ANNUAL REPORT 2020

Improving the Oil and Natural Gas Industry's Environmental Performance

THE ENVIRONMENTAL PARTNERSHIP

An Initiative of the U.S. Natural Gas and Oil Industry

Cover photo provided courtesy of SM Energy.

Our Mission

*To continuously improve the industry's environmental performance by **taking action**, **learning** about best practices and technologies, and fostering **collaboration** in order to responsibly develop our nation's essential oil and natural gas resources.*

Table of Contents

Joint Message
from the Director and Chair

In 2019, The Environmental Partnership focused its second full year on growing the coalition, expanding its reach and impacts, and harnessing the growing enthusiasm within the participating companies. The Partnership continues to demonstrate the oil and natural gas industry's commitment to deliver improved environmental performance by **taking action, learning, and collaborating** while delivering the essential energy that powers America's economy and quality of life.

Every day, it takes many different companies working across a vast network of operations to meet the energy demands of the nation. As the program has grown, so has the interest across the industry to learn more about the program and become part of this important coalition. In 2019, midstream companies that safely process and transport oil and natural gas across the country prompted the creation of two new Environmental Performance Programs to further reduce emissions from key emission sources within their operations. We're thrilled these companies have initiated implementation of the new programs this year and we look forward to welcoming additional midstream companies to the program, witnessing them **Taking Action** through implementation of the program in 2020, and seeing its impacts in the 2021 Annual Report.

Another key component of the program is **Learning**, and last year the program continued to deliver value to its participating companies by expanding our workshops to new locations, including Oklahoma and North Dakota. These workshops provided a unique opportunity for operators to come together, learn about the program, and share valuable information about new practices to further reduce emissions. Many of the unique challenges that individual operators face are overcome when tackled together, through the open dialogues with their industry peers that are fostered at the workshops.

In 2019, we built upon our **Collaboration** principle and reaffirmed our commitments to advance and improve our understanding of cutting-edge methane detection technologies by funding operations and research at Colorado State University's Methane Emissions Test and Evaluation Center (METEC). This support also provided METEC additional backing to secure a generous grant from the Department of Energy to build upon past efforts and advance these new technologies through a rigorous field testing campaign that will be, in part, facilitated by The Partnership and its participating companies. The 2019 Annual Conference in Houston, allowed us to build on this collaborative spirit and learn from important

stakeholders, including the regulatory and research community. Many companies that develop new technologies and provide services that facilitate our industry's ability to improve its environmental performance attended our first Tech Forum so that attendees could learn about their services and capabilities.

It's important to remember that none of this is possible without the dedication of the women and men of the participating companies, and we are grateful for the enthusiasm and leadership they continue to bring to the program. The Environmental Partnership has become a solid foundation based on common sense and effective actions upon which we will continue to build in the years to come.

The challenges we face as an industry and a nation strengthen the need to work together to get the best solutions in the field as quickly as possible. Our members' combined ingenuity, creativity, and know-how gives us great confidence in the industry's ability to continually improve our environmental performance. We welcome the opportunity to build on the program's progress in the years ahead.

Sincerely,

Matthew Todd
Director
The Environmental Partnership

Vanessa Ryan
Chair
Chevron

Message from Mike Sommers

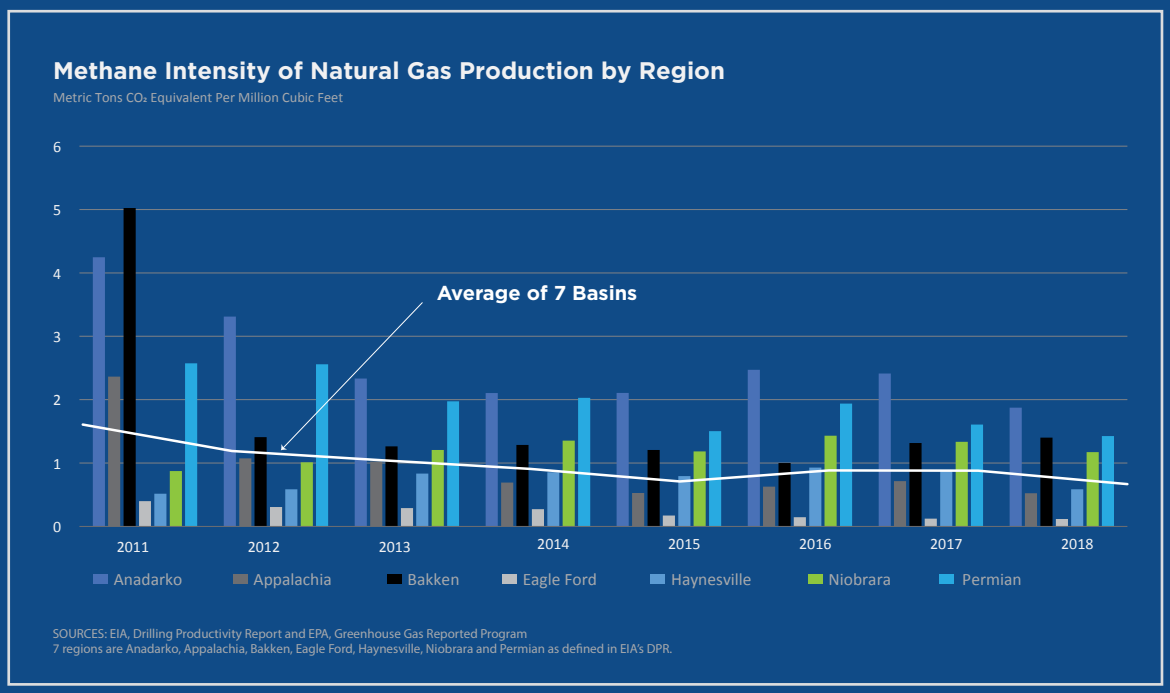
President and CEO, API

An unforeseen public health emergency has presented new challenges to America's oil and natural gas industry. But nothing has moved energy operators from their continued commitment to leading the world in energy development, emission reductions, and environmental performance. That's clear throughout the annual report you're reading and beyond.

Responsibly developing our domestic energy resources while mitigating the risks of climate change remains a top priority for this industry, and in 2019 The Environmental Partnership delivered action-oriented, commercially viable approaches to improve sustainability and strengthen our energy future.

The Partnership has tripled its membership since its December 2017 launch. It serves as a model for industry-led climate solutions and collaborative investment in the technologies and best practices that are driving down emissions of methane and volatile organic compounds. And API's world-class standards complement the coalition's goals by setting the bar for advancing the safety, environmental performance, and sustainability of industry operations around the globe.

It's important to note the progress that preceded us to demonstrate that continued gains are achievable. Methane emissions rates from five of the largest producing regions across the U.S. have fallen nearly 70 percent even as natural gas production in those regions tripled over the 2011-2018 period, demonstrating the industry's hard work to efficiently deliver energy to consumers.



Last year, our critical coalition grew to incorporate the midstream segment, establishing programs to improve environmental performance in the transmission of natural gas. Expanding participation in The Partnership is key to building on more than two productive years of achievement, teamwork, and continued progress.

The opportunity to **take action**, **learn**, and **collaborate** to responsibly develop our nation's essential energy resources is fundamental to The Environmental Partnership's mission.

As the Partnership grows, our industry stands ready to solve problems and continue to provide the world with affordable, reliable, and ever-cleaner energy. We take seriously our role in strengthening the economy while working to reduce our environmental footprint.

Sincerely,

Mike Sommers
President and CEO
American Petroleum Institute

The Environmental Partnership Expands to Midstream

Companies across the industry continue to recognize the value of being a part of the solution through a member-driven, voluntary program that addresses emissions across the supply chain. Starting in 2020, we're proud to announce the expansion of The Partnership to include the industry's midstream segment. Midstream companies are an integral part of the supply chain, and are necessary to move oil and natural gas from the wellhead to the transportation infrastructure necessary to get these fuels and feedstocks to market.

Informed by the Environmental Protection Agency's Greenhouse Gas Reporting Program data, the program is focusing its efforts to take commonsense actions to further reduce emissions from compressors and pipeline blowdowns within oil and natural gas transmission operations.

We welcome the new midstream companies and the additional commitments from companies that are already participating in The Environmental Partnership. Their actions will build upon the coalition's collective knowledge base and, through their commitment to implement the new midstream programs, further reduce industry emissions.

"TC Energy has a long, proud history of delivering sustainability solutions. The Environmental Partnership provides a great opportunity for TC Energy to work with industry partners on our shared goal of

MEETING TODAY'S ENERGY NEEDS SAFELY, RELIABLY, AND ECONOMICALLY WHILE PROGRESSING SUSTAINABLE SOLUTIONS FOR FUTURE ENERGY DEMAND."

Stan Chapman, *Executive Vice President & President, U.S. Natural Gas Pipelines, TC Energy*

While The Environmental Partnership initially focused on reducing emissions from oil and natural gas production, The Partnership is designed to evolve and advance, using innovations, science, and data to identify new initiatives to help the industry further reduce its environmental footprint, while safely and responsibly growing energy production.

"Enbridge moves about 20% of the natural gas consumed across the United States, and our network of gas transmission and midstream pipelines covers 30 states and the Gulf of Mexico.

NATURAL GAS IS KEY TO A LOWER-CARBON FUTURE, AND WE AS A COMPANY ARE COMMITTED TO SUSTAINABILITY

—helping to meet North America's growing energy needs in ways that are economically, environmentally, and socially responsible. We're pleased to be adding our energy and our focus to The Environmental Partnership, and to be working alongside our industry peers to reduce emissions."

Bill Yardley, *Enbridge's Executive Vice President and President of Gas Transmission and Midstream.*

"As an industry leader that handles 30% of the natural gas in the United States, Williams knows that the industry is capable of being part of the solution, as actions supported by The Environmental Partnership demonstrate.

THESE EFFORTS ALIGN WITH OUR OWN COMMITMENT TO CONTRIBUTE TO A SAFE AND SUSTAINABLE FUTURE."

Alan Armstrong, *Williams' President and Chief Executive Officer*

"At Tallgrass Energy, we believe the most important measure of our success as a company and as a neighbor is how well we achieve our objective to ensure the safety of our people, our communities, and our environment. We're proud to be the first midstream company to join The Environmental Partnership since its expansion to midstream. Through our membership in The Environmental Partnership, ***WE HAVE COMMITTED TO USE PROVEN STRATEGIES AND TECHNOLOGIES TO REDUCE EVEN FURTHER METHANE AND VOLATILE ORGANIC COMPOUND EMISSIONS ACROSS OUR ASSETS***. It's the right thing to do."

Bill Moler, *Chief Executive Officer, Tallgrass Energy, LP*

"Nothing is more important to EagleClaw and all of its employees than ensuring that we work safely, reliably, and responsibly in alignment with the goals of our key stakeholders, which includes not only our investors but the local communities and environments we operate in. We are continuously examining effective and proven ways

TO MEANINGFULLY IMPROVE OUR ENVIRONMENTAL PERFORMANCE."

Jamie Welch, *President and CEO, EagleClaw Midstream*

Program Summary
of The Environmental Partnership

Mission

To continuously **improve the industry's environmental performance by taking action, learning about best practices and technologies, and fostering collaboration** in order to responsibly develop our nation's essential oil and natural gas resources.

Principles

1 Learn
Participants have committed to continuous learning about the latest industry innovations and best practices that can further reduce their environmental footprint while safely and responsibly growing energy production.

2 Collaborate
Participants have committed to collaborate with one another and with academics, researchers, and regulators on the best strategies, tools, and tactics to improve environmental performance.

3 Take Action
Participants have committed to taking action to improve their environmental performance. This is being accomplished through The Partnership's three environmental performance programs, which companies can implement and phase into their operations.

Background

The U.S. oil and natural gas industry is committed to the protection of human health, safety, and the environment. Even as the United States is leading the world in oil and natural gas production, methane emissions from petroleum and natural gas systems have fallen (1990-2018), thanks to industry leadership and investment in new technologies.

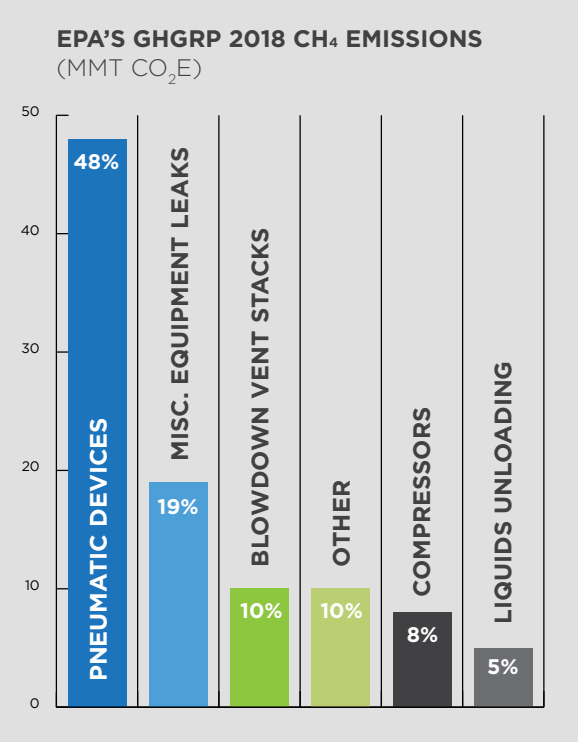
Seeking to build on this success, a group of 26 oil and natural gas production companies formed The Environmental Partnership in December 2017.

The Environmental Partnership's first initiative is focused on taking action to further reduce emissions, including methane and volatile organic compounds (VOCs), associated with oil and natural gas production.

Methane is a greenhouse gas, emitted both in nature and through human activity. Because methane is the primary constituent of natural gas, minimizing its release is important to industry from an environmental and business standpoint. VOCs are naturally occurring compounds containing carbon that can be emitted during production and are an important target for reductions because they are a precursor to ground-level ozone formation and smog.

Our Environmental Performance Programs

Since its launch, growing industry interest in The Partnership within the midstream sector prompted additional review of the EPA's Inventory of U.S. Greenhouse Gas Reporting Program (GHGRP). According to the GHGRP, the primary sources of industry methane emissions within the transmission segment are compressors and pipeline blowdowns. To further reduce emissions from these sources, two new Environmental Performance Programs were created that provide midstream operators cost-effective methods to address these emission sources. This expansion builds upon the existing programs that address emissions from pneumatic devices, equipment leaks, and the manual liquids unloading process that were created for the program's launch.



There are five Environmental Performance Programs that oil and natural gas companies can implement:

- **Leak Detection and Repair:** *Participants are committed to leak monitoring, followed by timely repair, at selected sites using detection methods and technologies such as Method 21 or Optical Gas Imaging cameras.*
- **Focus on High-Bleed Pneumatic Controllers:** *Participants are committed to replace, remove, or retrofit high-bleed pneumatic controllers with low- or zero-emitting devices.*
- **Improving the Manual Liquids Unloading Process:** *Participants are committed to implement an industry best practice that minimizes emissions associated with the removal of liquids that, as a well ages, can build up and restrict natural gas flow.*
- **Compressor Program:** *Participants are committed to implement reduction practices that minimize emissions associated with centrifugal and reciprocating compressors.*
- **Pipeline Blowdown Program:** *Participants are committed to implement reduction practices that minimize emissions during pipeline blowdowns.*

"...These workshops are filling a desire from industry to continue to learn from each other to improve operations and,

AS THE PROGRAM CONTINUES TO GROW, THE DIVERSITY OF EXPERIENCE AND CONTRIBUTIONS GROWS WITH IT."

Kevin Hendricks, *Environmental Engineering Technical Lead, Denbury Resources, Inc.,*

2019 Environmental Performance Highlights

These performance programs are one of the most critical components of The Environmental Partnership. Through these programs, we are making real progress in reducing emissions and ensuring that we are responsible stewards of our environment.

0.08%
LEAK OCCURENCE RATE, OR LESS THAN 1 LEAK PER 1,000 COMPONENTS

MORE THAN
87,000
SITES SURVEYED

MORE THAN
184,000
SURVEYS CONDUCTED

MORE THAN
116 MILLION
COMPONENT INSPECTIONS PERFORMED

43 Participating Companies

NO LONGER HAVE HIGH-BLEED PNEUMATIC CONTROLLERS IN THEIR OPERATIONS

MORE THAN

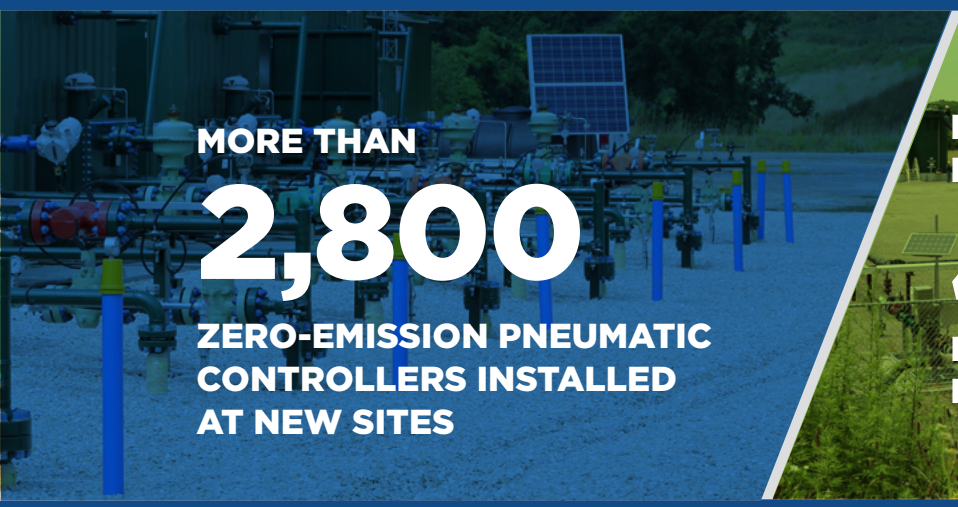
3,300

HIGH-BLEED PNEUMATIC CONTROLLERS REPLACED, RETROFITTED, OR REMOVED FROM SERVICE

MORE THAN

10,500

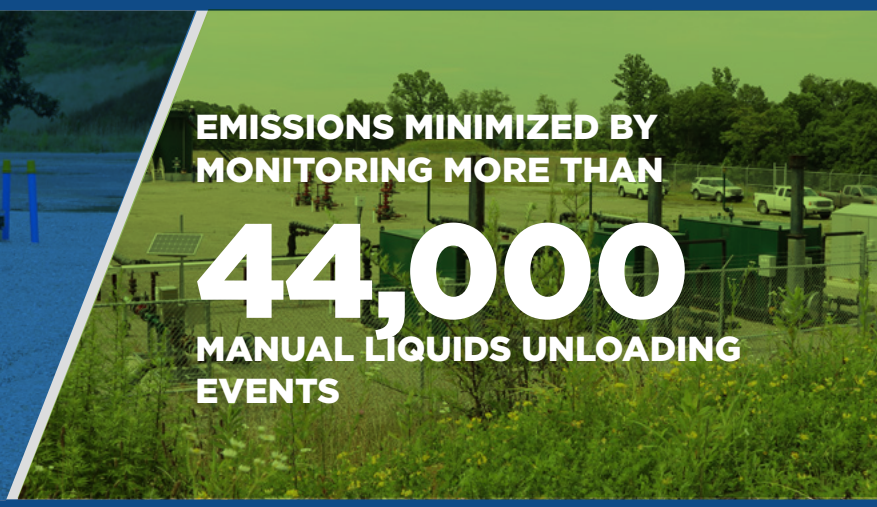
ADDITIONAL GAS DRIVEN CONTROLLERS REPLACED OR REMOVED FROM SERVICE



MORE THAN

2,800

ZERO-EMISSION PNEUMATIC CONTROLLERS INSTALLED AT NEW SITES



EMISSIONS MINIMIZED BY MONITORING MORE THAN

44,000

MANUAL LIQUIDS UNLOADING EVENTS

Focus On Flaring

Since the launch of The Environmental Partnership in late 2017, participating companies have remained committed to the coalition's focus on reducing emissions across our operations. This commitment, exemplified by this year's expansion to midstream operations, has driven robust discussions of best practices on issues beyond the current scope of the program. One of those opportunities is the reduction of associated gas flaring in oil fields.

While U.S. operators have proven it's possible to increase production while also reducing flaring, we share the community, shareholder, regulatory, and environmental perspective that routine flaring must be reduced. To that end, participants gathered at Occidental's Midland, Texas facility to discuss current flaring trends, causes, and current best practices. This gathering expanded on previous discussions to better understand the issues and challenges operators face to address flaring. The workshop provided an overview of planning, best practices, and technologies that can reduce flaring volumes and improve flare reliability and efficiency when it does occur.

Lisa Tiesman
Shell's Permian Environmental and Regulatory Lead reviewed alternative use technologies for the beneficial use of associated gas.

Why Does Industry Flare Gas?

Flaring typically occurs when there is a lack of gas gathering/processing capacity during facility or gathering maintenance or during unplanned events for safety measures such as alleviating pressure. Flaring is also used when an oil well produces ancillary natural gas and there is no pipeline infrastructure available to transport it. In these instances, flaring is the safer environmental option. Rather than venting the gas into the air, flaring burns the gas, which releases fewer greenhouse gases than venting.

Matthew Kolesar *of XTO Energy provided an overview of flaring trends and industry efforts focused on to reduced flaring.*

Industry Spotlight

A Commitment Leads to Action

Like other participating companies in The Environmental Partnership, Chevron leadership has established and continuously reinforces our commitment to minimize flaring. Our value of protecting the environment drives infrastructure planning and design decisions, resulting in systems optimized for reliability. Using an integrated approach across the value chain, cross-functional teams review and analyze opportunities to improve gas takeaway system effectiveness, starting with early project planning and throughout the production process.

As a Midland resident, I'm proud to see how The Partnership is addressing the concerns of communities and operators in the Permian basin and across the country. The Partnership helps our air team learn and improve by exchanging best practices with other operators. Emissions reduction is bigger than any single company or basin. The Partnership creates the opportunity for industry-wide progress across the U.S. and beyond.

Sincerely,

Morgan Iannuzzi
Permian Air Team Lead
Chevron

"When a company commits to reducing emissions, it impacts how employees plan projects, design facilities, and solve problems. The Environmental Partnership enables companies who've made this commitment to

LEARN FROM EACH OTHER, SHARE BEST PRACTICES, AND RAISE THE BAR FOR THE ENTIRE INDUSTRY."

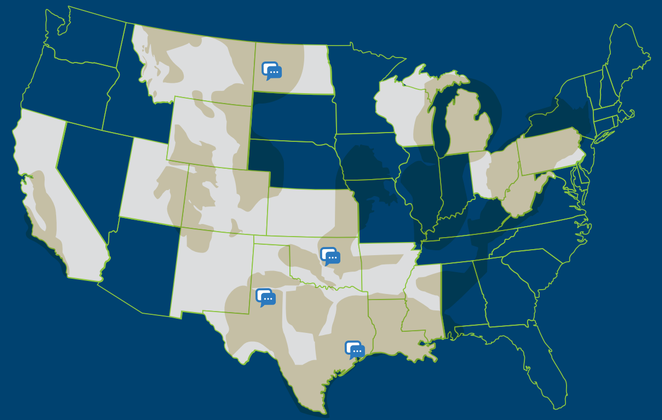
Morgan Iannuzzi, *Permian Air Team Lead, Chevron*

2019 Membership

AAERA Great Todays Better Tomorrows
AETHON
ALTA
AMERICAN PETROLEUM PARTNERS
Antero Resources
Apache
ASCENT RESOURCES
BHP
bp
Cabot Oil & Gas Corporation
CALIFORNIA RESOURCES CORPORATION
CALLON PETROLEUM
CHESAPEAKE ENERGY
Chevron
CIMAREX
ConocoPhillips
Continental RESOURCES
CROWNQUEST
Denbury
devon
DIAMONDBACK Energy
enerPLUS
eog resources
EQT Where energy meets innovation.
equinor
equitrans Midstream
EXTRACTION Oil & Gas
ExxonMobil
FIELDWOOD ENERGY
FLYWHEEL ENERGY
Gulfport ENERGY
HESS
HighPoint RESOURCES
Hunt OIL COMPANY
Indigo
JKLM ENERGY LLC
LIME ROCK RESOURCES
Marathon Oil Corporation.
MURPHY EXPLORATION & PRODUCTION CO.
noble energy
OASIS PETROLEUM
OXY
Occidental
OLYMPUS ENERGY
Ovintiv
PARSLEY
PDC ENERGY
PENNENERGY RESOURCES
PENNSYLVANIA GENERAL ENERGY PGE
PIONEER NATURAL RESOURCES
QEP RESOURCES
RANGE RESOURCES
RED BLUFF RESOURCES
REPSOL
Riviera Resources, Inc.

SABLE PERMIAN RESOURCES
SENECA RESOURCES A NATIONAL FUEL GAS COMPANY
Sequitur ENERGY RESOURCES LLC
SM ENERGY
Summit Discovery Resources LLC
SURGE Energy
swn Southwestern Energy
TALLGRASS ENERGY
TOTAL
TRINITY OPERATING
ULTRA PETROLEUM
WARWICK GROUP
Western Midstream
WHITING
WPXENERGY
XTO ENERGY

Improving Operations from Coast to Coast



THE ENVIRONMENTAL PARTNERSHIP
IMPLEMENTED IN
17 of 21
TOP PRODUCING STATES

2019 Conferences and Workshops

Oil and natural gas Basins

2019 Implementation of The Environmental Partnership Programs

Participating Company Growth

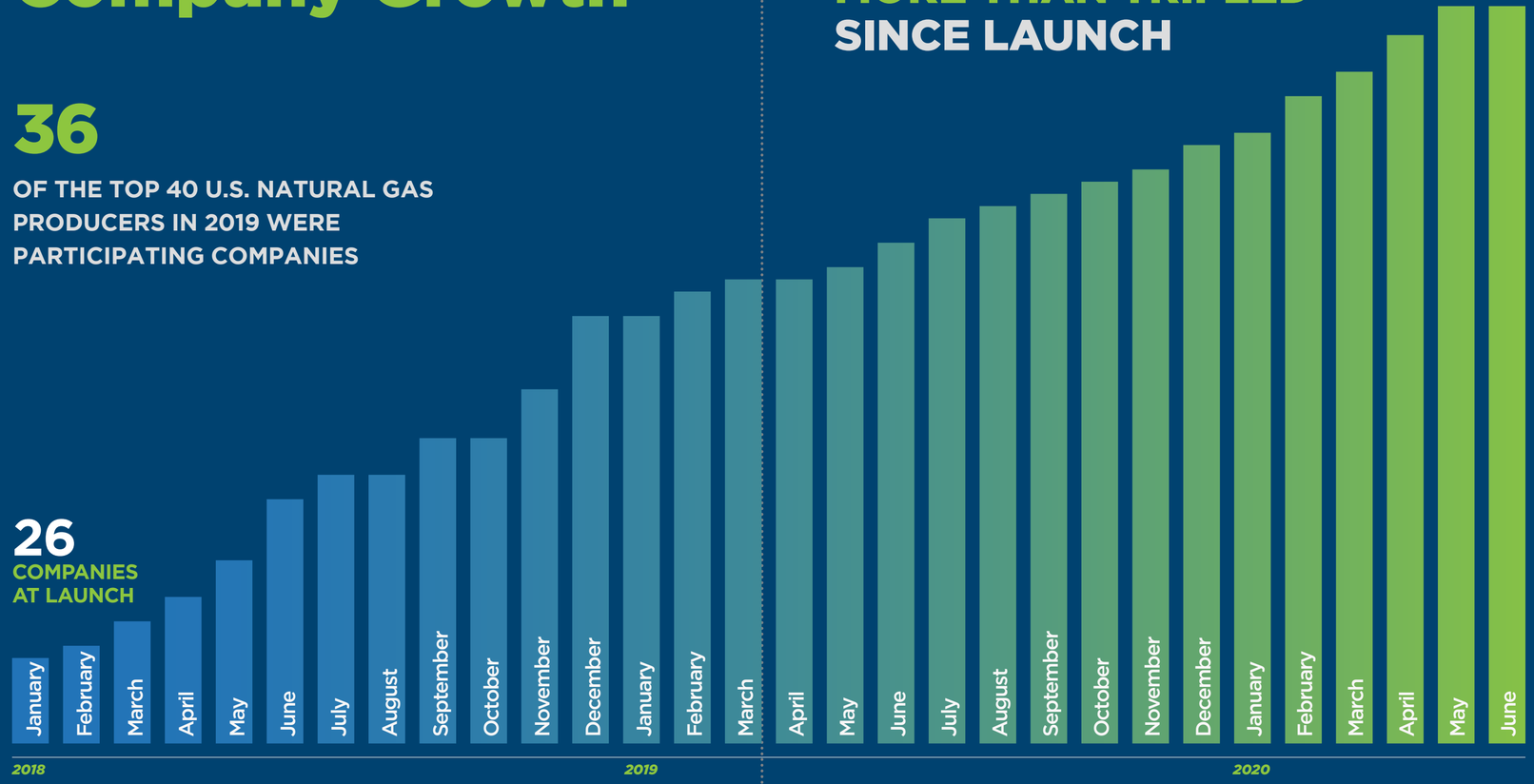
36

OF THE TOP 40 U.S. NATURAL GAS PRODUCERS IN 2019 WERE PARTICIPATING COMPANIES

26
COMPANIES AT LAUNCH

Company Membership has MORE THAN TRIPLED SINCE LAUNCH

83
COMPANIES TODAY



A Year in Review:
Learning across the Basins

In addition to the **Actions** that each participating company took to further reduce the industry's environmental footprint, The Partnership continued to build on its success as we promoted and expanded implementation of the program's **Learning** and **Collaborating** principles.

In 2019, The Partnership held three workshops in Texas, Oklahoma, and North Dakota. By taking the program to major oil and natural gas basins, we were able to expand and promote information-sharing to local upstream and midstream oil and natural gas operators, regardless of whether their company was an active participant in The Partnership. The workshops were a great introduction to the program with their "hands-on" nature; combined with the opportunities to network with their industry colleagues, the workshops continue to provide real value to the attendees.

Making environmental progress, however, requires the contributions of many outside of industry and this **collaboration** is a fundamental principle of The Partnership. In 2019, we provided forums for operators to hear the latest from important stakeholders, including local and state regulatory agencies, trade association representatives, and new emissions and detection research. The 2019 Annual Conference, themed "**The Field of the Future**," provided participating company representatives the latest intelligence on satellite measurement capabilities, and welcomed emission detection technology developers and service providers to join us for our inaugural Tech Forum.

PERMIAN WORKSHOP

*Occidental's **Angela Zivkovich** updated operators on new regulatory developments during the Permian Basin workshop, hosted by Chevron in Midland, Texas.*

"The Implementation and tracking of a successful Leak Detection and Repair (LDAR) program has been a focus of

SEQUITUR ENERGY AND SHARING OUR COMPANY'S EXPERIENCE

with our industry peers in The Environmental Partnership."

Russ Perry, *Health Safety & Environmental Manager, Sequitur Energy Resources*

OKLAHOMA CITY WORKSHOP

The Oklahoma City workshop, hosted by Baker Hughes at their Energy Innovation Center, *included an in-depth look at approaches to system design, operation, and maintenance of storage tank vapor control systems.*

"THE ENVIRONMENTAL PARTNERSHIP'S WORKSHOPS WERE EXTREMELY HELPFUL, WITH INTERESTING PRESENTATIONS THAT PROVIDED NEW INFORMATION AND INNOVATIVE WAYS TO HELP US FURTHER REDUCE EMISSIONS. The workshops also provided us with a rare and appreciated opportunity to talk face-to-face with other operators and presenters about their own experiences with facility designs, regulations, and new technologies. These workshops are well worth the effort to attend."

Bill Bailey
Senior Engineer – Environmental Compliance and Technology, ES&H, Cimarex Energy

OKLAHOMA CITY WORKSHOP

Bill Bailey, Sr. Engineer – Environmental Compliance and Technology, ES&H, Cimarex Energy

BAKKEN WORKSHOP

*Lime Rock Resources' **Dusty Tescher** answers questions following his presentation on the company's efforts to reduce emissions from storage tanks.*

"LIME ROCK RESOURCES HAS TAKEN A VERY ACTIVE ROLE IN THE ENVIRONMENTAL PARTNERSHIP

and we jumped at the chance to host the first workshop for Bakken operators at our office in Dickinson, North Dakota...

...It provided us an opportunity to introduce the program to other local operators and share our successful

EFFORTS TO REDUCE OUR ENVIRONMENTAL FOOTPRINT

and overcome the complications we can face during our harsh North Dakota winters."

***Dusty Tescher**, Environmental, Health & Safety Supervisor, Lime Rock Resources*

*North Dakota Petroleum Council's **Kari Cutting** provides updates on regional production and emissions trends, as well as regulatory developments and challenges at the Bakken Workshop.*

"The North Dakota Department of Environmental Quality appreciated participating with The Environmental Partnership to discuss environmental issues and how we can build on the successes we've seen recently in the Bakken.

THIS WORK BENEFITS THE ENVIRONMENT, WORKER SAFETY, AND THE CITIZENS OF THE STATE OF NORTH DAKOTA."

Jim Semerad, Director, Division of Air Quality, North Dakota Department of Environmental Quality, at the Bakken Workshop

2019 ANNUAL CONFERENCE

Susan Jablonski *(left) provided an overview of the Texas Commission on Environmental Quality's latest detection efforts, which are being used to help reduce fugitive emissions, including flyover and mobile sensing technologies.*

Jill Engel-Cox *(above), with the Department of Energy's National Renewable Energy Laboratory, discussed the lab's current research on renewable energy used to power oil and natural gas operations, including wind, solar, geothermal, and other resources.*

2019 ANNUAL CONFERENCE

***Dan Zimmerle** of Colorado State University (CSU) delivered remarks on The Partnership's ongoing work with the university's Methane Emissions Technology Evaluation Center (METEC).*

The Partnership's forums offered opportunities for operators to meet and discuss current issues with academia, regulators, researchers, and other related parties.

These gatherings not only help to educate the operators – they also provide a great opportunity for the broader stakeholder community to learn about industry efforts.

"The Partnership's funding and promotional efforts have enhanced METEC's research into methane-sensing technologies, furthering ties between

RESEARCHERS AND PRODUCERS ON PROJECTS TO REDUCE EMISSIONS."

Dan Zimmerle, *Senior Research Associate, Colorado State University and Director of METEC*

Nicole Downey *(left) of Earth System Sciences provided an overview of current and pending satellite detection methods capable of tracking emissions from space.*

Attendees took the opportunity to learn about many of the latest innovative technologies focused on emissions detection and prevention available for use in their operations.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An Initiative of the U.S. Natural Gas and Oil Industry
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2020 Acknowledgement:

We would like to thank all of the dedicated individuals that contribute to The Environmental Partnership, and look forward to the future as we continue to welcome new companies, including:

CAERUS OPERATING LLC

COMSTOCK RESOURCES

CONCHO

EAGLECLAW MIDSTREAM

ENBRIDGE

ENERVEST

INTENSITY MIDSTREAM

Rio Oil and Gas II, LLC

ROCKCLIFF ENERGY OPERATING LLC

STEWARD ENERGY

TC Energy

Williams

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