.

**AIR TECHNOLOGY AND RESEARCH**

Our established air research program is grounded in the subjects of volatile organic compounds, particulate matter formation, source apportionment, measurement and modeling.

A current effort is research in secondary organic aerosol and the formation of ozone. The work focuses on how these substances behave, and the chemical reactions that occur in the atmosphere. Our initial findings on secondary organic aerosols were published in the February 2019 issue of Atmospheric Environment, and our findings on ozone formation were presented at the American Geophysical Union fall 2019 meeting.

We have also moved forward on our air quality monitoring research. This includes a continuous review of currently available remote gas detection technologies and their applications in leak detection, and low-cost air sensors to better understand data quality and the potential for use at our operations in the future.

Last year, Phillips 66 chaired the Atmospheric Impact Committee of the Coordinating Research Council. This nonprofit organization directs, through committee action, engineering and environmental studies on the interaction between automotive/other mobility equipment and petroleum products.
**Hydrocarbon Spills**

Our operations and mechanical integrity systems are designed to keep the crude oil and refined products we transport in the pipes. We emphasize early identification and immediate shut down if there is a breach or spill. When an accident occurs, despite primary and secondary containment safeguards, we quantify, report and study it to avoid repeat occurrences. Data on spills beyond secondary containment are in our data table at the end of this report. In 2019, the volume dropped 51% compared to 2018; one incident accounted for 40% of the volume spilled beyond secondary containment. We identified the causes and implemented corrections to prevent recurrence through proactive measures including adjusting pressure cycles, running additional advanced inspection technology tools, and using data analytics to prioritize increased inspections and repairs.

We are improving the integrity testing of pipelines and using data analytics to reduce the risk of failure from seam cracks. We are applying our technical resources and know-how through joint studies with the Pipeline Research Council International and OneBridge Solutions, Inc. and support of the technology advancement and deployment recommendations in the [2019 National Petroleum Council study on future infrastructure needs to 2040](https://www.nationalpetroleumcouncil.org).

**Water Management and Use**

Water is an essential resource in our manufacturing facilities and processes. All our refining assets have on-site water treatment systems, and many of them use available brackish, salt or nonfresh water, or have industrial reuse processes.

Phillips 66 researches and develops best practices for water use to ensure we will have sufficient, sustainable water resources well into the future. We use the World Resources Institute Aqueduct™ Water Risk Atlas to identify areas with high water demand or potential for water scarcity in the future. These analyses help us prioritize projects to improve our efficiency and decrease our environmental footprint in areas where they can have the greatest impact.

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**SHARING BEST PRACTICES ON WATER TREATMENT**

Phillips 66 is an active member of the Water Environment Federation’s Industrial Wastewater Committee (IWWC). Our research team authored two chapters in the IWWC’s book of case studies on minimum liquids discharge (MLD). The book, “Industrial Water Reclamation and Reuse to Minimize Liquid Discharge,” is scheduled to be released in 2020 and will be a high-level review and resource for professionals in the area of water and wastewater treatment.

One chapter, “MLD Technology Applications—Refining,” provides examples of positive steps that refiners around the world, including Phillips 66-owned and -operated refineries, are taking to conserve, reuse and recycle water.

The second Phillips 66-authored chapter, “Fundamentals of Absorption and Ion Exchange,” could play a significant role in helping companies address water reuse and recycle challenges.

Phillips 66 also is engaged with the Petroleum Environmental Research Forum on a project to better understand the impact of unconventional crude processing on wastewater treatment operations. Long term, the objective is to improve oil-water separation at Phillips 66 refineries, which can also benefit the entire industry.
We also evaluate new technologies and products to decrease our water footprint and to recycle more water. One of these new technologies helps reduce nitrogen in wastewater streams, which, according to the EPA, improves water quality and protects wildlife and water resources. After several years of screening technologies in the lab, in 2019, we started a field trial of advanced technology at our Humber Refinery with promising results. We collaborated with the University of Texas at Austin to investigate new membrane technologies that will allow refineries to more efficiently separate oil and water, improving our ability to recycle those resources and reduce waste.

**Waste Management and Recycling**

We track every raw material used in our manufacturing process at 100% of our lubricants plants. In 2019, we recycled nearly 1,100 tons of scrap material from those facilities, including cardboard, bottles, cans, pallets and shrink wrap.

Phillips 66 has a systematic hazardous wastes program, with processes and practices executed by trained personnel. Each of our operating sites has environmental professionals whose expertise is supplemented by corporate staff. For some materials, the best option is incineration, but when possible, we recover, recycle or reuse materials.

The principle of circular economy applies when we find ways to exhaust resources, such as residual product that’s removed when we clean refinery tanks. We must dispose of the residual product in compliance with rigorous environmental laws. But instead of incinerating it or using some other method of disposal, we can work with contractors to transport the waste to manufacturers in other industries. In 2019, one contractor moved more than 9 million pounds of waste from our sites in California, Louisiana and Texas to locations where it can be used as an alternative fuel source. Using the waste as fuel keeps byproducts out of landfills. In 2019, we kept more than 4,500 tons of waste out of landfills, an increase of 2,000 tons over 2018 levels, and provided more than 1.5 million gallons of waste-derived fuel, up from 866 million gallons in 2018.

**OPERATION CLEAN HOUSE**

Phillips 66 supports Operation Clean House, an annual household hazardous waste education disposal and recycling event that is offered free of charge to the community in Bartlesville, Oklahoma. In the 30 years since the inaugural event in 1989, over 350,000 pounds of hazardous waste and 725,000 pounds of electronic waste have been collected. The combined efforts of the Phillips 66 organizing committee and the greater Bartlesville community allow for the safe disposal of household hazardous waste while providing a safer, healthier environment for us all.
COASTAL BIODIVERSITY EFFORTS

Support for coastal conservation comes in the way of voluntary actions, such as monetary contributions and employee volunteer projects. Many of our efforts are focused regionally at the refinery level.

**GULF COAST:** The Lake Charles Manufacturing Complex teamed up with the Coastal Conservation Association of Louisiana to host 100 students for a coastal restoration project at Prien Lake. Phillips 66 employees worked alongside students to plant more than 4,000 native plants on floating islands made from recycled plastic bottles. This created more than 2,000 square feet of new wetland habitat along the shoreline to prevent coastal erosion and enhance the ecosystem. Since 2017, Lake Charles has financially supported coastal conservation projects.

**NORTHEAST:** The Bayway Refinery has been a supporter of the Superstorm Sandy Resiliency project since 2015, an effort administered by the EPA and NFWF to mitigate flooding for families living in and around Linden, New Jersey. Over the last five years, Phillips 66 has contributed to projects ranging from hydrology studies to building rain gardens to floodplain restoration.

**PACIFIC NORTHWEST:** The Ferndale Refinery is an active supporter of salmon habitat rehabilitation, donating to the Nooksack Salmon Enhancement Association in 2019 along with engaging in an employee volunteer project. The refinery’s employees have also been active in local beach cleanup and invasive species removal, which enhance biodiversity.

**WEST COAST:** We support the International Bird Rescue in California. The San Francisco Refinery supports coastal and watershed cleanup and restoration efforts and sponsors a youth program that works to improve the environment in the Carquinez Strait region. The Santa Maria Refinery focuses its support on the Land Conservancy’s efforts to preserve and enhance the habitat of the endangered Nipomo Lupine plant species. The Los Angeles Refinery is a long-time contributor to the Palos Verde Land Conservancy as well as the International Bird Rescue.

Biodiversity and Conservation

Our environmental and sustainability strategy includes enhancing conservation and managing biodiversity risks. Phillips 66 mitigates impacts to biodiversity through planning processes aimed at reducing the effects of our activities on the environment. We address biodiversity conservation during the planning and development of major capital projects by conducting environmental impact analyses, collecting key environmental data and implementing mitigation and monitoring programs to reduce impacts and assure results.
**REMEDIATION TECHNOLOGY AND RESEARCH**

With our commitment to being good partners in the communities in which we operate, Phillips 66 is investigating and developing novel approaches for the groundwater and soil remediation. We do this in an effort to reduce the time and cost of remediation activities and to generate more effective solutions for the industry’s most challenging remediation concerns.

In 2019, Phillips 66 began research to develop custom polymers to improve our ability to remove contaminants from groundwater and soil. The anticipated result is increased quality of remediation, with more treatment options and quicker time to site resolution.

We also added capability when we brought an advanced molecular biology technique in-house. The addition of this technique improves turnaround time for analyzing water and soil samples: It now takes days instead of weeks. With development, this technique has the potential to allow us to create customized remediation solutions based on site soil samples and to better monitor results. This reduces the risk of treatment failure because, otherwise, it might take months or longer to determine whether an effort has had the desired result.

**PARTNERS IN THE COMMUNITY**

We promote biodiversity, environmental stewardship and conservation by providing resources to address issues that are important to the people who live near our facilities. We also collaborate with local environmental and conservation organizations and national partners.

We have longstanding partnerships with many conservation organizations, including the National Fish and Wildlife Foundation (NFWF), Ducks Unlimited and the Wildlife Habitat Council. We support their efforts through company donations of money and resources. Our employees volunteer their time and make monetary contributions – many of which are matched by the company – and even our summer interns take advantage of opportunities to volunteer. Phillips 66 is a long-term sponsor of the San Bernard National Wildlife Refuge, and our 2017 donation to the Gulf Coast Initiative continues to provide resources for preserving the Texas and Louisiana coasts and wetlands.
DECADES OF DEDICATION TO OUR COMMUNITIES

Our commitment to our vision — providing energy and improving lives — is evident in many ways. Each of our facilities contributes to the surrounding community, from providing good jobs and benefits to donating time, money or both to causes that support our values of safety, honor and commitment. Several of our refineries reached milestone anniversaries in 2019 that reflect dedication to the communities where we live and work.

**Humber Refinery 50th celebration**
The Humber Refinery in the United Kingdom celebrated its 50th anniversary in 2019, with a firm focus on inspiring the next generation of engineers. Refinery staff raised money for local schools and charities and volunteered over 2,000 hours for engineering, educational and environmental projects. With a refinery vision of “Fueling the Future for Our People, Our Communities and Our Customers,” the refinery also launched the Humber ChemBox project in partnership with Birmingham University. The project enables science teachers from regional secondary schools to reach more than 5,000 students through industry-focused experiments facilitated by Phillips 66 and aligned with the national curriculum.

**Billings Refinery turns 70**
Since 2012, Billings Refinery in Montana has donated over $1 million to Project Lead the Way, a program dedicated to promoting the STEM (science, technology, engineering and math) curriculum for Billings schools. Supported by a Citizens Advisory Council established almost 30 years ago, in 2019, the refinery also donated to Rocky Mountain College to fund a virtual reality classroom. The refinery also earned ENERGY STAR® certification in 2019.

**Los Angeles Refinery Centennial**
Los Angeles Refinery celebrated 100 years of operations in 2019. With sites in Carson and Wilmington, California, the facility employs more than 900 people and generates significant positive economic and social impact in the community. The Los Angeles Refinery Community Advisory Council (CAC) includes approximately 80 community leaders and is instrumental in fostering open dialogue, building partnerships and prioritizing local concerns and needs in the cities of Carson, San Pedro, Wilmington and the greater South Bay Los Angeles region. Last year, Phillips 66 directly donated funds to more than 30 community partner organizations focused on health and safety, environmental advocacy and educational outreach.
At Phillips 66, we provide energy that improves lives and meets the world’s growing needs. Affordable, reliable and abundant energy is essential to sustaining human health and well-being while simultaneously improving the global standard of living.

Climate change is a global issue that requires long-term commitment, action by every segment of society, technology development and free-market solutions.

Phillips 66 recognizes the climate challenge and is making investments that advance a lower carbon future. To sustain the affordable, reliable and abundant energy we make, Phillips 66:

• Has a long-term strategy that, over time, positions the company for the future growth of lower greenhouse gas (GHG)-emitting segments, such as Midstream and Chemicals, while maintaining our core operations

• Executes programs and initiatives to enhance the resilience of our assets

• Manages GHG emissions from our operations through measuring, reporting and developing technology to improve energy efficiency to lower GHG emissions

• Seeks growth and new manufacturing opportunities and uses of assets in a lower carbon economy, including:
  - Premium coke, which is a component in batteries for electric vehicles (EVs) and electronic devices
  - Synthetic lubricants, which improve engine efficiency
  - Blending renewable fuels
  - Evaluating hydrogen production from renewable sources
  - Producing nonpetroleum-based diesel made from renewable sources, such as food waste and agricultural sources

• Drives energy research in our state-of-the-art technology center, in support of energy transition including, sustainability technologies, innovation and analytical sciences, to support operating business units and identifying new technology
Principles for Climate Policy

Energy and environmental issues are important to policymakers and to Phillips 66. A comprehensive climate program must recognize that all forms of energy are needed today and in the future. Phillips 66 supports policies that are applied broadly, have one layer of regulation, address economic concerns, and are transparent to the consumer with clear and measurable benefits.

As policymakers seek to shift to a lower-carbon economy, regulations must:

• Acknowledge the complexities in serving the world’s energy needs and recognize that all forms of affordable energy, including fossil fuels, will be required
• Be approached from an economically and technologically feasible perspective, balancing benefits and long-term societal needs, and protecting the environment
• Manage GHGs on a global basis using pragmatic and science-based solutions
• Promote public, fundamental research at the pre-commercial stage to advance energy solutions
• Ensure any regulatory cost on the consumer is transparent and economy-wide
• Be national and, for consistency, pre-empt state or local programs and requirements

Our corporate strategy is designed for the long term. It is based upon operating excellence and delivers growth, enhances returns, provides shareholder distributions and supports people development. We’re investing to grow infrastructure to move energy and meet global needs. Our strategic and scenario planning seek to manage the risks our businesses face while evaluating opportunities to execute our strategy.

TCFD Analysis

Globally, we face the dual challenge of providing affordable energy to support economic growth and human prosperity while addressing the environmental effects of that development, including the risks of climate change. Our four integrated business units — Midstream, Chemicals, Refining, and Marketing & Specialties — produce transportation fuels and the materials necessary to create products for modern life and deliver them at scale. In this section, we disclose our governance, strategy, risk identification, and management and measurement of climate risks — policy and physical — and opportunities in alignment with the Taskforce for Climate-Related Financial Disclosures (TCFD) core elements below.

Core Elements of Recommended Climate-Related Financial Disclosures

- **GOVERNANCE**: The organization’s governance around climate-related risks and opportunities
- **STRATEGY**: The actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning
- **RISK MANAGEMENT**: The processes used by the organization to identify, assess, and manage climate-related risks
- **METRICS AND TARGETS**: The metrics and targets used to assess and manage relevant climate-related risks and opportunities
GOVERNANCE

Oversight of Climate-Related Risks and Opportunities
At Phillips 66, risk management starts at the top. Our board of directors and its committees oversee and guide the company. Risk oversight is conducted by the full board and committees. Our governance structure provides the necessary opportunities for the board and executive leadership to exercise their oversight responsibilities with respect to risks, including those related to climate change.

The full board reviews long-term energy outlooks and leading indicators annually. It hears from outside experts on subjects of strategic interest. The Audit and Finance Committee monitors our enterprise-wide risk management program on a more frequent basis, as well as company controls, compliance and ethics.

The full board is included in the Public Policy Committee, which identifies environmental, social and political trends and risks to guide Phillips 66’s long-term business objectives.

Specifically, the Public Policy Committee of the board:

- Reviews compliance with health, safety and environmental matters, and reviews the results of internal scenario planning and analysis related to the effects of environmental and social trends and uncertainties
- Reviews major decisions to assess exposure to and management of environmental, social and political trends and risks, including climate risk
- Reviews, and makes recommendations on, the company’s compliance with policies, programs and practices regarding health, safety and environmental protection, government relations and political contributions, corporate philanthropy, and sustainability matters
- Receives updates from subject matter experts

Management owns the company strategy, risk management and capital allocation. We have a strategy council made up of executives that guides the development of our strategy, including climate risks and opportunities. Business continuity plans and opportunities are developed through business unit leaders who report to management.

STRATEGY

Climate-Related Risks and Opportunities
Energy is essential to human survival. Harnessing it to do work allows civilizations to flourish. Because of its importance to the quality and the length of human life, the search for more accessible, reliable and affordable energy has been a constant throughout history. The sources of the energy people rely on continue to evolve. Phillips 66’s strategic scenario planning hinges on understanding this evolution and being proactive in positioning for the future.
Today, there are roughly 7.7 billion people in the world, yet more than 840 million of them have little or no access to electricity. The global population is expected to increase 10% to 8.5 billion people by 2030 and to 9.7 billion by 2050, a 26% increase. The International Energy Agency projects that this will create a 30% increase in demand for all modern sources of energy.

The rising global population, coupled with increases in the standard of living, will put more pressure on the earth’s resources and have implications for the amount and sources of energy the world will need.

Even with advances in energy efficiency and increased availability of nonfossil fuel sources of energy, there will still be demand for fuels and products from carbon-based sources. Fossil fuels will continue to make up a significant portion of the global energy future. We believe our business is sound and resilient to future policy or physical impacts and technology disruptors.

Financial Planning and Scenario Analysis
Our strategic planning process considers a variety of information and inputs from multiple sources to develop a range of capital allocation scenarios to inform our investment decisions. Long-term energy demand is a key consideration in our strategic planning analysis from which we develop our long-term views. We also look at other risks and opportunities in our strategic planning process including changes to key climate policy, energy mix, energy efficiency, access to capital, tax, reputational, technological and human capital. This robust scenario analysis enables sound financial choices to ensure sustainable and resilient operations.

We are investing to grow infrastructure to move energy and meet global needs. Our business model includes work on engine and fuel optimization, pipeline energy optimization, refinery efficiency, instrumentation and controls upgrades, heat recovery hardware, and energy dashboards that enable facility operators to make real-time decisions that enhance energy efficiency.
The specific climate change risks we believe are relevant to our business are:

- Physical environmental factors, risks associated with weather or climate
- Our efforts and ability to measure, report and control GHG emissions
- The impact of energy accords and climate-related regulations (global or regional) and related forecasts of program impacts and costs
- Financial variables, including the likely location, scale and duration of all tax regimes, including carbon taxes
- Evolving investor and other stakeholder opinions and decision-making initiatives
- Community, cultural, political and public opinion factors that could influence where, when and how we operate and at what costs
- Demographic, scientific, technological, reputational and human capital matters
- Trade leakage

Our analysis considers a range of scenarios, several of which are shown below. Included is the IEA Sustainable Development Scenario, which presents itself as aligned with the Paris Agreement.

### Three Core Components of Planning and Management of Climate Risks and Opportunities:

1. **Physical risks:** Phillips 66 operations are subject to influence by nature — droughts and floods, hurricanes and storms, heat and cold, and shifting tectonic plates. We have substantial systems and processes to help us identify, measure, manage and mitigate risks associated with each of these possibilities. Our assets are built to detailed engineering standards that consider these risks. Each of our assets has a risk profile based on its geographic location.
For example, our facilities that share a common hurricane risk, in the Gulf Coast and Northeastern regions of the United States, have thorough hurricane preparedness procedures. Our procedures address numerous issues pertaining to physical risks ranging from operating personnel safety, staffing, unit shutdowns and restarts, availability of emergency preparedness equipment and stakeholder communications. Implementing these procedures protects stakeholders and our assets from physical risk by triggering specific actions, such as proactively staging equipment and materials. We update our preparedness procedures based on lessons learned and learnings from sites with similar risks. Additionally, we assess the need for asset hardening, and execute these initiatives where appropriate. More information can be found in the resilience and adaptation section in this chapter.

2. Policy risks: We are subject to changing laws, regulations and judicial opinions; community, national and global preferences; and contractual obligations. We have developed sophisticated, multilevel, integrated systems to anticipate, inform and shape, and manage and comply with these requirements and expectations. For clarity, we include here cybersecurity risks, recognizing cybersecurity can span policy and technology.

3. Technology opportunities: Phillips 66 has a cutting edge research and development center in Bartlesville, Oklahoma that conducts basic and long-term work toward energy solutions. This puts us in a position to better address current and future challenges associated with physical or policy risks, not just for ourselves, but for our customers, communities and industry. We analyze technologies through a scientific lens to make our operations safer, more reliable and more efficient, to reduce water risks and other environmental impacts, and to manage changing regulations and expectations, including climate.

To support planning and management, we further break down risks into short-, medium-, and long-term horizons. We define these as follows:

- Short-term risks are those that may impact near-term financial results, including any that may materialize within the current annual reporting cycle.

- Medium-term risks may materially impact our financial results due to longer-term manifestation of climate-related impacts that may require us to significantly adjust our strategy over a two- to five-year timeframe.

- Long-term risks may fundamentally impact the viability of our long-term strategy and business model, and may materialize over a five- to 10-year timeframe.

We assess the materiality of climate-related risks based on their likelihood of occurrence and the estimated magnitude of resulting financial impact. The materiality assessment is substantially similar to that which the company applies to all business risks and opportunities.

Based on this assessment, the company has identified the following short-term, medium-term and long-term climate-related risks:

**Short-term**
- Emissions (Regulatory and Market Transition Risk)
  - Our industry is highly regulated, and we comply with the many local, state and federal laws that affect our operations, including air emissions. We operate in areas with regulations that address the impact of climate change, from renewable fuels standards and fuel quality directives, to low carbon fuel standards and cap and trade. We evaluate where markets are going to make decisions to ensure the company can effectively meet compliance requirements.
  - Our HSEMS facilitates HSE performance and compliance with standards, procedures and guidelines that often exceed regulatory requirements and are consistently applied by all business units.
• Business Continuity (Physical Risk)
  – The company is prepared for the possibility of extreme weather events that might impact our operations. See the physical risks and resilience and adaptation sections of this chapter for more information.
  – Based on risk evaluations and business impact analyses, we have developed an Emergency Response Management System and Crisis Management Plan. Each facility has a written emergency response plan to ensure continuous availability, or prompt recovery, of critical business processes, resources and facility operations.

• We manufacture high-quality graphite and anode coke that is used to make electric vehicle lithium ion batteries. We’re increasing our supply of renewable fuels through ventures with other companies and projects at our existing facilities. We continue to assess new opportunities with our portfolios and with third parties. While doing so, we focus on operating reliability.

Medium-term
• We have made significant investments in environmental projects, including efforts to reduce emissions that focus on efficiency, resilience and adaptation, and renewable fuels. See the risk management section for more information.

• Emissions (Regulatory and Market Transition Risk)
  – There are many uncertainties about how future GHG emissions legislation might impact the company’s business. Legislation or regulation may emerge over the medium- to long-term that imposes reporting obligations on, or limits emissions of GHGs from, the company’s equipment and operations that could require the company to incur costs to reduce GHG emissions associated with our operations.

Long-term
• Oil and Natural Gas Prices (Market Transition and Regulatory Risk)
  – The deployment of disruptive new technologies at mass scale within government policy environments that strongly incentivize investment and innovation would have long-term effects on the price of and demand for oil and natural gas and derivative products.
  – To mitigate this risk, Phillips 66 remains committed to ongoing scenario analysis, to responsible risk management, and to being transparent about our financial and portfolio resilience and how we are preparing to adapt for the longer term.
  – We assess carbon reductions through all of our operations, including carbon capture and sequestration, solid oxide fuel cell (SOFC) application (see the research section in this chapter for more information on SOFCs) and renewable fuels and hydrogen production.

RISK MANAGEMENT
The process for identifying climate risks is ongoing detailed risk planning. Some of these activities are highly proprietary — company analyses can create advantages over competitors — but the processes are not.

Many energy sector veterans say that the main thing they have learned over the course of their long careers is to be humble about their ability to predict the future — even a few years out. At Phillips 66, we approach this challenge of making predictions through a detailed and disciplined process that seeks to identify the risks and opportunities that could have significant potential to affect our business. We believe that the depth and breadth of our risk management process exceed the scenario planning expectations that many stakeholders ask of us.
Enterprise Risk Management
Our enterprise risk management program provides a systematic approach to identifying and understanding significant enterprise risks, including climate-related risks to the company, changes in energy policy, and physical or operational risks.

Experts from all areas of our business units and functions — including research, planning, finance, economics, tax, refining, transport, marketing, specialties, legal, compliance, government relations, community relations and environmental-social-governance (ESG) — are members of, or support, our risk management program and processes. Our risk management team works together to identify risks falling into any of the categories described above that could affect our overall policies and governance, our strategy development, our business units, our predictions and our capital allocation decisions, among others.

In our program:

• We quantify the risks based on our assessment of the likelihood of risk and the potential significance of its financial, reputational or other impact.

• We then assess each of these risks in light of potential mitigating strategies or factors that may be available. We assign values to each mitigating factor based on assessments of potential timing, costs, effectiveness and other features.

• We also include assessments of potential GHG emissions policies and impacts.

• Each of these risks has an executive owner to create accountability within our organization.

• Our risk management team provides detailed, regular, timely and relevant information to our executive leadership team and board of directors. This information is one of many valuable inputs that enables our board of directors and its committees to oversee and guide our company.

We test our assumptions against CO₂ cost forecasting, energy efficiency indices and best practices, carbon capture technology and cost, and renewable fuels forecasts alongside regulatory requirements. Data on our GHG emissions, legal requirements regulating such emissions, and the possible physical effects of climate change on our assets are incorporated into our planning, investment and risk management decision making. We take into account anticipated future GHG emissions in designing and developing major facilities and projects. We implement energy efficiency initiatives that also reduce GHG emissions. Regulatory certainty and economic viability are integral considerations.

We test a variety of future scenarios that could have a material impact on the company, as well as variables that may be associated with an incident. This system ensures we mitigate risk to the company and conduct regular gap analyses. It also enables us to position the company to benefit from energy efficiency, emissions reductions and other business and policy goals.

Processes For Managing Climate Risks
Efficiencies
Energy expenditures can account for roughly 40% of a refinery’s operating expenses. We capitalize on opportunities such as improvements in heat exchange or recovery, furnace controls and steam optimization. Our refineries in Billings, Montana; Ferndale, Washington; Rodeo, California; and Old Ocean, Texas have current U.S. EPA ENERGY STAR® certification.
Refineries earn ENERGY STAR® certifications when they perform in the top 25% of similar facilities nationwide for energy efficiency and meet EPA performance levels.

Additionally, seven of our refineries have associated cogeneration units. Cogeneration is the use of a single fuel source to produce both electricity and heat simultaneously. The process helps us meet our manufacturing needs and convert heat that would otherwise be lost to the environment into thermal energy to power our process equipment. Three cogen units — at Los Angeles and San Francisco in California and Sweeny in Texas — are Phillips 66 owned units; any excess power not used in our facilities is sold to the local utility market. Four others — in the Texas Panhandle, New Jersey, Washington and the United Kingdom — have adjacent third-party owned cogeneration units from which we purchase steam or electricity.

We have an active Energy Best Practices network of representatives from all our refineries and major corporate support groups, including Refining Business Improvement, Research & Development, and Information Technology. Members of the network meet regularly to share information about technology, experiences at their plants, and ongoing energy conservation projects.

Access to water, maintaining its quality, and using it efficiently are all critical elements in sustaining energy production. All of our facilities have wastewater systems and oil recovery units. These units separate reusable water from oil streams, thereby reducing freshwater use, improving discharged water quality and conserving valuable hydrocarbons.

We utilize GHG offsets, such as forestry protocols which support projects designed to mitigate CO₂. We also voluntarily achieved Leadership in Energy & Environmental Design (LEED) Platinum certification for our headquarters building in Houston.

**Resilience and Adaptation**

*Planning and Preparedness*

We maintain and test robust business continuity planning and preparedness programs and other initiatives:

- We harden assets to enhance their reliability, including our industry-leading pipeline river crossing program, heightened levees at Alliance Refinery in Belle Chasse, Louisiana, and the power substation elevation at Bayway Refinery in Linden, New Jersey.
- We have installed a state-of-the-art power distribution facility at Wood River Refinery in Roxana, Illinois, that has improved facility reliability and reduced flaring from unplanned events.
- Our pipeline business provides comprehensive community awareness, education and outreach programs to ensure that everyone living or working near lines or facilities is aware of their existence, adopts safe digging practices, learns the signs of a potential pipeline leak and knows how to quickly respond if a problem is suspected.

*Renewable and Alternative Fuels*

We invest in technology to improve our assets, products and processes to be more efficient and to capitalize on emerging opportunities as the energy market transforms. That includes investment in alternative energy, as renewables are predicted to make up 28% of global energy consumption by 2050. Our commitment to renewables and alternative energy can be seen globally across the Phillips 66 value chain.
We blend and sell products with ethanol and biodiesel. At select retail locations in California, Phillips 66 is increasing the offering of E85, a blend of ethanol and gasoline used in flex fuel vehicles.

We prioritize renewable fuel projects that leverage existing infrastructure as we invest toward our goal of more than 340 million gallons per year of renewable diesel. Waste fats, recycled cooking oils and other renewable feedstocks will be processed into finished road fuels that have virtually the same energy content as traditional diesel, but with a lower overall carbon intensity.

We use our assets and third-party terminals to sell biodiesel. Across the U.S., 23 terminals enable our customers to buy 5% biodiesel.

We have a renewable diesel project at the Humber Refinery in the United Kingdom and another in development at the San Francisco Refinery in California. Additionally, the company is supporting two low carbon renewable diesel production facilities in Nevada. Those are under construction with Ryze Renewables and are expected to produce more than 150 million gallons of renewable diesel per year, which could save 2 billion pounds of annual CO₂ emissions.

### Humber Refinery’s Low Carbon Investments

In addition to manufacturing renewable diesel and premium coke (see battery technology in this chapter), the Humber Refinery is advancing a project that uses renewable hydrogen to produce fuels at the Humber Refinery. The project, called Gigastack, aims to harness offshore wind to power electrolysis and produce hydrogen, a low-emission fuel capable of powering transportation and heavy industry, as well as multiple processes within refining. Gigastack is a collaboration between Phillips 66 Limited, Danish wind farm developer and operator Ørsted, hydrogen systems developer ITM Power, and Element Energy. The second phase of Gigastack will involve a front-end engineering design study on a 100MW electrolyzer system, which would use electricity to split water into oxygen and hydrogen gas, feeding the hydrogen to Humber Refinery for use in lowering the sulfur content of diesel fuel. It is an opportunity to develop a new renewable hydrogen market where the only feedstocks are water and renewable power.

Our Swiss joint venture, Coop Mineraloel AG, in which Phillips 66 has a 49% interest, has seen success with a hydrogen fueling program launched in 2017. We plan to add more hydrogen filling stations in the near future.

**Research**

We enhance our business programs and initiatives with research so that we can improve our operations and provide a science-based approach to supporting our businesses and evaluating new opportunities. Approximately 250 scientists and engineers work in our Energy Research and Innovation organization at the 440-acre Phillips 66 Research Center in Bartlesville, Oklahoma. We conduct research to enhance the safety and reliability of our operations and to develop future air, water and energy solutions, including battery technology, organic (carbon-based) photovoltaic solar panels and solid oxide fuel cells, all for the storage or production of electricity. Details on several of these programs are below.

**Battery Technology**

With our world becoming increasingly electrified, Phillips 66’s battery program is focused on improving existing lithium-ion battery materials and on advancing research next-generation battery technologies.

Petroleum coke is a byproduct of our refining process, which enables us to commercialize high-grade, proprietary graphite needle coke for the lithium-ion battery anode market. We are the premier market supplier for this key component of lithium ion batteries, which help power almost everything with an electrical circuit, including 75% of all EVs and millions of smartphones and other consumer electronics. Our Humber and Lake Charles Refineries, in collaboration with our Energy Research and Innovation organization, have grown production of grades and formulations of petroleum coke that support making better batteries for EVs.
Our scientists are working to develop high-performing raw materials based on market needs. This includes developing solutions that may result in increased volumes and improved costs for customers while maintaining excellent battery performance.

Our next-generation battery research program is exploring alternatives to lithium-ion that incorporate readily available and responsibly sourced materials. These future technologies have the potential to address ongoing market considerations, such as extending the driving range of battery powered EVs and increasing electric grid reliability with energy storage solutions. As an example, Phillips 66 is advancing technology for sodium-ion batteries, a low-cost and green energy storage technology, that may provide a safer alternative for storage of wind and solar energy.

Five patent applications have been published, and several others filed, for Phillips 66’s advanced battery technologies.

**Solid Oxide Fuel Cells (SOFCs)**

SOFCs are electrochemical cells that generate electricity efficiently at a competitive cost, producing electricity by oxidizing a fuel, such as natural gas, through electrochemical reactions rather than combustion. Each Phillips 66 fuel cell wafer is less than half a millimeter thick and produces approximately 30 watts of electricity. Cells can be stacked together, and stacks can be bundled into modules. Phillips 66 SOFCs can generate electricity at high efficiencies from an abundant, reliable and inexpensive fuel source with more efficiency than conventional power plants. They can be paired with solar- or wind- generated power, ensuring reliable energy even during periods when the sun is not shining or the wind is not blowing. SOFCs produce no noise, have a reduced lower carbon footprint compared with conventional power plants, have no criteria pollutant combustion emissions, and are an ideal technology for CO₂ capture. Their quiet, compact, modular design makes SOFCs a convenient source for on-site power for homes and businesses, ensuring reliable energy even during traditional power grid outages.

In 2019, Phillips 66 made significant technical progress in multiple areas, including:

- Developing several new fuel cell materials for low-operating temperatures
- Dramatically reducing fabrication variability and increasing fabrication yield
- Continuously operating an SOFC stack using pipeline natural gas for more than one year without significant performance degradation
- Commissioning of our first 2-kilowatt fuel cell system in a real operation environment
- Adding five new patent applications, representing a total of 20 patents in our SOFC intellectual property portfolio
Our research was presented at the 2019 Fuel Cell Seminar & Energy Exposition, and we published our patented fabrication technique and research data in a technical article entitled “Multilayer Tape Casting of Large-Scale Anode-Supported Thin-Film Electrolyte Solid Oxide Fuel Cells” in the International Journal of Hydrogen Energy.

Lubricants Technology and Research
For combustion engines, we developed technology to improve our engine oil lubricants, which helps boost fuel economy and enables the engine hardware to run as efficiently as possible. We are also exploring ways to address lubrication needs in EVs. This includes emphasis on traditional and new lubricant performance parameters for a variety of vehicle electrification technologies and applications.

Organic Photovoltaic (OPV)
OPV is a clean energy technology for electricity generation that will enable new solar applications. This research aligns well with Phillips 66’s expertise in plastics, materials science and analytical sciences. Due to its flexible and lightweight structure, OPV will produce electricity in applications where traditional solar cells will not work, including semi-transparent applications, portable objects and disposable goods. There are also options for improving aesthetics with color, flexibility and design.

We are developing OPVs that we believe can be profitable without government subsidies. We have collaborated with the Department of Energy’s National Renewable Energy Laboratories in this development. Our polymers have led to breakthroughs in efficiency and longevity that help move solar technology closer to commercial viability.

Our polymer-based single junction OPV cells are made without hazardous components such as lead or cadmium, which are found in other types of solar technologies. In 2019, we expanded our solar intellectual property portfolio to include eight additional patents, bringing our total to 37 in this field, and we have registered to trademark ShieldPower™ for future OPV use. Furthermore, we have advanced our efforts to test the capabilities of our materials at print scale, and we are learning from these efforts and identifying improvements.

Our research team continues to show thought leadership in organic photovoltaic space. In 2019, Phillips 66 presented at several international engineering conferences and published an article entitled “Bottom-up Design of Organic Photovoltaics for Upscaling” in the International Society for Optics and Photonics: Organic, Hybrid, and Perovskite Photovoltaics Proceedings. In this article, we shared with the scientific community some of the challenges we faced in achieving what became our 2017 world record for efficiency, as well as the scaling-up problems we solved to advance this technology.

METRICS AND TARGETS
Our goal is to maintain and improve our operational excellence and manufacturing throughput, while improving the energy efficiency and GHG emissions of our manufacturing sites.

We use a third-party industry manufacturing energy efficiency index to measure our progress.

In 2019, Scope 1 and Scope 2 GHGs were 30.5 and 7.8 million tonnes, CO₂ equivalent (CO₂e), respectively. These emissions come from the energy it takes to make energy products. Every day, our refineries have a total capacity to process a combined average of more than 2 million barrels of crude oil into clean, affordable products. Most of our Scope 1 GHG emissions are carbon dioxide, which is a result of the energy used to refine crude. We monitor our operations to assess risks and identify opportunities to increase energy efficiency to lower emissions. Even with more stringent regulatory standards and increasing utilization of our assets, our direct GHG emissions have varied little on an absolute basis.
Social Responsibility

Investing In Our People
Executing our corporate strategy depends on the talents of our high-performing organization. We are committed to developing our employees. We actively seek to promote employee well-being through sound policies and programs. As outlined earlier in the Governance chapter, we are in the midst of a multiyear effort to proactively evolve and strengthen our corporate culture through the behaviors of our people, which we refer to as Our Energy in Action.

We work hard to maintain a deep sense of engagement, responsibility, respect and community among our employees and contractors. This means ongoing internal and external stakeholder dialogue and responsiveness.

Attracting and Retaining the Best People
Phillips 66 offers competitive jobs and provides varied development opportunities for our people to learn and grow.

We are proud of our competitive benefit packages, which include health and well-being programs and resources (medical, dental, vision, employee assistance programs, well-being initiatives), pension and savings (401k), as well as life and income protection and retirement planning support. New U.S. employees, for example, are automatically enrolled into the company savings plan that the company matches dollar for dollar, up to 6% of pay. In 2019, the median annual total compensation was more than $188,000, including salary variable compensation and company-provided benefits.

Our bonus program is based on company performance, business unit performance and individual performance. In addition to our safety and environmental performance, the program criteria are used to advance human capital metrics such as retention, development, capacity and performance.

We undertake annual benchmarking to ensure that the delivery and value of our total compensation and benefits package remains attractive and competitive to meet the needs of our evolving workforce.

We have formal special recognition programs to acknowledge exemplary performance or actions. We also have lifelong learning programs. Employees have had access to wellness programs since 2012.

If our employees need help, we have an employee assistance program that provides confidential counseling and other resources and services. Many of our facilities have on-site health clinics, and we offer fitness facilities in some locations.

Retention of all employees was 94%, a voluntary turnover rate of 6%.

Pipeline Control Center, Bartlesville, Oklahoma
Inclusion and Diversity

Our company values inclusion and diversity (I&D) — concepts that are interdependent and equally important. They are essential to who we are, what we believe and how we do business. Inclusion means we value, respect and support one another. When we talk about diversity, we mean that we respect the characteristics and dimensions that differentiate our 14,500 employees. Our formal I&D efforts began in 2012 at the inception of Phillips 66.

We are committed to high-level performance that can only be achieved through a culture that values people with a range of experiences, perspectives and knowledge. At Phillips 66, we lead with inclusion because, without it, diversity cannot thrive. Our definition of diversity includes factors such as race, gender and ethnicity, along with diversity of thought, experience and opinions. We are proactive in fostering a culture of inclusion, incorporating inclusive behaviors in our management development curriculum and through Our Energy in Action behavioral expectations of all employees. Inclusion is how we engage with each other and the value we place on the unique experiences, perspectives and backgrounds that our diverse employees represent. We want employees to feel that they belong and that their voices are heard. This results in more creative ideas and solutions, better decisions based on broader perspectives, and ultimately, better results for all our stakeholders. To this end, we have strategically focused on educating our employees on the business case for Inclusion & Diversity. In 2019, we began skill building on behaviors that complement and are assets to building an inclusive culture.

INCLUSION AND DIVERSITY AT PHILLIPS 66 IS ANCHORED IN:

• Leader-driven efforts across the organization
• Employees who are each responsible for creating an inclusive and diverse workplace
• Benefits for every employee, regardless of dimension of diversity
• Policies, procedures and programs

EXECUTIVE INCLUSION AND DIVERSITY COUNCIL

We are committed to enabling an inclusive and diverse workforce throughout our global operations and work to strengthen these qualities organically within our company culture. We want employees to feel that their voices are heard and valued, and call upon our leadership to guide and support our approach to I&D.

The I&D council, chaired by our chairman and CEO and comprised of the executive leadership team and other senior business leaders, is an advisory group committed to building an inclusive and diverse workplace. It was established in 2019 and sets the strategic vision from the top and throughout our organization for I&D efforts that drive innovation and enhance business outcomes. Our organizational mindset is that everyone has a role to play in creating an inclusive workplace where diversity, in all its forms, can thrive.
EMPLOYEE RESOURCE GROUPS

Our Employee Resource Groups (ERGs) are designed to be forums for sharing ideas and raising awareness around identity and belonging. Our eight ERGs have more than 50 chapters throughout the company. Groups meet many times a year, offering panels, discussions and other activities for all employees.

We’re proud that approximately 44% of our employees participate in an ERG. While these groups develop organically according to need and request, they focus on personal and professional development, attracting talent and connecting our company and communities.

Phillips 66’s ERGs are the Black Employee Network, the Hispanic Network, the Women’s Network, the Asian American Network, the Native American Network, the New Hire Network, Pride66, which is our LGBTQ+ network, and the Veterans Network. In addition, employees also form special interest clubs around hobbies or volunteer interests.

Many new chapters of our ERGs were established in 2019. This includes four new Veterans Networks within our refineries and an extension of a refinery chapter of the Women’s Network to a nearby terminal. We also saw our global activities expand with the support of the new U.K. Inclusion & Diversity Network pilot. This network was established to bring together employees who were interested in supporting the efforts of the ERGs but worked in locations that don’t have the population to support one specific ERG. The U.K. Inclusion & Diversity Network has been instrumental in providing programming around limiting unconscious bias through conscious inclusion, support for Pride month and other I&D initiatives at our U.K. facilities.

Changes made to the ERG structure in 2018 led to a global approach in how we manage these groups. The changes increase leadership engagement and support, streamline responsibilities and increase strategic alignment among locations. Each ERG now has a local sponsor and a local leader, along with global executive leaders.
INSPIRING WOMEN IN THE WORKFORCE

The energy industry has continued to focus on attracting and retaining women, and Phillips 66 is no exception. While we have seen increases in women on our board and in senior leadership, we still see an opportunity to ensure that women perceive our industry as a place to have a rewarding career, where they are represented at all levels of our organization.

Public recognition of women driving change in the I&D arena includes Vice President of Energy Research and Innovation Ann Oglesby’s induction into the 2019 Oklahoma State University (OSU) Diversity Hall of Fame. OSU recognizes individuals for their service to diversity; Oglesby has been actively advocating the importance of diversity for more than 30 years. She serves on the Phillips 66 Executive Inclusion and Diversity Council and the OSU Diversity Development Council. She is also a board member of the National Action Council for Minorities in Engineering.

Our employees also give their time and talent to mentor college students seeking career advice. Senior leadership routinely speak at public events, including Executive Vice President of Legal and Government Affairs Paula Johnson, who participated in the 2019 Women in Business Leadership Conference hosted by the JCPenney Leadership Program at Oklahoma University’s Price College of Business. Attended predominantly by female college students, the conference served as a platform for those joining the workforce to seek advice from successful businesswomen. Senior Vice President of Human Resources and Corporate Communications Sonya Reed was the keynote speaker at Ford Motor Company’s Diversity and Inclusion Day, explaining how organizations must “tap into the collective genius” within their workforces to seek answers and gain competitive advantages.

INCLUSIVE BENEFITS AT A GLANCE

Phillips 66 offers various benefits to eligible employees and their children, spouses, domestic partners and children of domestic partners.

• **Parental Leave:** Short-term disability coverage for the birth of a child is 10 weeks at 100% pay. Plus, new mothers and fathers are eligible for up to two weeks of paid time off at 100% pay for care and bonding under our Parental Leave Policy. When combined, these benefits provide adoptive and birth mothers with as much as 12 weeks of leave at 100% pay.

• **Adoption:** The company helps with adoption expenses, including agency fees, placement fees, legal fees, court costs and other expenses.

• **Flex Time:** The 19/30 program allows employees to take one personal day off each month by extending each workday that month by 30 minutes.

• **Family Leave:** We have policies that allow employees to take paid time off to care for a seriously ill family member or when there’s a death in the family.

• **Personal Leave:** Unpaid personal leave is available for matters that require extended time off; using such leave won’t cause a break in an employee’s continuous Phillips 66 service.

• **Military Leave:** Employees may be entitled to paid or unpaid leave for active service in the military.

• **Disability Leave:** Sick or injured employees who are unable to work may be eligible for disability leave after vacation and short-term disability benefits are exhausted.

• **Financial Support:** Phillips 66 provides employees with cash assistance or loans if they are displaced from their house or suffer personal loss following a natural disaster.
SUPPORT FOR PRIDE

Phillips 66 became an official sponsor of the Houston Pride Parade, one of the country’s largest, for the first time in 2019. We also donated to Pride Houston and provided sponsorship to Pride on the Port in Los Angeles alongside further activities organized via our Employee Resource Groups.

We continue to demonstrate our support of the LGBTQ+ community. In April 2019, we received a score of 95 on the Corporate Equality Index, a measure of workplace equality for lesbian, gay, bisexual, transgender and queer employees.

Phillips 66 2019 Workforce Data

Women hold 21% of the jobs in our international workforce, 27% of professional roles and 19% of the jobs in supervisory leadership roles. Minorities make up 26% of our U.S. workforce and 19% of U.S.-based supervisory leadership roles. Among new hires in 2019, 42% are experienced professionals and 9% are university graduates. Retention of all employees was 94%, a voluntary turnover rate of 6%.

Labor

Union-represented employees make up approximately 35% of our U.S. employee population. Represented employees work in our Refining, Midstream and lubricants facilities. Our labor philosophy endeavors to create and maintain collaborative relationships with unions in support of our business objectives. We respect the rights of our represented employees to bargain collectively and reach agreements that are both fair and equitable and enable each business unit to compete in an increasingly challenging global market. Additionally, our represented employees are active leaders in their communities and often champion our causes and initiatives with local and state governments.

Generational Mix

Phillips 66 is generationally diverse with four generations in the workforce. Attracting new workers and maintaining a pipeline of talent through compensation, training, development and networking opportunities sets us in strong stead for the future of our company and industry. The multi-generational mix of our workforce is shown in the graph on this page.

Of the employees in our global workforce, 3% are Generation Z, 40% are considered Millennials, 39% are GenX and 18% are baby boomers.
As a result of a multiyear program to hire military veterans, we have been able to attract, retain and support veterans in our workforce; we’re proud that veterans account for 9% of our U.S. workforce, and 10% of our 2019 U.S. hourly new hires. Military Times “Best for Vets: Employers” included us in its 2019 rankings because of our broad commitment to workforce inclusion and diversity. We look for opportunities to continually improve at every level of our organization.

In 2019, we were recognized by Forbes as one of “America’s Best Employers” and received the International Association of Business Communicators Gold Quill award for our “What Does Inclusion Mean to You?” video.

COMMITMENT THROUGH THE GENERATIONS

We are proud of our heritage and commitment to employees, and that’s reflected by the long careers people build at our company and in the industry. Almost half of our workforce has been with the company since its inception. About one-third have more than 15 years industry experience. We have employees whose families have worked here for generations.

A recent example is Bo Smith (pictured far right, below), who was hired at the Borger Refinery in Texas in 2019.

Four generations of Bo’s family have worked in the Borger community, and Bo continues that family tradition. The refinery is the largest employer in Borger, with around 1,000 employees, and the Borger Refinery has a connection to most of the businesses or services in town.
Learning, Training and Development

We provide regular opportunities for employees to deepen expertise, broaden experience and further enhance foundational skills like communication and team building. Our performance management process identifies coaching and training needs. In 2019, our employees collectively received 900,000 hours of training. Talent Management Teams offer employees structured input on job moves and career development. About 22% of employees moved into new roles in 2019, an increase from our historical average of 20%. In addition to annual performance reviews, all employees have at least one development review each year with their direct supervisor. We also utilize 360-degree feedback.

CAREER GROWTH

We offer employees many opportunities for career growth. Among them:

- New hire onboarding educates new employees on our company vision, values and culture
- “Leading the Vision” and “Leading for Success” programs advance continuous coaching skills for people leaders
- On-demand professional development for employees through digital learning platforms
- Specialized training for employees in operator roles, engineering, sales and finance
- Support for craft schools near our manufacturing facilities
- “Crucial conversations” training provides communication skills development
- “KATALYST” training increases employee knowledge of operations, supply and the value chain
- “Lunch and Learn” sessions on a variety of topics

Internships

We provide paid internships at every major U.S. job location, offering students opportunities to learn and play a role in the organization’s success.

In 2019, we recruited the most diverse intern class to date, with 39% underrepresented minorities, up from 31% in 2018, and we maintained a record-high 48% female representation. On average, 90% of our interns are offered positions with the company after they earn their degrees, and a similar percentage from the 2019 intern class accepted the offers.

HEALTHY COMPETITION

We believe that healthy competition and a diverse workforce drive innovation, as seen in our launch of the inaugural Phillips 66 Business and Engineering Diversity Case Competition at the University of Colorado, Boulder (CU). This new physical and co-curricular partnership between CU’s Leeds School of Business and the College of Engineering & Applied Science fosters collaboration between first-time college or minority students from engineering and business schools in their quest to solve case studies focusing on the U.N.’s Sustainable Development Goals. Such real-life business scenario simulations offer unique opportunities for students to collaborate and appreciate the benefit of diverse teams.
Employee Opinion Survey
We conduct biennial confidential employee engagement surveys to gather employee perspectives on their experience working at Phillips 66.

Results are available to all employees and the board of directors. Management analyzes findings to identify progress on previous recommendations and areas of continued opportunity. Accountability for follow up sits with the executive leadership team and with every “people leader.” Results are shared throughout the organization via CEO communications, business unit town hall and team meetings.

The 2018 survey had a 74% response rate and showed favorable scores in areas related to corporate values, the company’s future and manager effectiveness. In lower-scoring areas, we continue to take appropriate action, keeping our employees updated on progress so they continue to feel valued and heard.

Stakeholder Engagement
We value our stakeholder relationships, which have been a priority for us since we started as a company in 2012 and enable us to fulfill our purpose and to execute our strategy.

Our stakeholders include employees, shareholders, investors, customers, communities where we operate, indigenous people, legislators and energy consumers.

To identify trends and factors that may be important to us and our stakeholders, we cast wide nets internally and externally to collect and understand important data and perspectives. Because people’s views of the future are shaped by their perceptions of the present and their beliefs about what the future should look like, we tap into an array of sources inside and outside the sector, across countries and political perspectives, and covering physical, policy, human capital and reputational risk and opportunities-related information.

We routinely gather feedback from in-person interviews and surveys, service companies, consultants, industry bodies, research firms and analyst reports, governmental databases, environmental and social nongovernmental organizations (NGOs), global policy bodies, ESG raters and ESG advocates, rating agencies and indices, community advisory boards and public feedback, and private sector providers.

We are leaders in in-person engagements with our ESG-focused shareholders, specifically discussing the issues addressed in this report. We do not limit this intake of information to data. We continually listen to policy debates and assess big picture trends that could play a role in our strategic planning and our future.

We consider our efforts to collect ideas, data and information on these and many other topics to be both good business and a way to live out our core values of safety, honor and commitment. This work is central to our planning and sustainability.

Throughout Phillips 66, our processes provide a measured and responsive approach to stakeholder engagement, while our community call-in lines offer anonymity. If a community concern is raised, we respond. The concern is directed to those who can take action and, when needed, escalated to the relevant business unit leader or to refinery management. Corporate senior leadership is regularly briefed on any community feedback, and we respond as appropriate and take strategic action when needed. The board Public Policy Committee is updated with feedback from stakeholder engagement as part of its global reputation charter.
COMMUNITY ENGAGEMENT AND EDUCATION

The communities in which Phillips 66’s assets are located are critical stakeholders. We consistently and regularly engage with our local and indigenous communities and seek their feedback.

Below are 24-hour community hotlines for each of our refineries.
COMMUNITY ADVISORY PANELS

Our Refining operations have well-established Community Advisory Councils or Panels (CAC/CAPs) that represent a cooperative and empowering environment for collaboration in the community. CACs and CAPs include company representatives and community members who meet at least quarterly. Leadership from Refining, and in some regions Midstream and lubricants operations, provides feedback on performance, discusses topics of local concern and shares insights on plans and activities. The Wood River Refinery CAP also serves our Midstream and Marketing & Specialties operations in the area. The Billings CAC covers the Refining and Midstream operations there.

CACs/CAPs keep open communication channels for safety, feedback and grievances, including named and openly contactable leaders. Members of CACs and CAPs also give us feedback on their communications preferences. We use this feedback to be responsive to community needs, for example, by expanding our social media activities related to our business units.

Our pipeline business unit has year-round community awareness, education and listening panels to stay in touch with those involved with and affected by our extensive pipeline network.

Call 811 before you dig!

MIDSTREAM EDUCATION AND OUTREACH

U.S. government and oil industry statistics show that the most common cause of pipeline incidents is improper or unauthorized digging. If someone puts a shovel or heavy machinery in the ground without knowing there’s a pipeline buried beneath, they can cause serious damage.

This is why our pipeline operations business maintains an 811 call center for safe digging. The call center has handled more than a million calls, and we seek feedback and maintain many avenues for communication — a website for community education, toll-free numbers for questions or concerns, and an email portal.

Phillips 66 also conducts outreach directly with people who live or work near rights-of-way we operate. We offer specialized education programs for farmers, ranchers, and emergency response and public officials. We work closely with schools near our pipelines. This effort focuses on three coordinated activities: teaching districts how to develop safety processes and consider pipeline locations in their planning, providing related science-based curriculum materials for educators, and collaborating with parent-teacher organizations that share information through their networks.

In the broader community, project updates and hazard or safety reminders are disseminated through involvement with local emergency planning committees, via door-to-door walks and formal correspondence, email and media campaigns, and community forums. We are proud to meet or exceed regulatory requirements and industry best practices for informing the public about our operations. Our public awareness programs have been benchmarked as top-of-industry.

SOCIAL RISK ASSESSMENT

We adhere to local and national laws and regulations regarding requirements for environmental, social and health assessments prior to starting operations at a new site, including pipelines. For new projects, we conduct a comprehensive social risk assessment to understand the people and concerns along a proposed route.

We provide up-to-date information to stakeholder communities about potential impacts and environmental, health and safety aspects of our work. Much of this information is available on our public website. We regularly update and disseminate information through press releases, our website, social media and, in some cases, door-to-door flyer distribution. We also hold public consultations at which we encourage dialogue and welcome feedback from our stakeholders.
HUMAN RIGHTS

We approach our stakeholder engagement from a position of mutual respect, respecting human rights, demonstrating our values through our actions and being a good neighbor. We conduct our operations in compliance with all applicable laws, in accordance with our company values and policies, and consistent with the spirit of the Universal Declaration of Human Rights.

An example that brings our human rights position to life can be found in our relationship with the Lummi Nation, a Native American tribe and a neighbor to our Washington state facility. Members of the Nation are part of our Community Advisory Panel. For many years, we have been invited to participate in the Nation’s First Salmon Ceremony, which our leadership team is honored to join. We support the Lummi Nation’s education priorities, such as the Lummi Northwest Indian College and Boys and Girls Club education center, and we participate in many Nation activities and programs.

Our support of Crisis Text Line is another example of how we respect human rights and work to improve lives. Crisis Text Line provides live, trained crisis counselors through a free, 24/7 text line for people in emotional crisis. The goal of the text conversation is to get the person to a calm, safe place, whether via a referral to further help or by just knowing that someone is there and listening. Simply text 741741.

CUSTOM, TRADITION AND PARTNERSHIP WITH LUMMI NATION

2019 saw the dedication and installation of a stunning Western Red Cedar totem pole at the entrance to our Ferndale Refinery in Washington state. Carved by Jewell James of our neighboring tribe, the Lummi Nation, the pole took many months to carve and paint, involving a team of people whose ages ranged from 6 to 68.

Commissioning a totem pole is highly symbolic and continues a tradition that began in 1955. Honoring the relationship that the Lummi Nation and Phillips 66 have with the land, the totem pole references the energy of the sun and the moon and the importance of protecting our environment and the diversity within it. The beautiful totem pole is pictured on page 2 of this report. We are grateful to our neighbor, the Lummi Nation, for our gift.
SUPPLY CHAIN

Our procurement policy governs our supply chain. We have a formal program to vet suppliers for safety, quality and financial assurance. Understanding and monitoring the work conducted by our diverse suppliers and business partners is integral to efficient and robust business operations, sustainability and respect for human rights. These controls have strengthened our supply chain resilience through use of optimal supply alternatives, standardization and supplier relationships, which give us an advantaged position in managing unexpected risk events, with the ability to respond and recover quickly to potential market disruptions.

As explained in our Governance chapter, suppliers and partners are expected to comply with contractual regulations and the principles of conduct set out in our Business Partner Principles of Conduct.

We audit suppliers’ manufacturing facilities, as well as contracts within our supply chain, to ensure adherence to policy. In complying with laws where we do business, Phillips 66 supply chain standards meet minimum wage, child labor, right to associate or bargain collectively, and working hours laws. It should go without saying, but we don’t use corporal punishment. Where we provide housing for our employees, we ensure living conditions are safe and sanitary.

Our suppliers are expected to certify that the materials incorporated into products manufactured for Phillips 66 comply with all laws, including those pertaining to human rights, slavery and human trafficking.

The products manufactured in our refineries and developed along the supply chain significantly contribute to strengthening the economies in our communities. In all our operations, Phillips 66 seeks to partner with diverse businesses and is committed to providing equal and impartial opportunities. This approach stimulates local economic development and enhances our long-term business performance by improving supplier responsiveness, competition and sustainability.

Our supplier diversity initiative facilitates active participation in organizations that support the development of diverse businesses in the United States. We are corporate members of the National Minority Supplier Development Council and the Women’s Business Enterprise National Council.
CUSTOMERS

We supply petroleum products to wholesale distributors, who deliver them to more than 7,500 Phillips 66®, Conoco® and 76® branded fuel stations in the United States and Mexico. In Europe, we supply 1,600 JET® and COOP branded fuel stations in the United Kingdom, Germany, Austria and Switzerland. We also supply branded lubricants at various retail outlets across the United States, under the Kendall®, Red Line® and Smart Blend™ brands. Phillips 66 is a major jet and Phillips 66 is a major jet and avgas fuel supplier to private, commercial and military aviation.

We also provide businesses with chemicals and solvents, premium coke and other specialty products. We maintain open channels of communication to serve these customers with a range of quality products.

Extending Digitalization of the Consumer Experience

Industry experts predict 20% of all transactions will happen via mobile devices in the next five years, so digitalization of the customer experience is a growing need. In response, we took the lead in 2018, offering secure, fast and convenient mobile payment through our My Phillips 66®, My Conoco® and My 76® consumer apps.

We expanded the program in 2019, and the digital apps now work at more than 5,600 of our stations across the country. Based on consumer feedback, we are continuing updates and enhancements to the mobile pay program in 2020.

We are also improving our fuel stations to meet customer expectations for well-lit, safe and easy-to-access locations. Since 2015, we’ve reimaged approximately 4,200 Phillips 66®, Conoco® and 76® stations across the United States, including over 1,600 in 2019 alone. In the reimaging process, we replaced 97,000 canopy light fixtures with energy-saving LEDs, resulting in savings of almost 100 million KWH per year. Facilities and technology improvements are a significant investment in security, both physical and digital, consistent with our company values and strategy. We are also reimaging JET® stations in Europe.

DRIVING CUSTOMER EXCELLENCE

In 2019, 23 new JET® sites opened across Austria, Germany and the U.K. In Germany, the JET brand was voted Brand of the Year for the tenth consecutive year in a YouGov poll in the service station category covering the entire German competitive landscape. The research involves over 900,000 representative online interviews and includes more than 1,200 brands across 38 categories. Brands are ranked in categories including impression, quality, value, satisfaction and reputation.

INSPIRING YOUNG PILOTS FOR 25 YEARS

2019 marked 25 years of Phillips 66’s support for the Experimental Aircraft Association (EAA) Young Eagles, a program that gives young people their first ride in a small general aviation aircraft. Since the program began, it has enabled more than two million 7 to 18 year olds to take to the skies. Volunteer pilots, some of whom are graduates of the Young Eagles program themselves, use their aircraft to introduce kids to aviation. Phillips 66 also offers a $1 rebate per gallon to pilots who refuel with Phillips 66 after flying Young Eagles.
INNOVATIVE MOBILE PAY APP WINS CONSUMER AWARD

Harnessing technology to deliver value and convenience to consumers is central to our business ethos. Phillips 66’s Mobile Pay team was recognized at the Annual ICX Summit in 2019, winning the Best Mobile Interactive Customer Experience Award for the My Phillips 66® app. The accolade recognizes platform-based interactive solutions that engage audiences and extend brand presence through the essential devices in the consumers’ lives.

Through the app, consumers can locate their closest gas station, pay at the pump and in-store via a secure online payment system, enroll in the Kickback Rewards loyalty program and enjoy various other cost savings. The responsiveness and enhanced convenience have also driven an increase in consumer loyalty at Phillips 66 branded stations. The app was developed in collaboration with P97 Networks, a provider of secure mobile commerce and digital marketing solutions. We continue to enhance the app with new payment methods and features.

INVESTORS, BANKS AND INSURERS

We proactively engage with our investors, banks and insurers and socially responsible investors (SRIs) to discuss items of interest or concern, and to learn about topics of interest to their stakeholders. Regular communication enables these stakeholder groups to fulfill commitments related to Principles for Responsible Investment, a voluntary set of investment principles related to the integration of sustainability issues in investment decision-making processes. In 2019 and 2020, we hosted a conference in Houston to share sustainability best practices with banks, investors and our peers.

TRADE ASSOCIATIONS

We participate in industry trade associations to share technical and standards expertise, share lessons learned from incident investigations, develop best practices, and be part of public education efforts regarding issues of common concern to our industry. Our participation in trade and industry associations is subject to management oversight by our Governmental Affairs team, which approves our memberships and serves as the principal representative in such associations.

Phillips 66 pays regular membership dues to several trade associations, some of which use a portion of the dues for nondeductible state and federal lobbying and political expenditures. Following the U.S. Internal Revenue Code, those trade associations provide us with the portion of our annual dues that is attributable to lobbying expenses. We disclose these contributions in our Political Giving and Activity Policy. In addition to being active members in local chambers of commerce and civic organizations where our operating assets are located, the company is a member of many industry trade organizations. A listing of key organizations can also be found in our Political Giving and Activity Policy.
PAC66

In accordance with federal and state law and board and company policies, Phillips 66 does not make direct corporate contributions to candidates or political committees supporting candidates in federal or state elections where prohibited. Employees can support candidates for office through the Phillips 66 employee Political Action Committee (PAC66).

PAC66 is funded exclusively through voluntary contributions from eligible employees and members of the board of directors. It is registered with the Federal Election Commission, and contributions are fully reported on a monthly basis. Employees participating in PAC66 are not reimbursed, directly or indirectly, for political contributions or expenses. PAC66 has its own board of directors, which is composed of a broad cross-section of company employees. The board approves all PAC66 disbursements, which are made solely in the best interest of the company and its shareholders, and not according to the personal agendas of individual directors, officers or employees. PAC66 contributes to federal and state political candidates who support responsible energy industry activities and other business issues of interest to the company.

MEDIA

Media coverage about our company is another way we learn what is top-of-mind to our communities. Alongside social media, it’s a way to let community members know what’s going on, from philanthropic and community events that we sponsor to biodiversity efforts and business development. We maintain our local, national and trade media relationships as part of our commitment to communicating and maintaining transparency with our various stakeholders. We proactively share information with and are responsive to inquiries from news outlets. In the event of an incident, we ensure that community information is available in a timely manner.

Community Investment and Social Impact

One way we move our company strategy forward is by promoting economic, social and environmental advancement in the communities where we live and work. In short, we work toward a sustainable workforce and sustainable neighborhoods.

The strategy for our corporate philanthropy program that we refer to as 'social impact', is based on four focus areas: Education and Literacy, Environment and Sustainability, Community Safety and Preparedness, and Civic Enrichment.

We encourage our employees to volunteer their time to causes that are important to them. 2019 was another record year for our volunteer program. Phillips 66 employees invested 88,000 hours volunteering to teach STEM and working at literacy summer camps, building homes with Habitat for Humanity, assembling equipment for local fire departments, planting trees at local schools, doing household chores for people who aren't physically able, picking up trash along roads and beaches, and much more.

Our commitment to the greater good also included charitable donations totaling $28 million in 2019, and the company is setting its sights on doing even more in 2020.

Our regular full- and part-time employees are entitled to take two paid days per year to volunteer with initiatives and organizations that hold significance for them. Union employees are eligible for the benefit as well when it is part of their collective bargaining agreement.
Phillips 66 also donates $500 for every 20 hours an employee or spouse volunteers with an eligible 501(c)(3) nonprofit organization. Teams of four or more employees, retirees or spouse volunteers may apply for a team volunteer grant of $1,000. We encourage personal philanthropy by matching employee donations to eligible 501(c)(3) nonprofit organizations dollar-for-dollar, up to $15,000 per year. Retiree donations are matched dollar-for-dollar up to $7,500 a year. In 2019, we donated $7.2 million in matching gifts, volunteer grants and dependent scholarships.

The United Way provides services in virtually all of the communities where our employees live and work. Most of our locations in the United States participate in United Way campaigns. Employee participation is voluntary, and the company matches employee donations.

**GIVING AROUND THE GLOBE**

Our Singapore office is committed to serving the community, sponsoring five Social Service Organizations (SSOs) for many years. In 2019, the Philanthropic team planned activities with local organizations for less privileged children, participated in a charity walk organized by the Society for the Physically Disabled and donated funds to the organization. Phillips 66 Singapore made additional contributions to SSOs, including Food Bank Singapore.

Food Bank Singapore is a charity organization that aims to reduce food waste by acquiring donated nonperishable food items with at least four weeks of shelf life and redistributing them to people in need. With help and donations from employees, the company was able to donate dozens of food items including rice, noodles, pasta, oil, canned items and cereals.

In Germany, our employees support their communities and local organizations with time, in-kind donations and financial support. In 2019, our employees made a difference in people's lives by supporting numerous social organizations including:

- Helping provide hygiene facilities, essentials for survival and clothing for homeless people through the Mitternachtsbus, RAP for Refugees and CaFée mit Herz initiatives
- Gardening and preparing for the summer festival for the children's hospice
- Spending quality time with nursing home residents and decorating the Anscharhoehe Foundation's Christmas tree during the holiday season
INVESTING IN THE FUTURE

STEM
Phillips 66 is a long-term advocate of STEM education. As part of our commitment to encouraging STEM, we continue to invest in related community activities. In 2019 Phillips 66 became the main presenting sponsor of the Girls STEM Academy at Space Center Houston, designed to encourage middle-school girls to explore STEM topics at a time when research shows that girls can often lose interest in these subjects. The center aims to offer learning and experiential activities through tools, robotics and technology, and access to NASA experts. As workforce demands rapidly change, equipping girls with such skills and confidence is key to both their success and an inclusive workforce.

SCHOLARSHIPS
More than 2.5 million visitors from more than 75 countries attended the Houston Livestock Show and Rodeo in 2019. Phillips 66 was a first-time sponsor via a scholarship. The event, known for its generous contribution to supporting education, carries significant cultural and financial significance for Houston. Since 1932, it has raised over $500 million in scholarships for Texas students.
Our industry is essential to the worldwide economy. As the foundation of economic development for our growing global population, energy needs to be reliable, abundant, accessible and affordable.

With a diverse portfolio of assets in the Midstream, Chemicals, Refining, and Marketing & Specialties businesses, we process, transport, store and market fuels and products globally. Phillips 66 is well positioned to benefit from continued demand for our products for decades to come.

Below is a depiction of our business value chain.

We produce transportation fuels and the materials necessary to create products for modern life. Derived from crude oil or NGLs, our products are used to create:

- Health care products and medical devices
- Pharmaceuticals
- Plastics and rubber
- Adhesives and sealants
- Electronics, smartphones
- Cars, batteries
- Agricultural products
- Wind turbines and solar panels that capture alternative energy

We’re an essential part of feeding, clothing and caring for the world’s growing population and moving its people and commerce.
Our employees have competitive salaries, generous benefits and fulfilling work, allowing them to improve their lives and contribute to the financial well-being of their communities. We provide thousands of well-paying jobs, and every year, we hire thousands of contractors, subcontractors and suppliers, all of whom benefit from our business operations.

Our company further contributes to the economy through the taxes we pay. Since 2012, Phillips 66 has paid more than $9.9 billion in income, excise and property taxes to local, state and federal governments, helping to fund programs that include public schools, roads, bridges, ports and waterways.

Infrastructure

We ensure our infrastructure and facilities operate safely and efficiently; doing so protects people and the environment.

Over the last five years, our capital investments totaled $17 billion. Some key projects underway, or recently completed, include:

- **The Gray Oak Pipeline** owned by Phillips 66 Partners, is an 840-mile pipeline capable of shipping 900,000 BPD of crude oil from the Permian and Eagle Ford to multiple Gulf Coast destinations, including our Sweeny Refinery. It commenced initial operations in 2019 and full service in 2020.

- **At the Sweeny Hub**, we continued constructing two 150,000 BPD natural gas liquids (NGL) fractionators and associated pipeline infrastructure, and we are adding 7.5 million barrels of storage capacity at our Phillips 66 Partners’ Clemens Caverns. Upon completion, expected in the fourth quarter of 2020, the Sweeny Hub will have 400,000 BPD of fractionation capacity and 16.5 million barrels of storage at Clemens Caverns.

- **The Beaumont Terminal** is strategically located on the U.S. Gulf Coast with connections to 11 crude oil pipelines and access to six refineries. The terminal has been expanded to 16.8 million barrels of total crude and products.

- **In Refining**, we successfully completed multiple high-return projects across our system, increasing diesel yield and low-sulfur fuel oil production. At the Sweeny Refinery, we completed the FCC unit upgrade to increase production of higher-value petrochemical products and higher-octane gasoline.

- **In Marketing**, we formed a retail marketing joint venture on the U.S. West Coast. The joint venture operates a network that includes approximately 580 sites, enabling long-term placement of our refinery production and increasing our exposure to retail margins.

From 2012 through 2019, we have distributed $26 billion to shareholders through dividends, share repurchases and share exchanges, reducing our initial shares outstanding by 33%. We achieved these results through our continued commitment to safe, reliable and environmentally sustainable operations.

**Phillips 66 2019 in Review**

- **$3.1 Billion** in Total Earnings
- **$3.9 Billion** in Capital Expenditures & Investments
- **$6.77** in Total Earnings Per Share
- **$4.8 Billion** in Cash from Operations
- **$3.2 Billion** of Capital Returned to Shareholders
- **$1.6 Billion in Cash** On Hand

>$9.9B
Paid in Income, Excise and Property Taxes since 2012
Seeing the Greater Good

At Phillips 66 we invest in much more than business operations, product development and R&D. We invest in our people, our communities and the environment. We do this because it serves the greater good. We do it with a strategy that grow our Midstream and Chemicals segments, enhance returns in our other segments, deliver shareholder distributions and develop our people. Our company values of safety, honor and commitment and our Code of Business Ethics and Conduct are foundational to our dedication.

In addition to providing energy to improve lives, our business operations bring financial benefit to thousands of individuals and their communities. Our way of working protects our employees and our communities. We adhere to the highest safety standards, support labor-management alliances and create training opportunities for employees. We offer employees a variety of outstanding benefits, including wellness programs. We advance workforce inclusion and diversity, starting with our board of directors. We pay taxes that fund government programs. We invest heavily in infrastructure and facilities; their maintenance and integrity provide our communities with reliable, affordable, abundant energy. We support educational and civic projects. We use our expertise to participate in policy debates. We provide role models for political stability and the protection of human rights in all of the communities in which we operate. And we provide income to many beneficiaries, including our shareholders and their families.

We welcome discussion on viable solutions to the dual challenge of providing affordable energy to support economic growth and human prosperity while addressing the environmental effects of that development.
Metrics help us track our progress on things that matter to us as a responsible company, as stakeholders in the communities where we live and operate, and as global citizens. Key metrics have been highlighted throughout the report, and below we include additional data. This year, we have expanded our disclosure reporting.

Unless otherwise noted, data represent assets operated by Phillips 66 as of Dec. 31, 2019. Metrics are represented on a 100% ownership basis of Phillips 66 operated facilities.

### OPERATING EXCELLENCE

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<th></th>
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<tr>
<td>Total Recordable Rate (TRR)(^1) (incidents per 200,000 work hours)</td>
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<td>AFPM Benchmark(^2)</td>
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<td>Lost Workday Case Rate(^3) (incidents per 200,000 work hours)</td>
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<td>0.04</td>
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<tr>
<td>AFPM Benchmark(^2)</td>
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<tr>
<td>Fatalities(^4) (#)</td>
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<td>Fatality rate(^4) (fatalities per 100,000 full-time workers)</td>
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<td>3.00</td>
<td>3.03</td>
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<tr>
<td>Tier 1 Process Safety Event rate(^5)</td>
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### ENVIRONMENT

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<td><strong>Events &amp; Spills</strong></td>
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<tr>
<td>Environmental Events(^6)</td>
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<td>122</td>
<td>103</td>
<td>112</td>
<td>119</td>
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<tr>
<td>Oil Spills (#)</td>
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<td>60</td>
<td>60</td>
<td>50</td>
<td>49</td>
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<td>Oil Spills beyond secondary containment (bbls)(^7)</td>
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<td>373</td>
<td>2,936</td>
<td>5,598</td>
<td>2,754</td>
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<td><strong>Air Emissions</strong>(^8)</td>
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<td>Total Emissions (NOx-PM-SOx-VOC), (thousand tonnes)</td>
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<td>41.1</td>
<td>40.8</td>
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<td>37.5</td>
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<td>3.0</td>
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<td>3.1</td>
<td>2.7</td>
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<tr>
<td>SOx (thousand tonnes)</td>
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<td>8.8</td>
<td>9.5</td>
<td>8.7</td>
<td>7.8</td>
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<tr>
<td>VOCs (thousand tonnes)</td>
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<td>16.9</td>
<td>16.2</td>
<td>16.3</td>
<td>14.4</td>
</tr>
<tr>
<td><strong>Water</strong>(^9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshwater withdrawn (million bbls)(^10)</td>
<td>962</td>
<td>993</td>
<td>1,031</td>
<td>1,057</td>
<td>1,029</td>
</tr>
<tr>
<td>Freshwater withdrawn in water-stressed areas (%)(^10, 11)</td>
<td>30%</td>
<td>30%</td>
<td>29%</td>
<td>30%</td>
<td>28%</td>
</tr>
<tr>
<td>Freshwater consumed (million bbls)(^12)</td>
<td>297</td>
<td>330</td>
<td>330</td>
<td>358</td>
<td>319</td>
</tr>
<tr>
<td><strong>Recycling</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycled Materials(^13) (thousand tonnes)</td>
<td>209</td>
<td>165</td>
<td>175</td>
<td>141</td>
<td>158</td>
</tr>
</tbody>
</table>
Performance Data (Continued)

<table>
<thead>
<tr>
<th>GREENHOUSE GAS</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenhouse Gas Emissions, Scope 1 + Scope 2 (million tonnes CO₂e)</td>
<td>36.0</td>
<td>37.2</td>
<td>36.9</td>
<td>37.5</td>
<td>38.3</td>
</tr>
<tr>
<td>Greenhouse Gas - Scope 1 (million tonnes CO₂e)</td>
<td>28.2</td>
<td>29.3</td>
<td>29.4</td>
<td>29.7</td>
<td>30.5</td>
</tr>
<tr>
<td>Greenhouse Gas - Scope 2 (million tonnes CO₂e)</td>
<td>7.8</td>
<td>7.9</td>
<td>7.5</td>
<td>7.8</td>
<td>7.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROCESSING, RELIABILITY AND ENERGY USAGE</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processed Inputs (million bbls / year), global</td>
<td>822</td>
<td>862</td>
<td>859</td>
<td>872</td>
<td>872</td>
</tr>
<tr>
<td>Utilization (%)</td>
<td>91.3</td>
<td>96.0</td>
<td>95.1</td>
<td>95.2</td>
<td>93.7</td>
</tr>
<tr>
<td>Total energy consumption (trillion BTUs)</td>
<td>480</td>
<td>488</td>
<td>488</td>
<td>483</td>
<td>493</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOCIAL</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Diversity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of employees</td>
<td>14,000</td>
<td>14,800</td>
<td>14,600</td>
<td>14,200</td>
<td>14,500</td>
</tr>
<tr>
<td>Employees represented by unions(^5) (U.S. employee population)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>30%</td>
<td>35%</td>
</tr>
<tr>
<td>Women in workforce (international workforce)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>Retention rate / Turnover rate(^7)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>94% / 6%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GOVERNANCE</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women on PSX Board of Directors</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>Ethics violations allegations received</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>181</td>
<td>218</td>
</tr>
<tr>
<td>Ethics violations allegations investigated (%)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>% anonymous / % provided name</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>44% / 56%</td>
<td>38% / 62%</td>
</tr>
</tbody>
</table>

Performance Data Notes

1. TRR as defined by the Occupational Safety and Health Administration (OSHA). Includes employees and contractors.
3. Also known as Lost Time Incident Rate. Includes employees and contractors.
5. Tier 1 and Tier 2 Process Safety Events as defined by the American Petroleum Institute RP-754.
6. Events that result in an exceedance of the permit or regulatory-based numeric emissions limit, or a significant release of hydrocarbon or chemical. The values noted represent events which require immediate agency notifications.
7. In 2019, the volume dropped 51% compared to 2018; one incident accounted for 40% of the volume spilled beyond secondary containment. See additional commentary in report.
8. For this year’s report, we have expanded our global enterprise criteria pollutant emissions reporting to include VOCs (volatile organic compounds). Please note that this inclusion increases the total emissions reported compared to data in prior Phillips 66 sustainability reports.
9. Refining only
10. Freshwater is defined as water that has low salinity – usually less than 0.1% (local legal definitions vary). The reported value includes freshwater used as once-through cooling water.
11. Refining only
12. Water consumed is primarily due to evaporative losses (e.g. operation of cooling towers). The reporting basis and historical data for this metric have been restated in this report.
13. Includes refinery process catalyst captured for metals reclamation, oils and solids captured for reuse, and recyclable materials such as metal, glass and paper.
14. Scope 1 greenhouse gas emissions as defined by the EPA. Scope 2 emissions represents indirect GHG associated with imported steam and electricity. The reporting basis for historical GHG data has been refined in this year’s report.
15. Estimated
16. Turnover and attrition are used synonymously and voluntary attrition includes resignations and retirements

bbl = barrel = 42 U.S. gallons  
M - thousand  
MM - million
### SASB Content Index

This index references the Phillips 66 information in this report pertaining to standards applicable to companies classified by SASB in the Oil and Gas — Midstream, and Oil and Gas — Refining & Marketing industries as per SASB’s Sustainable Industry Classification System®.

<table>
<thead>
<tr>
<th>SASB TOPIC</th>
<th>SASB ACCOUNTING METRIC</th>
<th>SASB CODE</th>
<th>PHILLIPS 66 DISCLOSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Greenhouse Gas Emissions</strong></td>
<td>Gross global scope 1 emissions</td>
<td>EM-MD-110a.1</td>
<td>30.5 million CO$_{2}$e</td>
</tr>
<tr>
<td></td>
<td>Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets</td>
<td>EM-MD-110a.2</td>
<td>Climate Change and TCFD Analysis (page 35)</td>
</tr>
<tr>
<td><strong>Air Quality</strong></td>
<td>Air emissions of the following pollutants: (1) NOx (excluding N$<em>2$O), (2) SOx, (3) particulate matter (PM$</em>{10}$), (4) H2S, and (5) volatile organic compounds (VOCs)</td>
<td>EM-MD-120a.1</td>
<td>(1) NOx: 12.6 thousand tonnes (2) SOx: 7.8 (3) Particulate matter: 2.7 thousand tonnes (5) VOCs: 14.4 thousand tonnes</td>
</tr>
<tr>
<td><strong>Water Management</strong></td>
<td>(1) Total freshwater withdrawn, (2) percentage recycled, (3) percentage in regions with High or Extremely High Baseline Water Stress</td>
<td>EM-RM-140a.1</td>
<td>(1) Freshwater withdrawn - 1,029 million bbl (3) % in high or extremely high baseline water stress - 28%</td>
</tr>
<tr>
<td><strong>Ecological Impacts</strong></td>
<td>Description of environmental management policies and practices for active operations</td>
<td>EM-MD-160a.4</td>
<td>Environmental Stewardship (pages 27-34)</td>
</tr>
<tr>
<td></td>
<td>Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume in Unusually Sensitive Areas (USAs), and volume recovered</td>
<td></td>
<td>Total number of oil spills: 49 Volume of oil spills (beyond secondary containment): 2,754 bbls</td>
</tr>
<tr>
<td><strong>Workforce Health &amp; Safety</strong></td>
<td>(1) Total recordable incident rate (TRIR), (2) fatality rate, and (3) near miss frequency rate (NMFR) for (a) full-time employees and (b) contract employees</td>
<td>EM-RM-320a.1</td>
<td>(1) Total recordable incident rate (TRIR): 0.15 (employee + contractor) (2) Fatality rate: 0.00</td>
</tr>
<tr>
<td></td>
<td>Discussion of management systems used to integrate a culture of safety</td>
<td>EM-RM-320a.2</td>
<td>Operating Excellence (page 14-22)</td>
</tr>
<tr>
<td><strong>Operational Safety, Emergency Preparedness &amp; Response</strong></td>
<td>Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and throughout project lifecycles</td>
<td>EM-MD-540a.4</td>
<td>Operating Excellence (page 23-26)</td>
</tr>
<tr>
<td><strong>Critical Incident Risk Management</strong></td>
<td>Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1) and lesser consequence (Tier 2)</td>
<td>EM-RM-540a.1</td>
<td>Tier 1 process safety event rate: 0.06 Tier 2 process safety event rate: 0.14</td>
</tr>
<tr>
<td><strong>Activity Metric</strong></td>
<td>Refining throughput of crude oil and other feedstocks</td>
<td>EM-RM-000.A</td>
<td>872 million bbls, 100% operated basis.</td>
</tr>
<tr>
<td></td>
<td>Refining operating capacity</td>
<td>EM-RM-000.B</td>
<td>2.2 million BPD of crude throughput capacity</td>
</tr>
<tr>
<td></td>
<td>Total barrels of (2) crude oil and (3) refined petroleum products and (3A) natural gas liquids products</td>
<td></td>
<td>1 billion bbls</td>
</tr>
</tbody>
</table>
CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This report contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, which are intended to be covered by the safe harbors created thereby. These forward-looking statements are based on management’s expectations and beliefs as of the date they are made. These statements are not guarantees of future performance and you should not unduly rely on them as they involve certain risks, uncertainties and assumptions that are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed or forecast in such forward-looking statements. Factors that could cause actual results or events to differ materially from those described in the forward-looking statements include, but are not limited to, fluctuations in NGL, crude oil, and natural gas prices, and petrochemical and refining margins; unexpected changes in costs for constructing, modifying or operating our facilities; unexpected difficulties in manufacturing, refining or transporting our products; lack of, or disruptions in, adequate and reliable transportation for our NGL, crude oil, natural gas, and refined products; potential liability from litigation or for remedial actions, including removal and reclamation obligations under environmental regulations; limited access to capital or significantly higher cost of capital related to illiquidity or uncertainty in the domestic or international financial markets; potential disruption of our operations due to accidents, weather events, including as a result of climate change, terrorism or cyberattacks; general economic and political developments including: armed hostilities; expropriation of assets; changes in governmental policies relating to NGL, crude oil, natural gas or refined petroleum products pricing, regulation or taxation; and other political, economic and diplomatic developments, including those caused by public health issues and outbreaks; the impact of adverse market conditions or other similar risks to those identified herein affecting PSXP, as well as the ability of PSXP to successfully execute its growth plans; and other economic, business, competitive and/or regulatory factors affecting Phillips 66’s businesses generally as set forth in our filings with the Securities and Exchange Commission. Phillips 66 is under no obligation (and expressly disclaims any such obligation) to update or alter its forward-looking statements, whether as a result of new information, future events or otherwise.