



ENERGY: POLICY RISKS AND DISCLOSURES



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Safe Harbor

This document contains certain forward-looking statements. Words and phrases such as “is anticipated,” “is estimated,” “is expected,” “is planned,” “is scheduled,” “is targeted,” “believes,” “intends,” “objectives,” “projects,” “strategies” and similar expressions are used to identify such forward-looking statements. However, the absence of these words does not mean that a statement is not forward-looking. Forward-looking statements relating to the operations of Phillips 66 and Phillips 66 Partners LP (including their respective joint venture operations) are based on management’s expectations, estimates and projections about these entities, their interests and the energy industry in general on the date this document was prepared. These statements are not guarantees of future performance and 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 can be found in filings that Phillips 66 and Phillips 66 Partners LP make with the Securities and Exchange Commission (SEC). Copies of PSX’s and PSXP’s Forms 10-K are available on the SEC website, www.SEC.gov, or on PSX’s website, www.investor.phillips66.com. Phillips 66 and Phillips 66 Partners LP are under no obligation (and expressly disclaim any such obligation) to update or alter these forward-looking statements, whether as a result of new information, future events or otherwise.

I. INTRODUCTION

Energy and environmental issues are important to policymakers and to Phillips 66. Our vision, to provide energy and improve lives, done with our values of safety, honor and commitment, furthers our strategy.

Phillips 66 has four integrated business units: Midstream, Chemicals, Refining, and Marketing and Specialties. We produce transportation fuels and the materials necessary to create products for modern life and deliver them at scale.

Our products help create health care and medical devices, pharmaceuticals, plastics and rubber, adhesives and sealants, electronics, cars, agricultural products, and even the 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 commerce. Many oil and gas policy-related concerns focus on the exploration and production sector, including concerns related to hydraulic fracturing, fugitive emissions, venting and flaring. Phillips 66 is not in that sector.

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. As such, Phillips 66's strategic and scenario planning seeks to manage the risks our businesses face while evaluating opportunities to execute our strategy.

Consistent with the framework set out in the Taskforce on Climate-Related Financial Disclosures,ⁱ in this paper we will expand on our risk management, scenario planning and assumptions on energy policy risks.





II. KEY DRIVERS: ENERGY SOURCES, ECO-EFFICIENCY AND A GROWING POPULATION

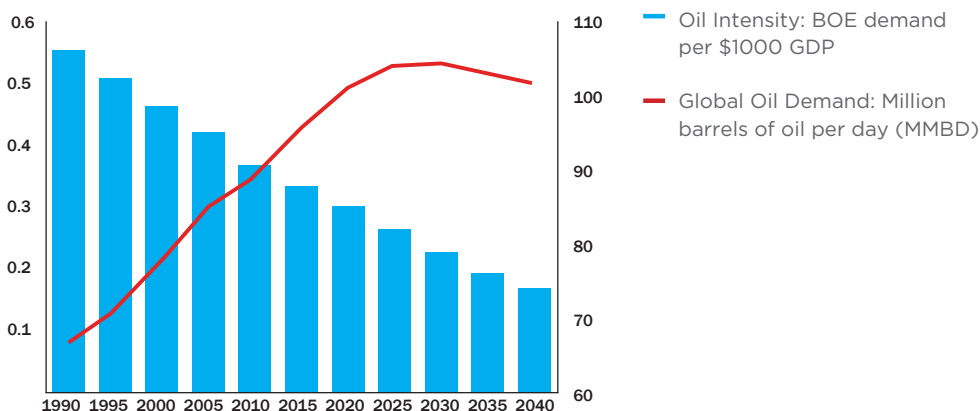
Energy is essential to human survival. Harnessing energy to do work allows civilizations to flourish. Because energy has always been important to the quality and the length of human life, the search for better ways to access reliable and affordable energy has been a constant throughout history.

The energy sources people rely on have evolved over time. They continue to evolve today. Phillips 66's strategic scenario planning hinges on understanding this evolution and being proactive in positioning for the future.

For almost as long as people have used energy, they've looked for ways to be efficient in how they use it. Humans' ability to use fire; to tap energy from water, either by simply floating with the current or by creating hydroelectric and tidal energy plants; to harness the wind in the sails of boats and modern wind turbines; and to benefit from geothermal and fossil fuel energy are all evidence of the evolution of increasing energy efficiency.

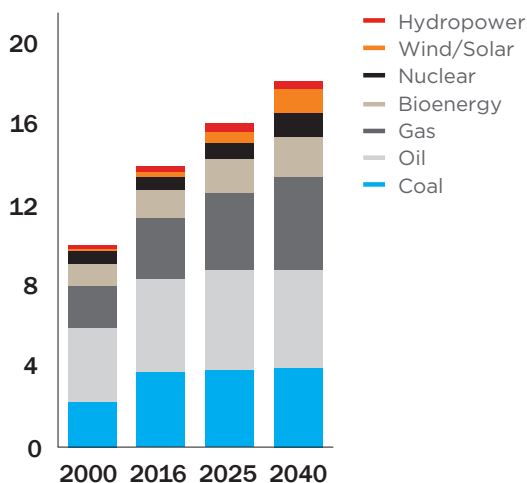
Yet the rising global population is putting pressure on the earth's finite resources, and energy efficiency and eco-efficiency are becoming more important issues to policymakers and other stakeholders. The growing global population, coupled with an increased standard of living, have implications for the amounts and sources of energy the world will need. Based on projections from the World Bank and the United Nations, today's world population of roughly 7.7 billion will increase by 25 percent to 9.8 billion by 2050 – an increase of 83 million people a year.ⁱⁱ The International Energy Agency's 2017 World Energy Outlook projects that this increase in population will create a 30 percent increase in demand for all modern sources of energy.

GLOBAL OIL INTENSITY AND DEMAND



BY FUEL TYPE

(BILLION TONNES OF OIL EQUIVALENT)



BY USE

(BILLION TONNES OF OIL EQUIVALENT)

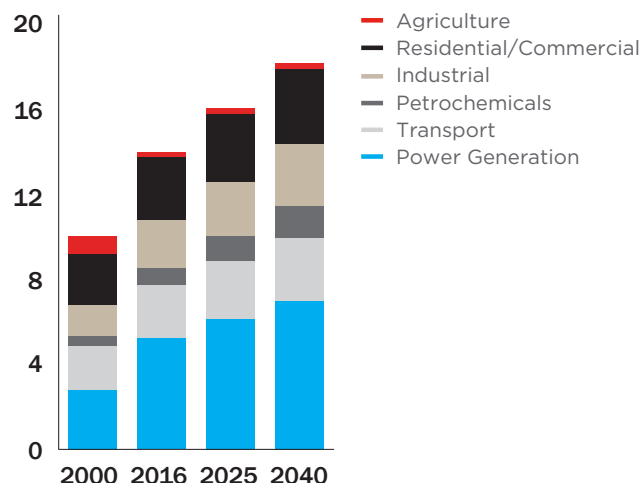


Chart Sources: Phillips 66 Chief Economist Office

These factors are a part of Phillips 66's planning, and 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.

Our experience and our analysis of these drivers lead us to conclude that, even with advances in energy efficiency and increased availability of non-fossil fuel sources of energy, demand for our products will continue. We plan to be the supplier of choice.

III. THREE CORE COMPONENTS OF PLANNING AND MANAGEMENT

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.

3

Technology opportunity. Phillips 66 is one of the few downstream energy companies with an in-house research and development (R&D) department. This is an important differentiator because it puts us in the position to create solutions to current and future challenges associated with physical or policy risks, not just for ourselves but for our customers, regulators and communities.

We analyze technologies through a scientific lens to evaluate feasibility, economics, scalability, key milestones and timing. Our R&D department conducts basic research for energy solutions. It also helps us increase clean product yields and overall energy efficiency; make our operations safer, more reliable and more sustainable; reduce water risks and other environmental impacts; and manage changing regulations and expectations, including climate.

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.



PHILLIPS 66 SOLID OXIDE FUEL CELL
(1 KW GENERATION), BARTLESVILLE, OKLAHOMA

IV. OUR STRATEGIC RISK MANAGEMENT SCENARIO AND FORECASTING PRACTICES

How do we get to these conclusions and make operational decisions?

We engage in detailed risk, opportunity, strategic and scenario planning on an ongoing basis. Although some of these activities are highly proprietary – companies' analyses can create advantages over competitors – we can share with you a clear summary of each part of these processes. We describe these processes under four headings: strategy, risk management, governance and forecasts.

1. Collecting information for an informed strategy

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 opinions.

Because people's views of the future are shaped by their perceptions of the present and by their passionately held 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 acquire information from large numbers of shareholders and stakeholders; service companies, consultants, industry bodies, research firms and analyst reports; governmental databases; environmental and social non-governmental organizations (NGO); global policy bodies; environmental-social-governance (ESG) raters, rating agencies and indices; 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 ask ourselves questions like these:

- What effect will the key geopolitical forces, including the relative levels of stimulus from Africa, China and India, have on energy markets?
- Will improvements in the competitiveness of alternative forms of energy slow or pick up speed? Or will they be offset by declining subsidies in some markets?
- What energy sources will be available to meet growing energy demands?
- To what extent will steady improvements in the global transport of natural gas create more global markets and influence the power generation mix?
- How will shifts in mobility preferences – shared or autonomous transport, build out of rapid rail service, preferences for zero emission vehicles (ZEVs), etc. – influence energy mix and demand levels?

We consider our efforts to collect ideas, data and information on these and many other topics to be both good business and important to our core values of safety, honor and commitment. We do not conduct this work with any public fanfare, but it is central to our planning and sustainability.



2. Risk management

Many energy sector veterans say that the main thing they have learned over the course of long careers is to be humble about their ability to predict the future – even a few years out. This is consistent with academic data showing that even the best predictors (super forecasters) are hard-pressed to make useful predictions about events more than five years into the future.ⁱⁱⁱ Yet increasingly, stakeholders ask energy companies to predict decades out or to the end of the century.

At Phillips 66, we approach this challenge through a detailed and disciplined process that seeks to identify the risks and opportunities that 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.

Our enterprise risk management program provides a systematic approach to identifying and understanding significant risks to the company, including:

- Risks from changes in energy policy
- Health, safety and environmental, physical or operational risks
- Cybersecurity risks

Part of the program includes policy impacts. We utilize green house gas (GHG) reduction cost curves, CO₂ cost forecasting, energy efficiency indices and best practices, and renewable fuels forecasts to test our assumptions against and 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, and 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.

To summarize, we approach identifying, measuring, managing and mitigating risks at Phillips 66 by doing the following:

- **Experts from all aspects of our business units and functions** – including research, planning, finance, economics, tax, refining, transport, marketing, specialties, legal, compliance, government relations, community relations and 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. The risks we identify as part of this process include:
 - **Physical environmental factors**, encompassing risks associated with weather or climate, and including our efforts to measure, report and predict GHG emissions and make related forecasts of program impacts and costs.
 - Impact of **global energy accords**.
 - **Financial variables**, including the likely location, scale and duration of all tax regimes **including carbon taxes**.
 - Evolving **investor 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.
- **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 their potential timing, costs, effectiveness and so forth.
- We also include assessments of potential **GHG emissions policies and impacts**.
- Each of these risks has a corporate owner to create **accountability** within our organization.
- Our risk management team provides detailed, regular, timely and relevant **information to our board of directors and Executive Leadership Team**. This information is one of many important inputs that enables our board of directors and its committees to oversee and guide our



company.

3. Governance and oversight – board oversight

This last point – about the role our board and executive leadership play in the oversight and management of our risk management and scenario planning work – is important. 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. The talent and composition of our board of directors augments this governance – our board has 100 percent tenure under 10 years, is 33 percent female and almost 90 percent independent. The Audit and Finance committee monitors the company's enterprise-wide risk management program, as well as controls, compliance and ethics. The board's Public Policy committee identifies environmental, social and political trends and risks to guide the company's long-term business objectives based in part on the input described above.

4. Development of forecasts to inform capital allocation

The fourth step in our strategic scenario planning process uses all the information and processes described above to develop a variety of forecasts – usually distilled into predictions for various fossil fuel outputs or products – to inform our capital allocation decision processes. Many large public companies go through similar processes to try to anticipate future risks and opportunities to enable sustainable operations. We look at multiple scenarios and stress test our projects and scenarios. We include metrics for our key strategic, physical and policy variables within our scenarios. This helps us embed key climate policy, energy mix, energy efficiency, access to capital, tax, reputational, technological and human capital risks and opportunities into our decision-making processes.



V. INTO ACTION

Areas where our risk management practices and scenario planning show up include:

- Operational excellence and energy efficiency
- Improved resiliency and competitiveness of businesses
- Biofuels supply and renewables marketing opportunities
- Ongoing technology development, including organic photovoltaic and fuel cell research

Operating excellence drives our focus on safety, environmental stewardship and asset availability. We work toward our goal of zero safety incidents. We intend for every worker to go home safely every day. If we experience a serious incident, injury or fatality, we analyze cause and effect. We seek corrective and predictive action to avoid a recurrence and to continue our journey toward zero. Many of our facilities have been recognized by the Occupational Safety and Health Administration (OSHA) for Voluntary Protection Programs (VPP).

In 2017, we had the lowest number of reportable environmental events in company history with a year-over-year decrease of 15 percent.

Energy expenditures can account for roughly 40 percent of a refinery's operating expenses. We capitalize on opportunities for things like improvements in heat exchange or recovery, furnace controls and steam optimization. Of our U.S. refineries, 45 percent have earned the U.S. EPA ENERGY STAR® award for top quartile energy efficiency performance. Energy and other resource savings from recent efficiency projects include:



Saving 196 million BTUs per hour. This is equivalent to the energy used in about 45,000 U.S. homes in a year.



Reducing global water use by 94 million gallons per year.



Reducing our use of steam by 90,000 pounds per hour, which saves additional energy and water.

Additional efficiencies are not overlooked. We achieved Leadership in Energy & Environmental Design (LEED) Platinum certification for our headquarters building in Houston, Texas. Quality of water and its efficient use are important in energy manufacturing. All facilities have wastewater systems and oil recovery units. These units separate reusable water from oil streams, thereby reducing fresh water use, improving discharged water quality and conserving valuable hydrocarbons.

We manufacture high-quality graphite and anode coke that's used to make electric vehicle lithium ion batteries. We're increasing our supply of renewable fuels through ventures with other companies and evaluating our assets. We continue to assess new opportunities with our portfolios and with third parties. While doing so, we focus on reliability.



PHILLIPS 66 BRANDED MARKETING SITE IN ST. LOUIS, MISSOURI

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 our Alliance Refinery in Belle Chasse, Louisiana, and the power substation elevation at our Bayway Refinery in Linden, New Jersey.
- We have installed a state-of-the-art power distribution facility at our Wood River Refinery in Roxana, Illinois, that has improved facility reliability and reduced flaring from unplanned events.
- Seven of our refineries have associated cogeneration power (“cogen”) units. Three – at Los Angeles, San Francisco and Sweeny – are Phillips 66 owned units. Four others – in the Texas Panhandle, New Jersey, Washington and the United Kingdom – purchase part of their waste heat steam from, or electricity generated at, third-party-owned cogeneration units adjacent to our facilities.
- 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.

We enhance these business programs and initiatives with research. We conduct research to manage water consumption, improve energy efficiency and provide technology options for future power generation. Our scientists and engineers conduct research to enhance the safety and reliability of our operations and to develop future air, water and energy solutions. Our energy solutions research includes **organic photovoltaic** and **solid oxide fuel cell** programs.

Organic photovoltaic (OPV) – a clean energy technology for electricity generation. We seek to develop OPVs that are profitable without government subsidies.

Solid oxide fuel cells (SOFCs) – electrochemical cells that generate electricity efficiently and cost competitively from natural gas.

VI. SEEING THE BIG PICTURE

At Phillips 66 we invest in much more than R&D, product development and business operations. We invest in our people, our communities and the environment. We do this because it is the right thing to do. We do it with a strategy that is growing our midstream and chemicals segments, enhancing returns in our other segments, delivering shareholder distributions and developing our people. Our company values – safety, honor and commitment – and our Code of Business Conduct are foundational to our dedication. We do it because we believe in our mission: Providing Energy and Improving Lives. We do it because we want to do business in a world in which we are welcome. And we do it because we believe that the things we produce and make possible are essential.

We can't retreat to a world of pre-industrialization era agriculture, transport, infrastructure and energy. Visions of that world may feel comforting, but they are no longer realistic. We try to make the world a better place based on current realities: an evolving energy mix and a rapidly increasing global population, where more than 1.3 billion people still don't have access to electricity and 2.6 billion still rely upon traditional biomass for cooking or heating.^{iv}

In addition to providing energy to improve lives, we provide thousands of stable, well-paid jobs. Our way of working protects the safety of our employees and our communities. We 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 substantial 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 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 world's energy challenges.



Providing Energy. Improving Lives.®

GLOSSARY

Anode coke – a grade between graphite coke and fuel or pet coke, used in aluminum manufacturing processes and in manufacturing batteries.

Barrel – 42 U.S. gallons.

Biomass or traditional biomass – wood fuels, agricultural byproducts and dung burned for cooking and heating purposes.

BOE – Barrel of oil equivalent – conversion of liquid or gaseous hydrocarbons using a factor that measures the equivalent heating content of the various fuels.

Cogeneration – use of a single fuel source to produce electricity and heat.

Eco-efficiency – seeking to generate economic value through technology or process changes while reducing resource use or environmental impact.

EPA – U.S. Environmental Protection Agency.

GDP – gross domestic product.

GHG – greenhouse gases, carbon dioxide, methane, nitrous oxide and fluorinated gases. Carbon dioxide (CO₂).

Graphite coke – also known as needle or premium coke, a specialty product used in recycling of steel and in the manufacture of electrodes for battery anode precursors. Electrodes produced from graphite coke can withstand very high temperatures.

MM – Million.

MMBD – Million barrels per day.

NGO – Non-governmental Organizations

Organic photovoltaic (OPV) – Photovoltaics convert sunlight into electricity. OPVs are made from hydrocarbons, are lightweight and flexible, and generate electricity.

R&D – Research and development.

Solid Oxide Fuel Cells (SOFCs) – electrochemical cells that can efficiently generate electricity from a fuel.

VPP, or Voluntary Protection Programs – A U.S. Occupational Safety and Health Administration (OSHA) program that recognizes implementation of effective safety and health management systems and maintenance of injury and illness rates below national Bureau of Labor Statistics averages. In VPP, management, labor and OSHA work cooperatively and proactively to prevent fatalities, injuries and illnesses through a system focused on hazard prevention and control, worksite analysis, training, management commitment and worker involvement. To participate, employers must apply to OSHA and undergo a rigorous on-site evaluation by a team of safety and health professionals. Union support is required for applicants represented by a bargaining unit. VPP participants are re-evaluated every three to five years to remain in the program. www.osha.gov.

ENDNOTES AND SELECT SOURCES

i. Taskforce for Climate-Related Financial Disclosures, <https://www.fsb-tcfd.org/>, accessed 9/1/18.

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iii. Superforecasting: The Art and Science of Prediction, Tetlock and Gardner, 2015.

iv. United Nations Development Programme, http://www.un.org/en/ecosoc/newfunct/pdf13/sti_undp.pdf, accessed 9/1/18.

Phillips 66 Annual Reports, including 2018 definitive proxy and 2017 10-K, available at www.sec.gov.

Phillips 66 2017 Sustainability Report, Working Together, www.phillips66.com/sustainability.