

American Fuel & Petrochemical Manufacturers



We Make Progress

2020 Annual Report







The refining and petrochemical industries are served by many of the brightest minds and most creative problem-solvers of our time. We are essential in tackling some of the world's biggest challenges and helping humanity thrive — today and well into the future.

Our members make life better, safer, more productive, and, most of all, possible. Together we



Deliver affordable, reliable fuel and petrochemical products that lift the living standards of people all over the world.



Share a culture of cooperation that advances safety and environmental performance across our industries.



Support our communities and provide meaningful jobs to people of varying backgrounds and experiences.



Improve the sustainability of our operations and products, and innovate to find breakthroughs to solve our greatest challenges.

The members of AFPM have been crucial in making affordable fuels that enable transportation, home heating and cooking, and petrochemical products that facilitate food, water and healthcare systems, among many other benefits for people around the globe.

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A Message from the Chairman of the Board and the President and CEO of AFPM

A 15-year rise in U.S. exports of refined products continued in 2019 with our nation exporting more than ever. Record investments in the U.S. petrochemical industry means petrochemical capacity has and will continue to grow as exports for petrochemicals and petrochemical feedstocks also rise.

It's difficult not to see these trends in the context of another: the number of people living in extreme poverty across the globe has dropped steeply in recent decades, from 28% of the world population in 2000, to 16% in 2010, to an estimated 8.6% in 2018 — a milestone that means healthier lives and more opportunities for hundreds of millions of people.

U.S. fuel and petrochemical manufacturers have been crucial in this transformation, making affordable fuels that enable transportation, home heating and cooking, and petrochemical products that facilitate food, water and health-care systems, among countless other solutions foundational to thriving, vibrant communities.

At the dawn of a new decade, our society is grappling with questions about the best path forward for our country and for humanity, as the world population is expected to grow by two billion people in the next 30 years. While projections show that demand for fuel and petrochemical products is expected to increase for decades to come, there is a growing dialogue about what it means to operate sustainably, and how petroleum-derived fuels and chemicals fit into a culture that is concerned for our shared environment, mindful of our changing climate, and eager to build a better world for the next generation.

Positioned at an intersection where precious natural resources are transformed into valuable, life-enhancing products, fuel and petrochemical manufacturers have unique perspectives, insights, and capabilities to inform solutions

and policies. We acknowledge that we have a role to play in addressing challenges like climate change and plastic waste and are committed to the development of sound policies that enable our members to supply the fuel and petrochemicals that growing global populations and economies need to thrive, in an environmentally sustainable way.

We must challenge our leaders to consider a more holistic picture of modern life and the products that enable it when developing the laws and rules that govern us. Policies addressing climate change and plastic waste must be balanced and measured to improve quality of life, ensuring the long-term economic, energy and environmental needs of humanity are met.

As we look ahead to the next year, decade and beyond, there is no question that U.S. fuel and petrochemical manufacturers and the products they produce will help humanity thrive. We are optimistic about our shared future and look forward to working with all stakeholders to tackle the world's biggest challenges.



Joseph W. Gorder
Chairman of the Board

Valero Energy
Corporation

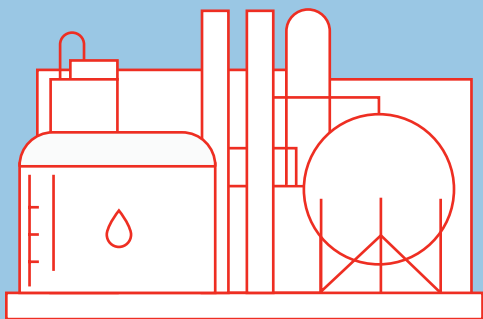


Chet M. Thompson
President and CEO

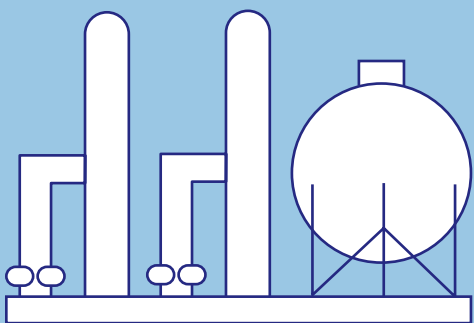
American
Fuel & Petrochemical
Manufacturers

U.S. Refineries and Petrochemical Facilities

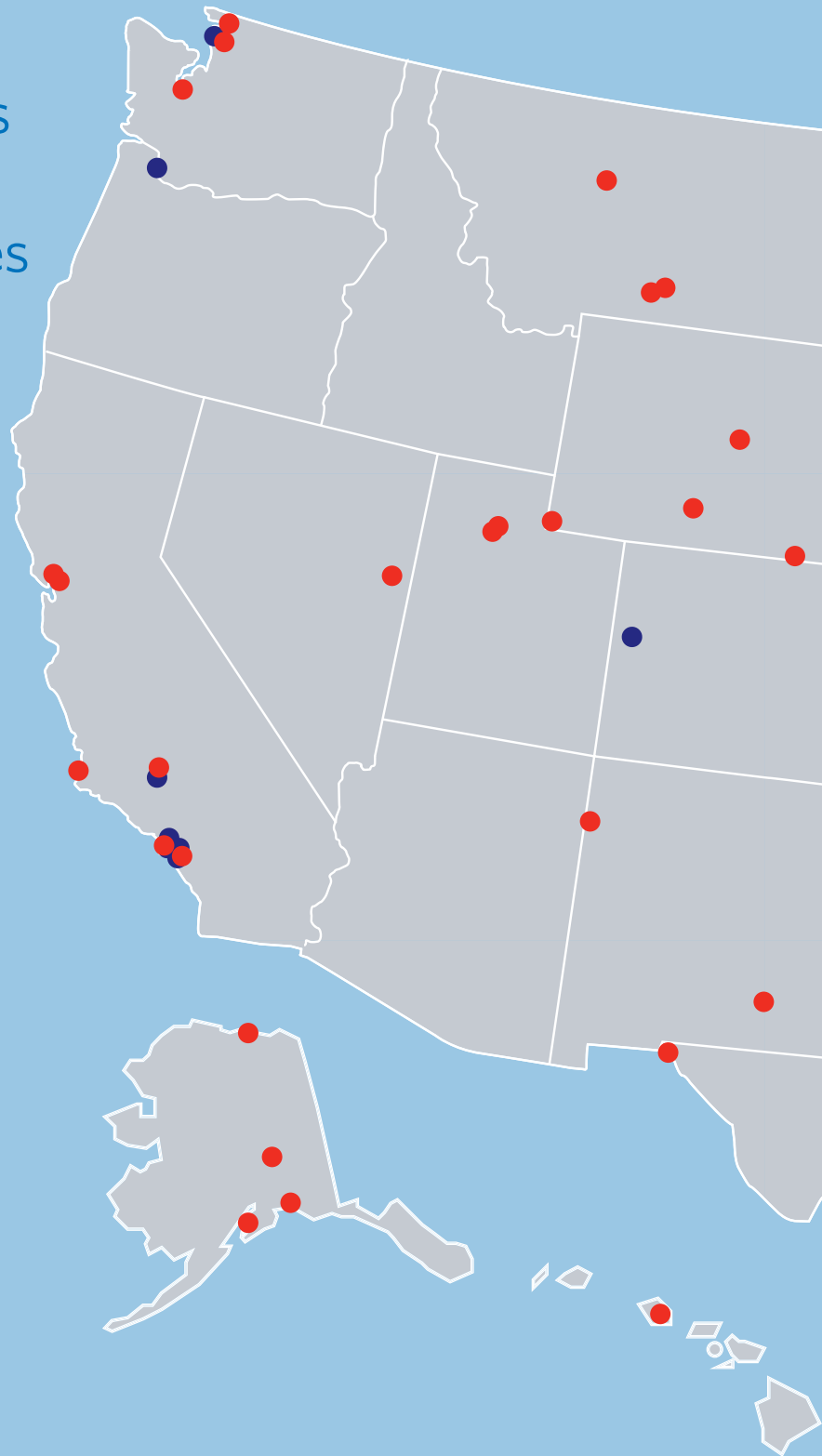
There are 459 refineries and petrochemical facilities across 39 states in this country.

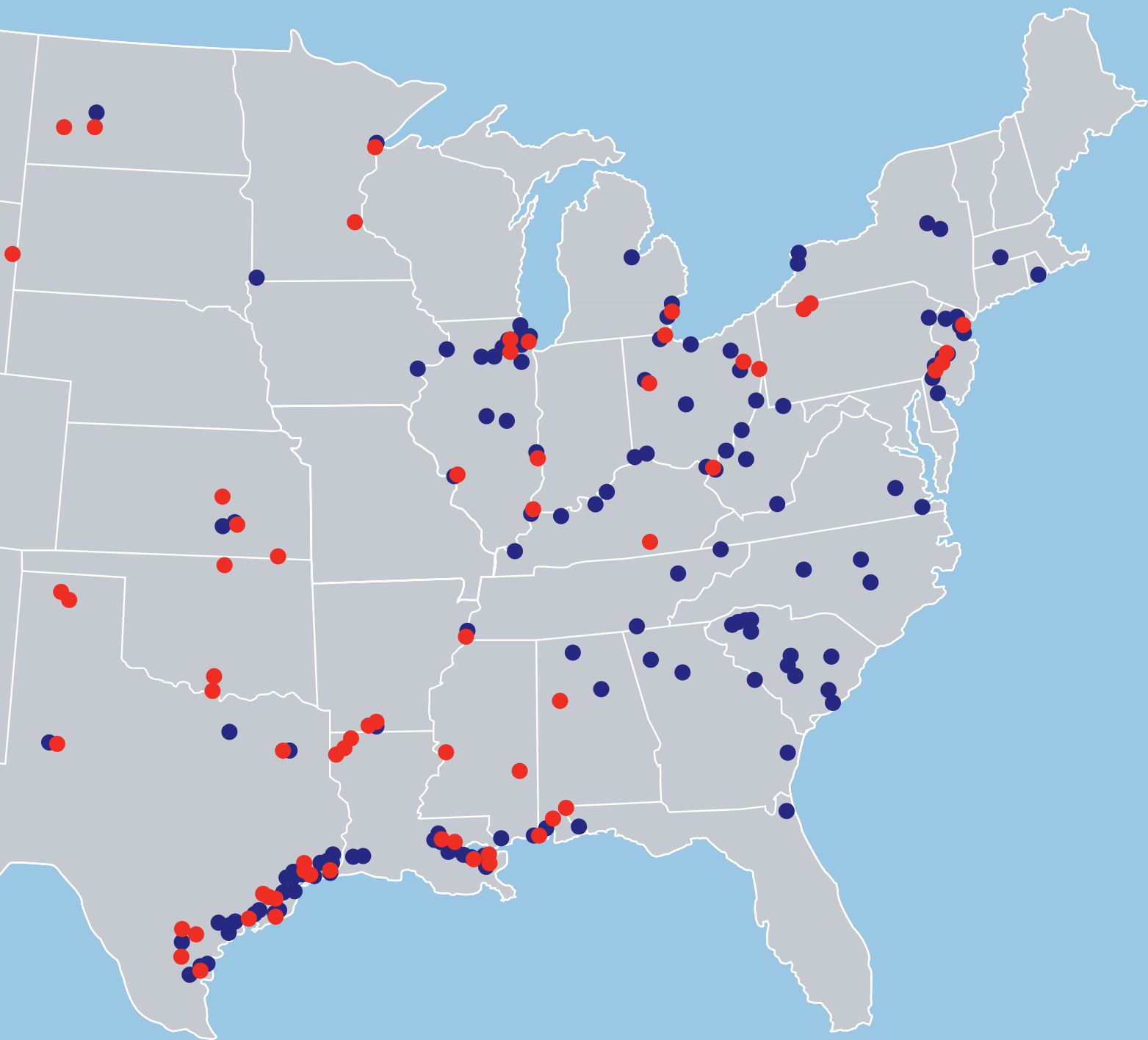


135
refineries



324
petrochemical facilities





Global Leadership in Refining

U.S. refineries are among the most sophisticated and complex in the world and lead in refinery capacity utilization — the percent share of a refinery’s operable capacity that is used. For more than five years, U.S. refineries have consistently operated at or above 90% of capacity.¹

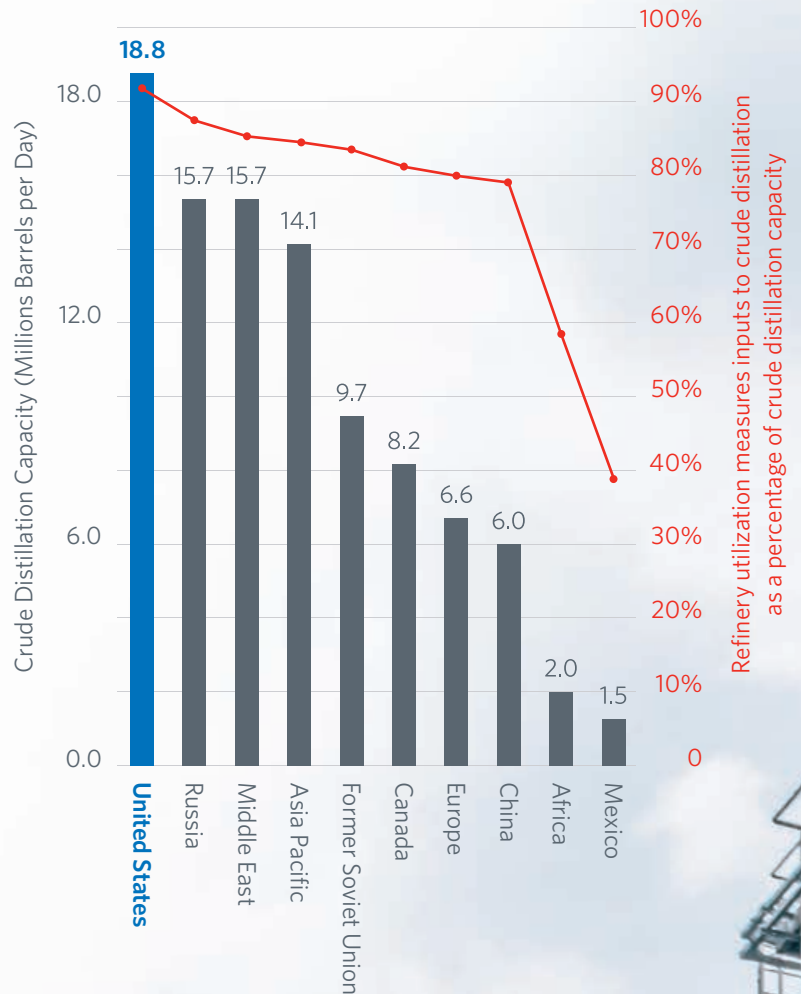
Our facilities produce cleaner fuels and more high-value products from a range of crude oil qualities. In 2019, they supplied 275 billion gallons of gasoline, diesel, jet fuel and other products to consumers in the United States and more than 84 billion gallons of products to consumers in 136 countries.²



18.8 million barrels

The U.S. refining industry includes 135 refineries that can process a total of 18.8 million barrels per day of crude oil, accounting for close to 20% of total global capacity.³

Global Refinery Capacity and Utilization⁴



What is Refinery Capacity Utilization? A measure of efficiency!

Refineries measure capacity as the amount of crude oil a refinery can process, turning it into gasoline, diesel, jet fuel and other products. *Refinery Capacity Utilization* measures how much of the capacity of a single refinery or refining system actually gets used.

Refinery utilization rates in the United States are among the highest in the world, averaging more than 90% for the past 5 years, as compared to 80% with the rest of the world.

The higher the utilization rate, the more efficient and competitive a refining system — and the U.S. refining system is one of the most competitive in the world, which is why the United States leads the world in the supply of refined products to the global market.



275 billion gallons
to the United States



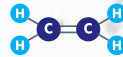
84 billion gallons
to 136 countries

In 2019, the United States supplied 275 billion gallons of gasoline, diesel, jet fuel and other products to consumers in the United States and exported more than 84 billion gallons of products to consumers in 136 countries.

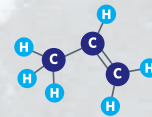
What are Petrochemicals?

There are six basic petrochemicals — ethylene, propylene, butadiene, benzene, toluene, xylene — that, when combined with other chemicals, are transformed into other materials that make products better.

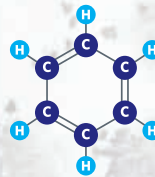
They make nylon stronger, so seatbelts are safer. They make workout clothes sweat resistant. They make cars and airplanes lighter, so they are more fuel efficient.



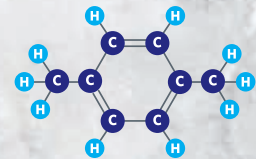
ethylene



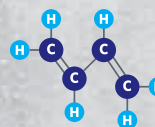
propylene



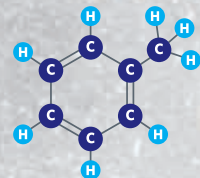
benzene



toluene



butadiene



xylene

Ethylene and Propylene in Focus

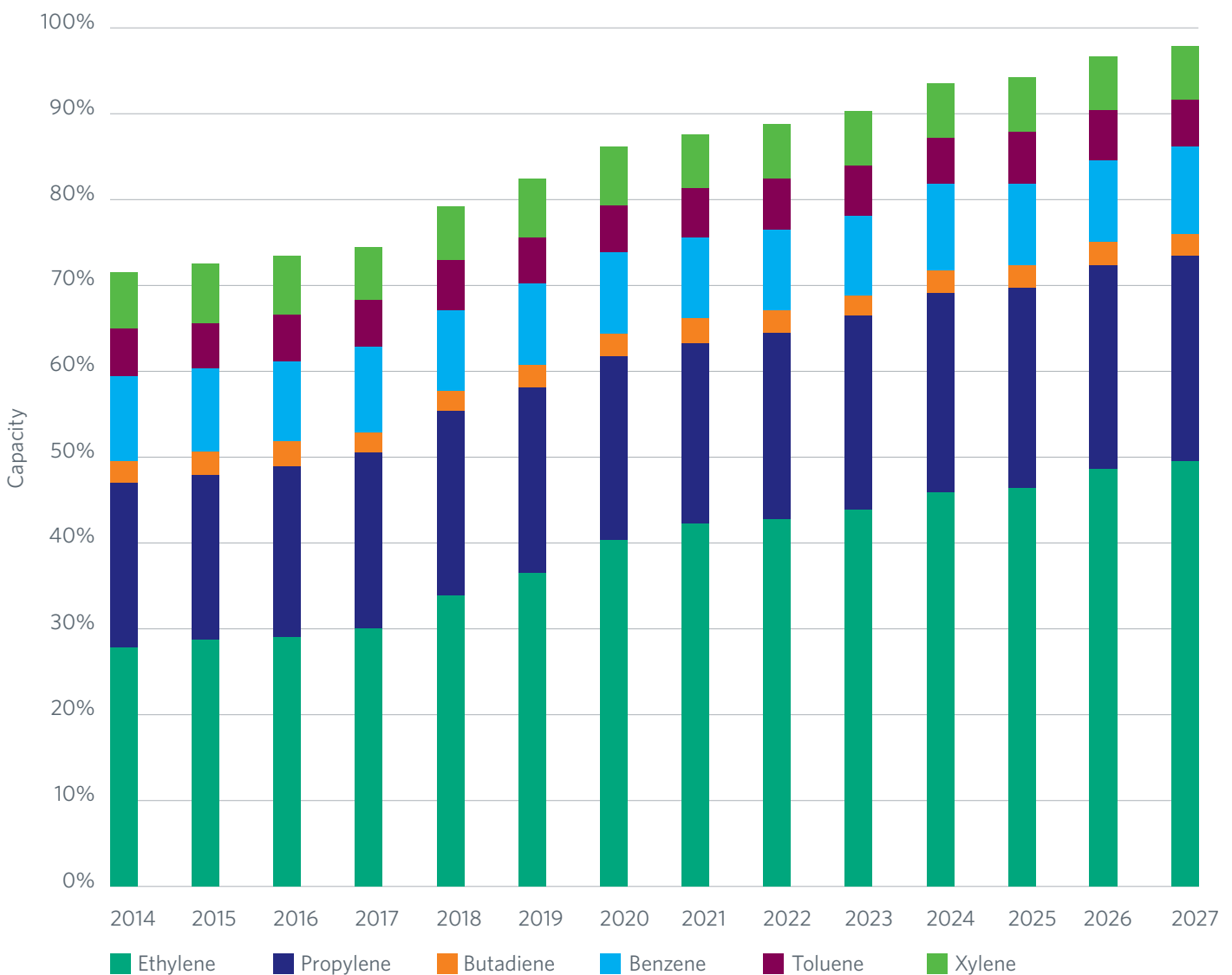
Ethylene and propylene are the two most in-demand of the six primary petrochemicals. Together they account for nearly two-thirds of the global petrochemical demand.

The United States today is the undisputed leader in global ethylene capacity with 20%⁵ of the total market and will remain a net producer as planned U.S. projects come online. Since 2015, we've been a net exporter of ethylene and are expected to remain so for the foreseeable future.

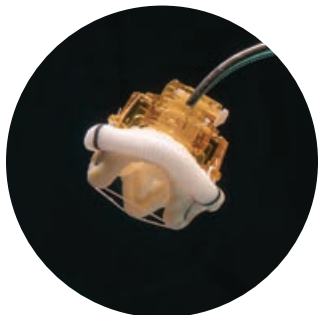
Total U.S. capacity of each of the six primary petrochemicals is growing and will do so for the foreseeable future.

The United States produces about 16% of global propylene capacity, second only to China. Although produced in much smaller quantities, we are also net exporters of toluene and xylene, with 14% and 7% of global capacity.⁶

Total U.S. Petrochemical Capacity⁷



Growth in the U.S. Petrochemical Industry



Petrochemical products are foundational to the global economy, providing the building blocks for millions of products that make our modern lives possible.

From the propylene in life-saving heart valves, to the ethylene used in wind turbines and solar panels and the toluene in the waterproof seals that protect our smartphones, to countless applications for our products we have yet to uncover, petrochemicals, often unknown and unseen, are vital to making progress on challenges both big and small.

As the global population grows and the middle class increases, so too does demand for products derived from petrochemicals. In the next 30 years, the world's population is expected to increase by 2 billion to 9.8 billion people, of this more than 5 billion will be in the middle class worldwide. This expansion of the middle class will increase demand for petrochemicals, as the International Energy Agency (IEA) reports that advanced economies currently use up to 20 times more plastic than developing economies. The U.S. petrochemical industry — with access to abundant and affordable natural gas feedstock — is well positioned, and growing, to meet this increased demand.

In 2019, there were 32 active and completed petrochemical projects in the United States, with investments of \$14 billion. Additional investments are planned, which through 2021, total over \$29 billion.⁸ As this construction ramps up and new facilities open, thousands of new jobs will be created.

32 in 2019

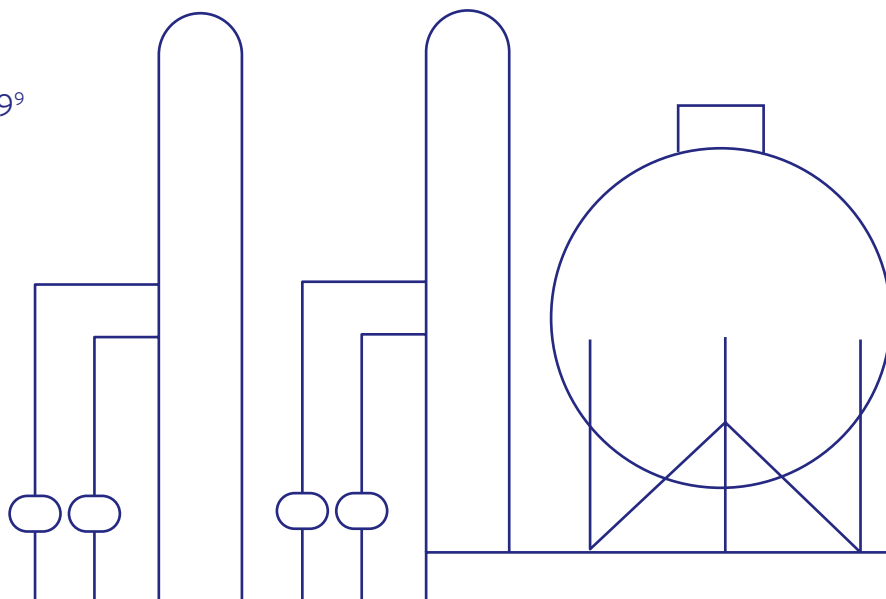
Number of active and completed U.S. petrochemical projects in 2019⁹

\$29 billion

Additional investments planned through 2021¹⁰

89 to 96 mmt

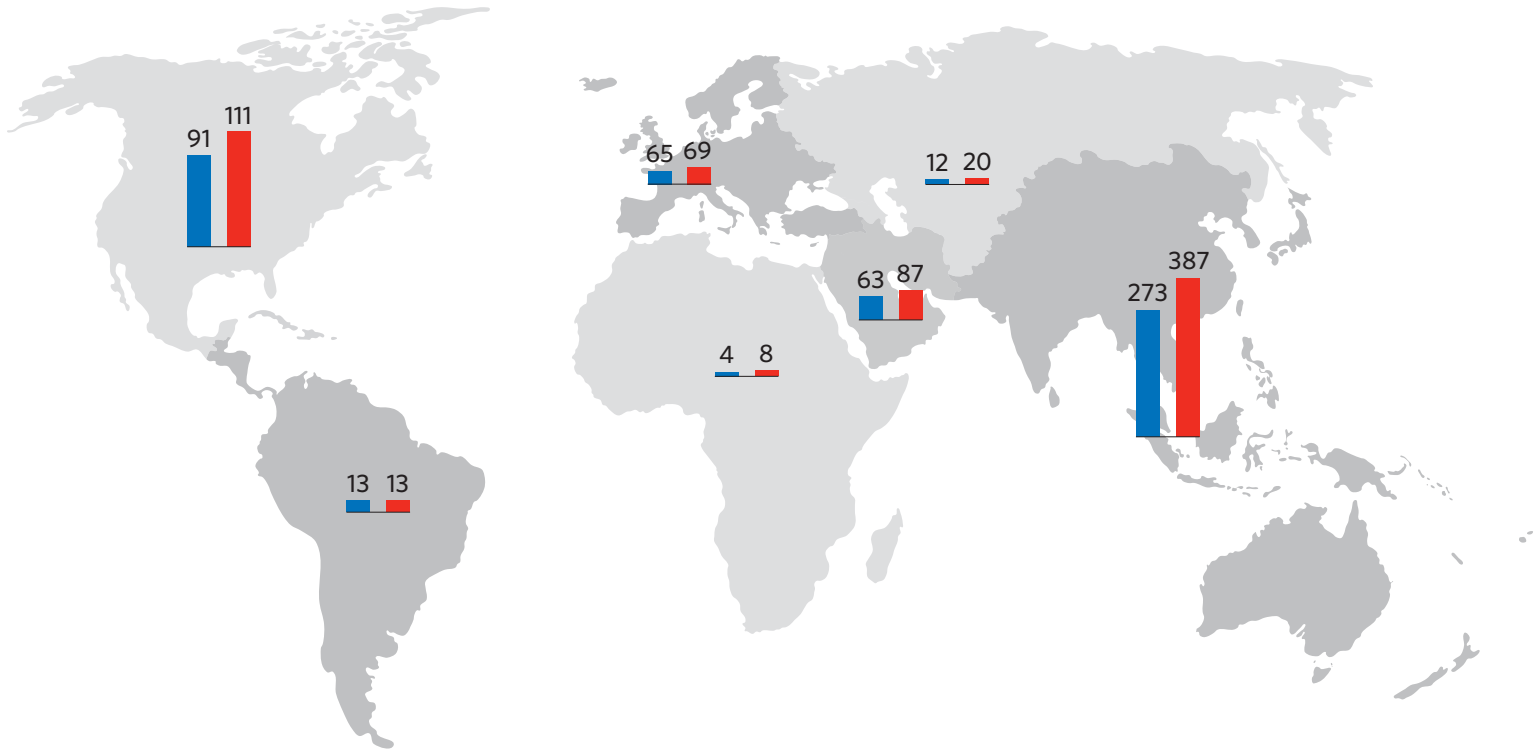
U.S. total petrochemical capacity growth from 2019 to 2027¹¹



Total Global Petrochemical Capacity is Dominated by North America and Asia¹²

Capacity in million tons

■ 2018 ■ 2027



The U.S. petrochemical industry comprises 324 facilities, representing 15% of global capacity.¹³ U.S. petrochemical manufacturers export products to every region around the world.

Environmental Stewardship

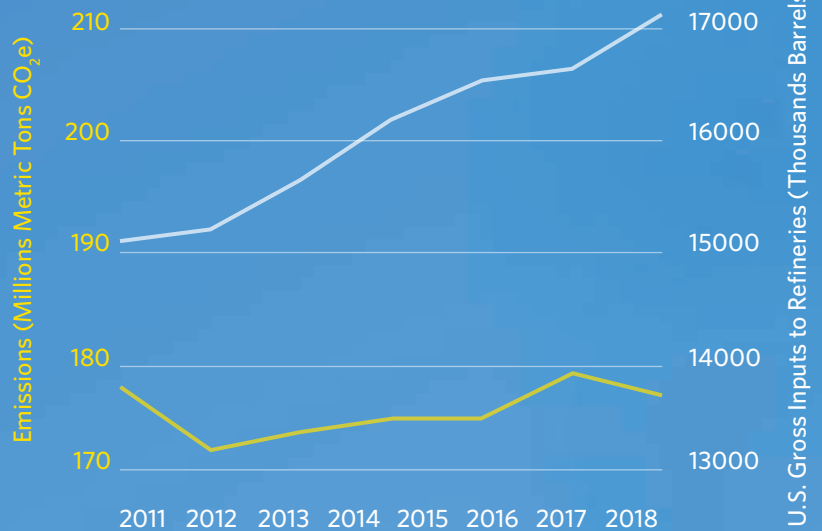
Clean air, energy efficiency, responsible water use and waste reduction are all part of the commitment made by fuel and petrochemical manufacturers to protect the environment — both within the fences of our facilities and in our communities — communities that we and our loved ones call home. AFPM members have invested billions of dollars to improve the environmental performance of our operations and produce cleaner fuels.

Reducing Emissions

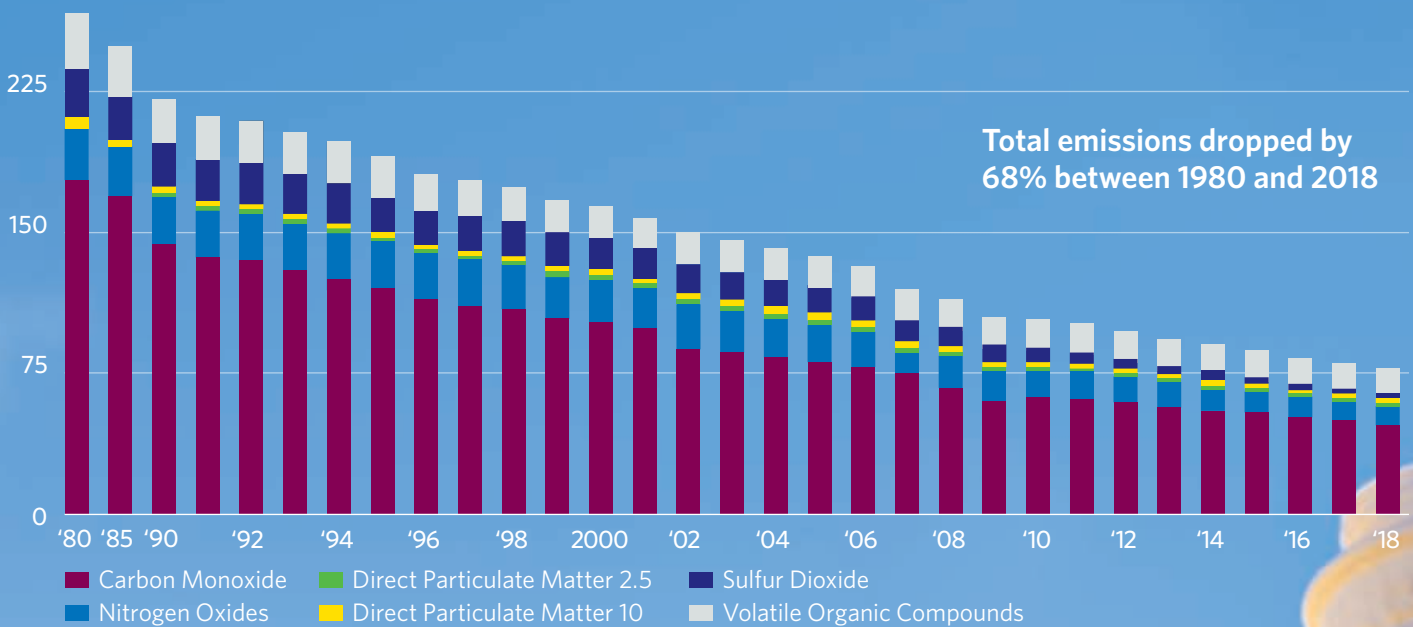
Environmental Protection Agency (EPA) data show that emissions have been reduced significantly since 1980. This progress was made while meeting stringent regulations and increasing production to satisfy a growing need for our products. Refinery utilization has steadily increased, while emissions levels have stayed steady.

The increasing efficiency of U.S. petrochemical plants means lower emissions for each unit of plastic-building-block they produce. Despite a historic expansion in the petrochemical sector, U.S. EPA data shows only a slight uptick in carbon emissions in 2017. And these facilities are set to become even more efficient and cleaner in the future.

Refining Sector: Annual Reported Direct Emissions and U.S. Gross Inputs¹⁴



Declining National Air Pollutant Emissions¹⁵



From 1970 to 2018, the U.S. Gross Domestic Product increased 275% while carbon emissions decreased by 22%¹⁶

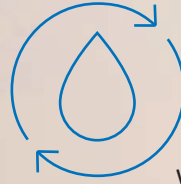


Preserving our Surroundings



AFPM members have deep respect for nature and work to protect our natural resources. Their work varies from maintaining and stabilizing wildlife habitats like prairies and wetlands, to preserving coastlines facing erosion. Some partner with nonprofits to create habitats on their own properties and conduct conservation education programs with employees and community members, while others provide funding for state-led reintroduction programs for endangered species.

Water Management



Water is essential in the cooling towers and boilers needed to produce fuel and petrochemicals, and as much as 70% of the water at some fuel and petrochemical facilities is recycled or reclaimed. Wastewater from these operations is treated before discharge or disposal, and many AFPM members' treatment efforts go above and beyond what is required by existing regulations. Innovative treatment methodologies mean that the water coming out of our facilities is often cleaner than the water coming in.



Since reopening the facility in 2012, **Monroe** has sent over 46,000 tons of materials for beneficial reuse instead of to a landfill. This includes the recycling of products like paper, plastics, aluminum, cardboard, tin, steel, and glass throughout the refinery, and materials like blacktop, wood and concrete, when improvements are made at their Trainer Refinery.



ExxonMobil is using technology to reduce, reuse and recycle energy throughout their operations. By using this technology, the company is capturing heat generated from the production of electricity for use in production, refining and chemical processing operations. Due to its inherent energy efficiency, the use of cogeneration leads to reduced greenhouse gas (GHG) emissions. ExxonMobil has interest in approximately 5,400 megawatts of cogeneration capacity in more than 100 installations around the world. These facilities alone enable the avoidance of about 6 million metric tons per year of GHG emissions.



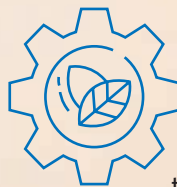
Chevron Phillips Chemical Company reinforced its commitment to environmental stewardship by making a \$15 million investment in the Circulate Capital Ocean Fund (CCOF). This is the world's first investment fund dedicated to incubating and financing companies and infrastructure that prevent ocean plastic in South and Southeast Asia. CCOF will provide financing to companies and projects to build circular supply chains that can deliver and re-capture resources at scale while preventing the flow of plastic pollution into oceans.

Energy Conservation



The efficiency and sound resource management for which our industries have become synonymous are also exemplified in the numerous cogeneration systems at U.S. fuel and petrochemical facilities. Producing both electricity and thermal energy, on-site electricity generation avoids losses associated with transmission and distribution and helps avoid greenhouse gas emissions. Cogeneration provides some facilities with roughly half of the power required for operations.

Waste Management and Recycling



Responsible management of waste at facilities and beyond is a priority for refiners and petrochemical manufacturers. Our members recycle products like paper, aluminum and plastics at their facilities. They also invest in their own research and development and form partnerships with outside organizations to address broader waste management issues, like that of the proper disposal and recycling of plastic waste.



AFPM members' water treatment efforts go above and beyond what is required by existing regulations. Innovative treatment methodologies mean that the water coming out of our facilities is often cleaner than the water coming in.

Commitment to Safety

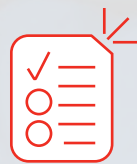
There is nothing more important to the fuel and petrochemical industries than safety. Together, we constantly work toward the goal of zero incidents. Our industries have a strong safety record and are constantly innovating and improving to become even safer.

We work closely with local, state and federal governments to advance safety and prevent incidents. And, we go above and beyond requirements to keep our people, communities and facilities safe.



Safety in Fuel and Petrochemical Facilities

There are two primary types of safety in facilities: process safety and occupational safety. Both are governed by comprehensive regulations and different government agencies. AFPM works closely with these agencies to improve the safety of our facilities.



Process Safety

Process Safety involves applying good practices in operating, engineering and maintenance to prevent accidental releases of substances in a manufacturing facility. Fuel and petrochemical manufacturers work with the Occupational Safety and Health Administration (OSHA) and the U.S. Environmental Protection Agency to keep our employees, communities and environment safe. Refining and petrochemical sites undergo routine maintenance, as well as continuous monitoring and auditing



“Our goal is to always keep what’s in the pipe — in the pipe — and to do so with zero injuries, illnesses or releases that may impact the environment. We do this by investing heavily in technology, rigorous operating practices, hazard detection, and extensive training to make sure that safety is a part of the culture at every facility.”

— Rebecca O’Donnell, AFPM safety specialist



Occupational Safety

to ensure their practices and procedures are constantly improving and in compliance with regulations.

We also strive to exceed regulatory compliance by following additional recommended practices to promote a safe working environment. We track Process Safety Events (PSEs) so industry can benchmark safety performance and identify opportunities for additional improvement.

Occupational Safety is about making sure our employees go home the same way they came to work. AFPM offers robust safety resources that focus on preventing employee injuries by teaching company procedures, good safety practices such as hazard identification and awareness, as well as job specific activities. AFPM members work with OSHA to achieve the highest level of industry safety possible. Our members constantly strive to go beyond regulatory compliance to provide a safe workplace for all employees.

AFPM Safety Programs

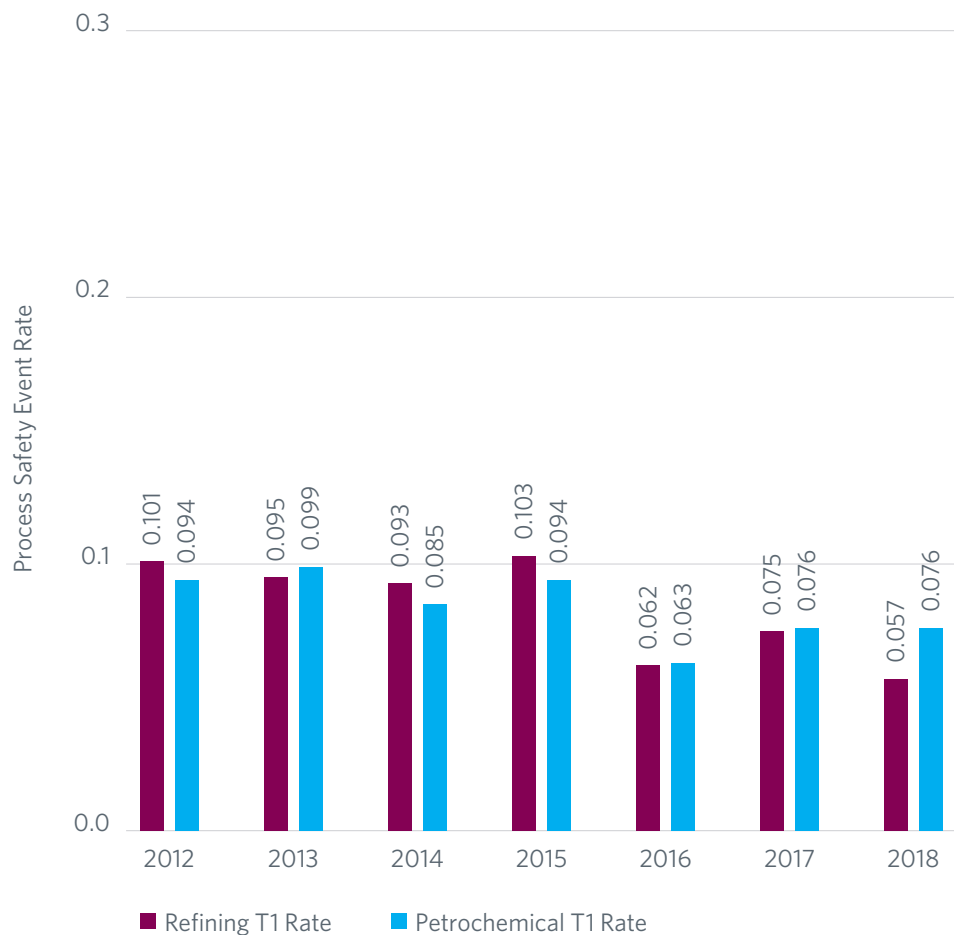
AFPM members put competition aside and collaborate across companies and industries to constantly improve safety performance through programs focused on both process safety and occupational safety and through an immersive learning working group that addresses next generation training.

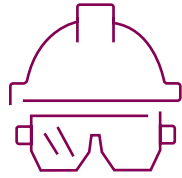
“My true passion is working on proactive programs that improve safety across industries. I’m a believer that these facilities can achieve zero injuries and releases from equipment.

I am proud that I can do my part to improve safety and when I talk to government agencies, my passion and knowledge for safety is admired. I believe the words coming out of my mouth because I have seen the results.”

—Lara Swett, vice president, technical services, AFPM

Refining and Petrochemical Tier 1 Process Safety Event Rates¹⁷





40% decrease in process safety events since 2011¹⁸



Advancing Process Safety (APS) is a groundbreaking, voluntary program developed to promote collaboration across industries and to continuously improve process safety through data collection and opportunities to share experiences and knowledge. Launched in 2010 to work toward a goal of zero process safety events at all facilities, the program has grown to include a suite of resources that encourage the sharing of information and good practices.

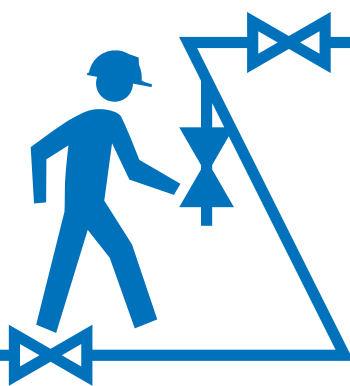
Advancing Process Safety Program is a joint program between AFPM and the American Petroleum Institute (API) and consists of several programs:

Walk the Line (WTL) is a practice sharing program that features an annual training workshop. WTL engages operations personnel, with a focus on the front-line employee, to understand with 100% certainty where the material is flowing. What began as a process safety program has evolved into an operations-driven program supported by data for a reduction in events.

The Process Safety Regional Networks allow process safety professionals from refineries and petrochemical facilities to meet face to face, discuss process safety topics, and share good practices. The eight regional networks work with sites to tackle common, regional challenges, create a close support network and help process safety professionals understand how to establish effective programs.

The Process Safety Site Assessment Program deploys independent, third-party process safety experts to assess individual facilities' process safety systems. These industry-qualified experts evaluate the quality of written programs and the effectiveness of implementation. They also assess a site's process safety leadership, operating practices, mechanical integrity, safe work practices, management of change, process hazard analysis, facility siting, product storage and transfer, incident learning and hydrofluoric acid alkylation.

The Advancing Process Safety Program also consists of several practice-sharing subgroups that bring together industry personnel to identify areas of improvement and share knowledge. They include the *Hazard Identification/Practice Sharing Subgroup*, *Mechanical Integrity Subgroup* and the *Human Reliability Subgroup*.



“Walk the Line is an essential element of the process safety culture. This should prevent loss of primary containment and ensure proper pre-commissioning and unit preparedness. This includes the proper training to keep everyone safe and sustain strong performance.”

— *Lawrence Moreaux, site manager*
Chocolate Bay, LyondellBasell Industries

AFPM Safety Programs

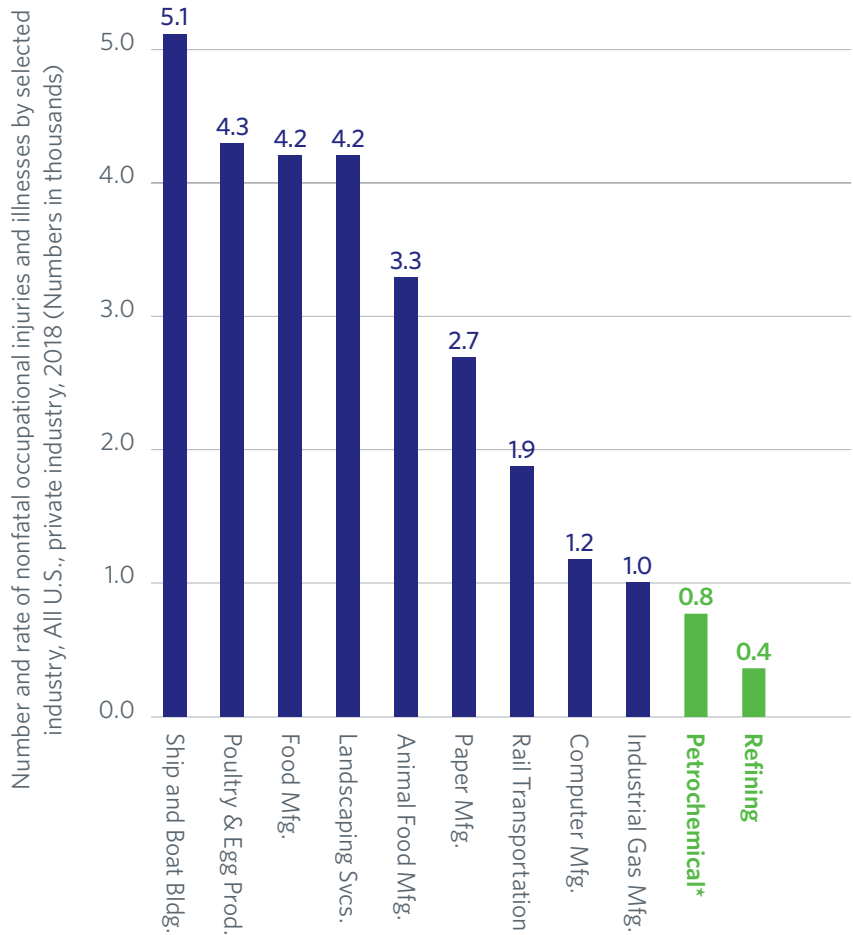
Occupational Safety Regional Networks Program

Building on the success of APS regional networks AFPM manages six, regional occupational safety networks. These networks encourage peer-to-peer networking, create a forum to exchange ideas and enhance occupational safety performance of all sites in the region.

Regional Network:

- Central States Regional Network
- East Coast/Mid-West Regional Network
- Eastern Gulf Coast Regional Network
- Pacific Coast Regional Network
- Rocky Mountain Regional Network
- Texas Gulf Coast Network

Incident Rates of Non-Fatal Injuries or Illnesses Among Manufacturing Sectors 2018¹⁹



*The data for the 2018 petrochemical manufacturing industry is not currently available, data shown is from 2017.

Immersive Learning Subgroup

The AFPM Immersive Learning Subcommittee helps improve industry safety by developing supplementary training tools for low frequency, high consequence critical activities with immersive and interactive technologies. This group developed and launched the first AFPM virtual reality simulation, a complex training tool simulating the process for lighting a fired heater. The tool allows members to learn the consequences of the critical steps of lighting a fired heater in a safe environment.



The VR simulation trains employees by using three different modules to familiarize them with the hazards of lighting a fired heater and build their competency.

Our industries have some of the lowest total recordable rates of injuries and illnesses in the entire manufacturing sector.



Incident Classification Data Collection Program is a personal safety tool that records and analyzes member companies' actual and high potential and near-miss incident data to categorize each incident and measures its severity. The data allows member companies to clearly evaluate and focus on the important improvement opportunities within their facilities and allow AFPM to identify opportunities for industrywide improvement. By working to understand more about incidents, we are able to develop tools to help address areas for opportunity and move beyond the numbers.



Enhancing Training with Virtual Reality

AFPM recently developed a highly advanced virtual reality (VR) simulation to supplement training for employees at refinery and petrochemical facilities and enhance safety. The focus of this simulation is lighting a fired heater from cold start to help employees learn and understand the safety critical steps involved in this activity and ensure they understand the consequences of a failure. This topic was coupled with immersive technology because of its high consequence, low frequency nature, and the challenge this activity has with hands-on training.

"AFPM is focused on developing emerging training technologies. As we do so, we will measure their effectiveness and provide valuable information to our members to take back to their companies to show the value of VR and potentially expand its use," said Danny Forest, senior manager of safety programs at AFPM.

The simulation begins in a classroom setting, which includes a tutorial that familiarizes trainees to the VR environment. Next, they cover the basics of key VR actions used in the simulation, including the proper way to turn valves or press buttons. Trainees can choose between two learning scenarios, a guided simulation that walks the operator through the procedure, providing prompts and assistance; or an unguided module that allows the individual to fail safely and learn from their mistakes within the VR environment.

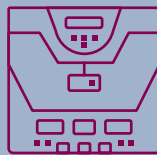
"When you consider how millennials and Gen Z learn, this VR and immersive learning component adds another style of learning, which this workforce appreciates," said Russell Klinegardner, chief operating officer of Houston Area Safety Council (HASC), which is also beginning to incorporate VR simulations into training for contractors for work at fuel and petrochemical facilities.

Emerging Technologies in Our Operations

Fuels and petrochemical companies are utilizing cutting edge technologies to enhance the safety and security of our operations and improve training at our facilities, making them some of the most advanced workplaces in the world.



Virtual reality (VR) is being used in trainings, giving employees real-life experiences in safe, controlled environments. Virtual reality can reduce training time, and help employees prepare for complex tasks. The scenarios in which VR can place an employee are endless, from training with heavy machinery, to starting a fire-heater, to simply turning valves.



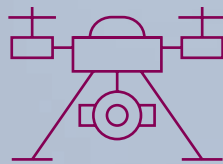
Simulators are being used in training, replicating actual facilities and procedures to familiarize employees with new equipment and prepare for complicated events like start-ups and shut-downs.



Connected Lens Technology allows workers conducting highly complex tasks to consult with experts in real time, regardless of location and distance. This technology bypasses the logistical challenges that once prevented experts from being onsite in situations where their experience is most needed.



Wearable Devices include smartwatches, smartphones and Bluetooth and are increasingly being used at our facilities to make it quick, easy and convenient for workers to communicate and share information.



Drones are being used to monitor facilities from above, which means keeping people from working at heights, thus reducing their risks. Drones also monitor larger areas in shorter periods of time, providing near-instantaneous feedback and cost savings.

Virtual Reality Improving Training, Safety at Refining and Petrochemical Facilities

The operator of an 800-ton crane at **ExxonMobil**'s Baton Rouge, polypropylene project construction site lowers a new 150-foot-tall reactor into place. The maneuver requires that he understands the physics of the lift, as well as ensuring the rigging is installed properly, the swing is stabilized and bystanders are safely out of the way.

Installing two reactors, with a combined weight of 1.1 million pounds, requires precision and a steady hand at the crane controls. That is why the company is using virtual reality (VR) to train its crane operators before the heavy lifting begins. ExxonMobil is using VR training at the more than \$500 million polypropylene project to improve work performance and safety, while also reducing training time.

"We're hiring a lot of people, so it's imperative we increase competency quickly — one way is through virtual reality," says Keitt Wannamaker, project lead for the ExxonMobil polyolefins plant. "We have found that the VR training saves time, improves project reliability and, in some cases, is more cost-effective than traditional training methods."

VR allows workers to become familiar with the operations of the new plant before it is completed, and ExxonMobil is hoping to expand the use of VR as it gears up for a major expansion of its facilities along the Gulf Coast.

VR Helps Shorten the Learning Curve

The safety performance at U.S. refineries and petrochemical facilities is better than ever and continues to improve, thanks in part to a range of technologies such as drones and systems that monitor facilities digitally instead of manually. Injury and incident rates at refineries and petrochemical facilities have dropped during the past 30 years and are now five-times lower than the total recordable rates of the entire manufacturing sector.

"Within the next 10 years, some companies will be losing 40% to 50% of their workforce," said Christopher McAulay, an operations trainer with **Sinclair**'s refinery in Casper, Wyoming. "We have a bunch of people with three to six years of experience, and we want them to be ready if, for example, we're putting something online they've never seen before."

VR can help shorten the learning curve.

"As humans, our original way of learning is by contextually experiencing it," says Tyler Gates, managing principal of Brightline Interactive, a VR development company that got its start nearly 16 years ago building training simulations for the U.S. Department of Defense. "We are spatial beings. VR helps people better understand what it is like to actually be in a certain real-life scenario — an experience that the brain remembers like a lived experience — operate in that environment, fail safely and learn from their decisions."

'A more connected workforce'

In addition to programs such as those being developed by AFPM, refining and petrochemical companies are also studying technologies that connect workers and improve communications and collaboration.

For example, **Flint Hills Resources** is testing connected lens technology, which if adopted, would allow an engineer in Wichita to see exactly what his counterpart in Minnesota is doing and offer advice.

"We're looking at different wearable devices to have a more connected workforce," said Bjorn Olson, Flint Hills' technical training lead.

With connected lens technology, workers conducting highly complex tasks can consult experts in real time regardless of location and distance. This bypasses the logistical challenges that once precluded experts from being on site in situations where their experience is most needed.

U.S. refineries and petrochemical facilities are embracing these and other steady advances in virtual and augmented reality technologies to continue to improve safety, benefit employees and remain dynamic in the fast-paced energy marketplace.

"VR helps people better understand what it is like to actually be in a certain real-life scenario — an experience that the brain remembers like a lived experience — operate in that environment, fail safely and learn from their decisions."

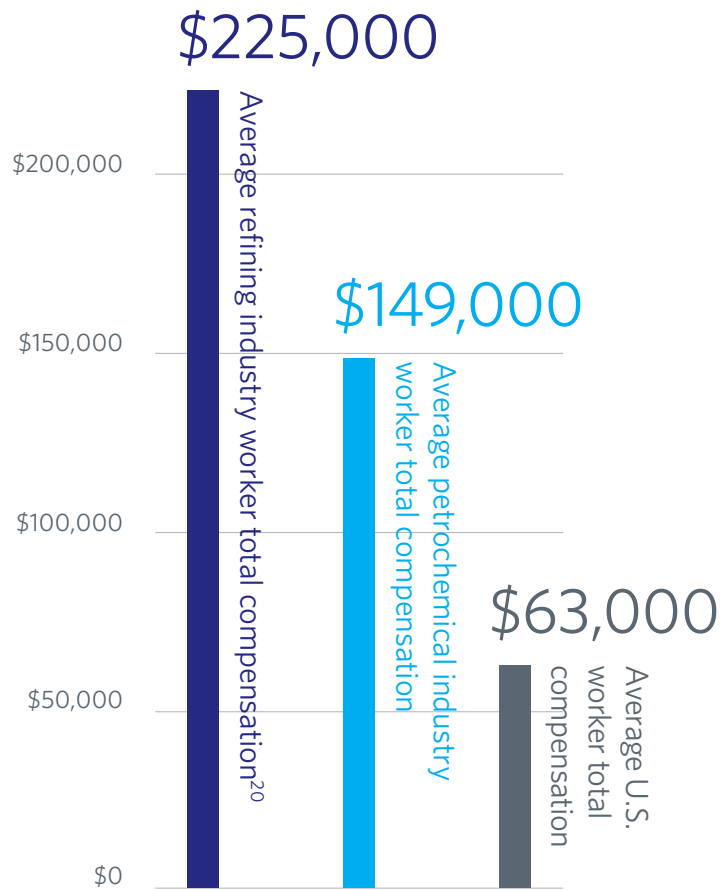
— *Tyler Gates*
Brightline Interactive



Jobs in the Fuel and Petrochemical Industries

The refining and petrochemical industries are hiring. Our industries provide well-paying, highly skilled jobs to people from all walks of life, experiences, opportunities and education levels and support 3.5 million jobs across the country.

There are jobs that require advanced skills and knowledge, but do not necessarily require college degrees, and others that require highly specialized expertise and advanced degrees. Employees in our industries are process operators and technicians, crane operators and inspectors, maintenance workers and boiler operators. They are also seismologists and meteorologists, chemists and mathematicians, wildlife biologists and machine learning engineers, data scientists and robotics engineers, cybersecurity analysts and environmental engineers.



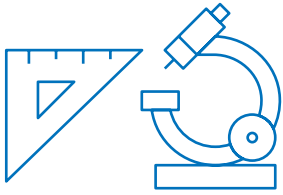
U.S. refining and petrochemical manufacturers support 3.5 million jobs in all 50 states.²¹



Krystal Garcia is an instrument technician with INEOS, a petrochemical company producing plastics that are used in making home insulation, medicines, food packaging and a lot more. When she started at the INEOS plant in Houston, as Krystal says, she didn't even know what a wrench was (she'd been working as a paralegal).

She knows now though after two years of a full-time, paid apprenticeship where she worked in the plant and earned an associate degree in instrumentation at the same time.

Her day job is to keep things running — inside and outside at the plant — monitoring temperature and pressure and flow rate — adjusting temperature and pressure flow rate — testing equipment and repairing it — driving a forklift, climbing a tower, showing up in the middle of the night when something unexpected happens, doing something different every day.



Developing the Future Workforce

Amidst record expansion in our industries and a looming wave of retirements in the next decade, the refining and petrochemical industries are helping to prepare potential employees to fill roles of all types now and well into the future.

We are working to fill roles today through partnerships with career development centers, community colleges and local economic development organizations to train more skilled workforce. Working in partnership with these organizations, we are preparing people in our communities for opportunities to do challenging, fulfilling and well-paid work with a long-term career path.

And we invest heavily in developing the next generation of employees by supporting STEM – science, technology, engineering and math – education at all levels. Our companies are investing in programs to spark the interest of middle school students, giving high school and college students the practical hands-on experience they need to excel in these fields, and supporting programs to keep teachers on top of their fields.

“Probably one of the biggest satisfactions of working in this industry is that you’re part of something that’s going out there into the world and making it better.”

— *Krystal Garcia, INEOS*



How a Refinery’s Neighbors Became its Future Workforce

Born and raised into a low-income family in San Pablo, California, about 30 minutes east of San Francisco, Yesenia Pineda struggled to find a sustainable career after leaving high school. She lacked the money and support to complete a college degree. At the time, she didn’t think to ask whether the area’s largest employer, the Chevron Richmond Refinery, was hiring. She always thought applicants needed at least a college degree to qualify for jobs at Chevron, known to provide high wages and good benefits.

“I’ve known Chevron all my life,” Pineda said. “You have to be a super genius with a college background. Normal people don’t go to work there.”

Or so she thought. One day, while feeling stifled by an unfulfilling job, she was invited to an orientation for a career program.

“Where are we going?” she remembered asking her classmate. “To attend a training program that helps people get jobs at places like Chevron,” he said.

Pineda was skeptical, but she agreed to attend – a decision that has changed her life in the same way it had changed hundreds of lives before her.

After learning about the Regional Occupational Program, a statewide vocational training program that prepares Californians for successful careers in a wide variety of fields including the refining and petrochemical industries, Pineda found out she didn’t need to be a genius, or even have a college degree, to qualify for opportunities at Chevron. What she needed was just five months of dedication. And the best part, there was no cost for Pineda to participate. While working the late shift full time, Pineda completed the intensive, ROP Plant Process Operator course. It paid off — literally. Last year, she was hired into the Chevron Refinery’s Operator Trainee Program. It’s a lucrative career track, as process operator annual salaries in the refining industry range from \$94,363 to \$135,742. And now she is enjoying a new normal.

Contributing to Our Communities

Our companies are woven into the fabric of their communities. Our companies are employers, economic contributors and community supporters. Our people are volunteers, coaches, fellow parents, Sunday school teachers and community leaders.

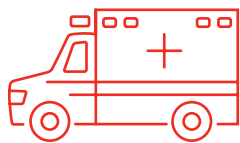
In 2018, the fuels and petrochemical industries contributed over \$60 billion in federal taxes and nearly \$70 billion in state and local taxes²² — supporting state and local essential services such as education and health services, law enforcement and fire services, and infrastructure development, to name a few.

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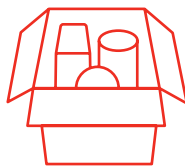
Our companies actively support our local communities through hundreds of millions of dollars in charitable contributions and thousands of hours of volunteering with civic, health and human services, education and environmental organizations and programs.



Renovate homes for people in need



Provide funding and education to first responders



Fund and donate supplies to local food banks



Organize and participate in toy drives

In 2019, **LyondellBasell** marked two decades of service projects through its annual Global Care Day program. Sustainability and helping to eliminate plastic waste in our environment took center stage on many of the global efforts. More than 4,200 employees rolled up their sleeves to leave a positive, lasting impact in the communities where they live and work. Global Care Day began in 2000 to encourage worldwide volunteerism in the communities where LyondellBasell operates.



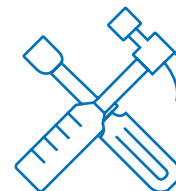
HollyFrontier recognizes the value of beautification projects and their role in enhancing their communities. In 2018, the company donated land along U.S. 285 valued at \$260,000. The donated property was a critical piece of the city of Artesia's First Street beautification and tree-planting project headed by the local organization Artesia MainStreet and development began in October 2018. HollyFrontier's gift, along with contributions from corporate and individual donors, will enhance the region's landscape for current residents and future generations.



Two weeks each year, about 40 to 50 **Valero** Ardmore Refinery volunteers cook, host and serve meals for needy families and the homeless at the Ardmore Soup Kitchen in Oklahoma. The nonprofit Ardmore Soup Kitchen is run solely on donations and through volunteers from the southern Oklahoma community. Each week approximately 275 to 450 meals are served. This support reflects the generosity of the people of Ardmore, and of the Valero refinery.



Phillips 66 encourages its employees to volunteer for causes that matter to them and make a difference in their communities. Their Ferndale Refinery Women's Network and Ferndale Futures group recently volunteered for the Opportunity Council's Chore Program, helping a senior citizen by doing yard clean-up and maintenance projects. The project not only helped a member of the community, but the team's efforts earned a \$1,000 donation to the Opportunity Council from the Phillips 66 Volunteer Grants Program.



Driving Sustainability

Fuel and petrochemical manufacturers make substantial investments in research and development, enhanced equipment and new capabilities to improve our ability to deliver increasingly cleaner products — and products that make other products more efficient. These innovators are tackling some of the biggest challenges in cleaner transportation, advanced energy and plastic waste.



“There’s been more demand for cleaner products across the board and American facilities are going to be producing the cleanest products we’ve ever had in history.”

— *Brendan Williams, vice president, government relations, PBF Energy*



16

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0.5% in
2020

Investing in cleaner fuels that power global trade

U.S. refiners are supplying the globe with cleaner marine fuel than ever before and helping reduce emissions in global trade. Having invested billions of dollars in the past decade alone to produce fuel that emits fewer pollutants than traditional marine fuel, U.S. refiners were well-prepared for a January 2020 change in global shipping standards — known as IMO 2020 — that reduced the allowable sulfur content in marine fuel from 3.5% to 0.5%. The U.S. refining industry is essential to meeting the higher demand for low-sulfur fuel oil (LSFO) resulting from IMO 2020, and continues to supply cleaner fuels for tankers, freighters, cruise ships and other commercial vessels navigating the world's oceans.



Partnering to Drive Sustainability in the Auto Sector

Fuel and petrochemical manufacturers are critical partners to automakers striving for a cleaner, more efficient vehicle fleet. Not only are refiners improving on engine oils to achieve efficiency gains, they are also leading the effort to transition the United States to a high-octane, 95-RON fuel standard that will improve vehicle efficiency and meet the most stringent air quality standards in every state, including California. Beyond the engine, petrochemical manufacturers are developing state-of-the-art advanced composites that are essential to lowering a vehicle's weight while maintaining its strength and safety.

"If you reduce viscosity, less energy is consumed in the moving parts and in pumping the fluid around the engine," said Mark Sztenderowicz, global manager of product development for automotive engine oils at Chevron's Oronite lubricant additives division.

Pioneering More Efficient and Versatile Advanced Energy Technologies

The energy innovations our members pursue go beyond petroleum-derived fuels.

Scientist Alyssa Chinen-Mendez, Ph.D., joined Phillips 66 three years ago, when her new team was on the cusp of a breakthrough: setting the world record for power-conversion efficiency in organic solar cells. "It was a really exciting time to join," she said. "They set the record — then it was time for me to dig in and get to work."

Alyssa's research is focused on scaling the sustainable technology and making it accessible and affordable for consumers. The traditional model of solar panels — heavy, brittle and opaque — has been in use for roughly 50 years. But the photocells printed on polymer-based plastic in development by the Phillips 66 Organic Photovoltaics team are lightweight, flexible, semi-transparent and highly customizable, with possible applications on almost any surface — from building windows to semi-trucks to fabrics and more.

"We see great potential in the technology and we're figuring out how to take it to the next phase."

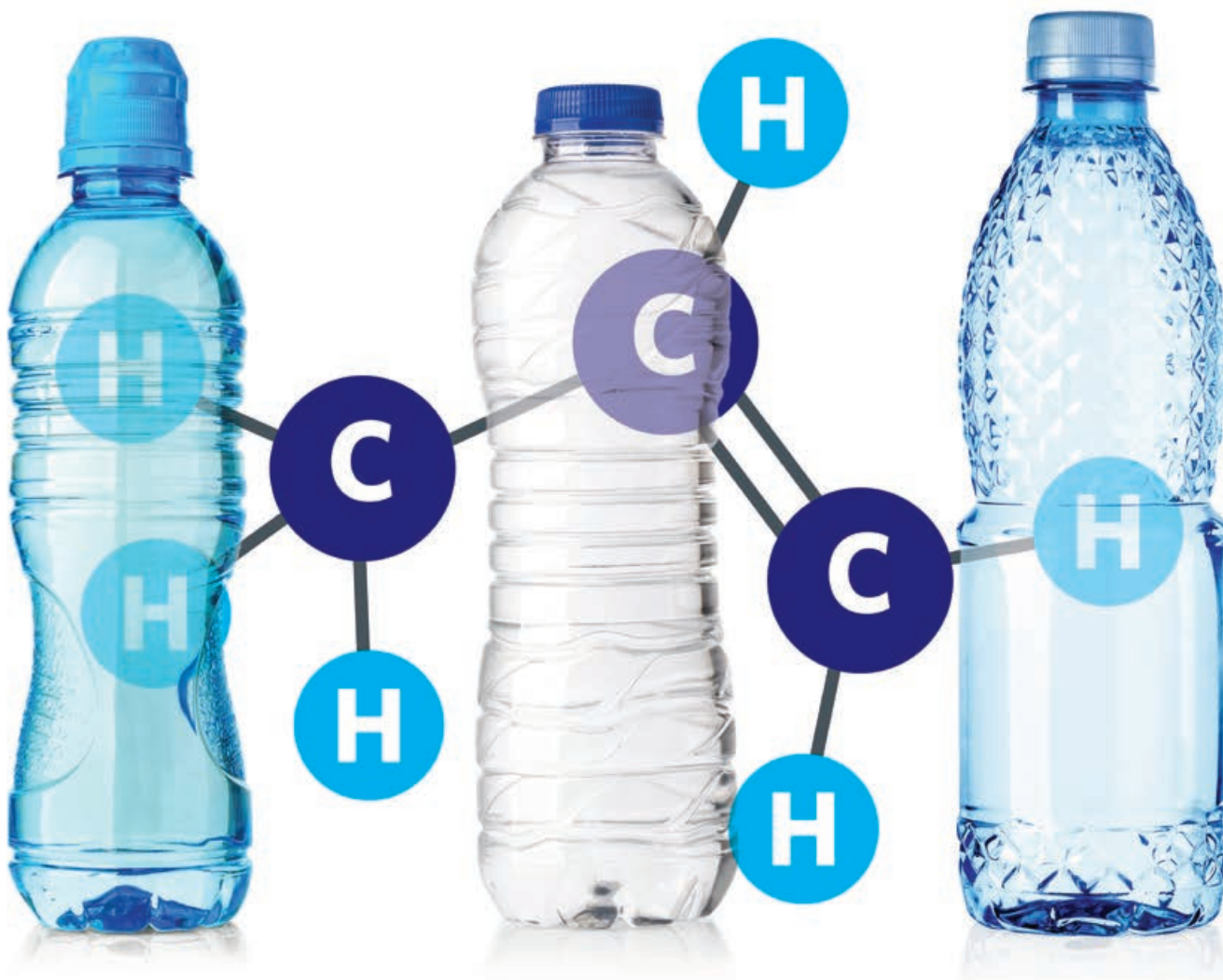
*—Alyssa Chinen-Mendez, Ph.D.
Phillips 66*

Reinventing Recycling and Unlocking the Circular Economy

“U.S. petrochemical producers are committed to the plastic waste issue and are at the forefront of addressing the problem. They’re developing innovative products, investing in new and advanced recycling methods, and collaborating closely with other stakeholders in the plastics and recycling supply chains.”

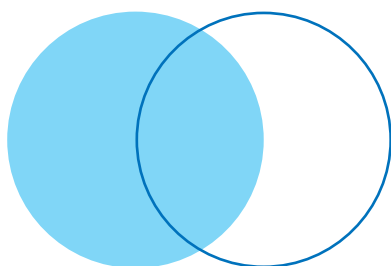
— AFPM President and CEO Chet Thompson

Petrochemical manufacturers are revolutionizing recycling by innovating processes that unlock the value and extend the usefulness of used plastics that might otherwise be considered waste. A piece of plastic put through a traditional, mechanical recycling process weakens and can only be shredded, heated and re-formed into a product a limited number of times. But new chemical recycling processes being pioneered by petrochemical manufacturers return a piece of plastic to its original monomers. These building blocks can be re-formed into new products and chemically recycled countless times without the quality or strength of a product being compromised. This breakthrough is enabling the successful reuse of discarded bottles, bags, packaging and other materials that typically would be destined for the landfill, and bringing a circular economy closer to reality.



Promoting Policies That Power Progress

The United States needs policies that promote growth and investment in the refining and petrochemical manufacturing industries to help drive our economy, add jobs, increase energy security and remain competitive in a global economy. These policies must:



Enhance Transparency

The future of American manufacturing requires reasonable and cost-effective regulations. AFPM supports regulatory reform that enhance transparency, accountability and efficacy of federal regulations based in sound science.



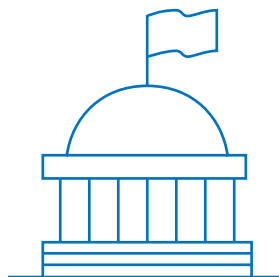
Promote Competition

The refining and petrochemical industries welcome free-market competition unimpeded by market distorters including mandates and subsidies. Policymakers should also look to ensure U.S. companies operating abroad are treated fairly through a system of trade rules that facilitate cooperation and regulatory alignment, and reflect the reality of an integrated energy and petrochemical market. Finally, policymakers must ensure the full potential of the modernized tax code is realized to spur growth now and into the future.



Balance Needs for All Americans

U.S. policies should balance the need for affordable and reliable fuels and a growing economy with sound environmental policies. The essential role and many societal benefits that petroleum fuels, natural gas and petrochemicals provide our nation and the world should not be ignored.



Strengthen Our Foundation

The global gains of the U.S. refining and petrochemical industries can not be maintained or built upon unless our nation's infrastructure keeps pace. Investment in critical infrastructure, including roads, pipelines, rail, inland waterways and ports, are key to accessing and expanding the use of U.S. resources.

We must adopt policies that carefully assess needs vital for meeting current and future demands. This includes federal, state, and local government investment, regulatory reform that encourages private investment, and streamlining our regulatory system and permitting processes to facilitate prompt construction of critical new infrastructure, including pipelines.

Addressing Climate Change

AFPM acknowledges climate change is real and is committed to the development of sound policies that enable our members to supply the fuel and petrochemicals that growing global populations and economies need to thrive, and to do so in an environmentally sustainable way.

Policies addressing climate change must be:

- Balanced and measured to improve quality of life, ensuring the long-term economic, energy, and environmental needs of humanity are met;
- Protective of U.S. competitiveness and prevent the shifting of production, jobs, and emissions from the United States to other countries;
- Harmonized, preemptive, and economy-wide;
- Simple and transparent; and
- Achievable and flexible to adjust as necessary.

AFPM and our members are further committed to:

- Delivering affordable, reliable fuel and petrochemicals products that lift the standards of living for people all over the world;
- Improving the efficiency and sustainability of our operations;
- Offering fuels and petrochemicals that make engines and other products more efficient; and
- Continuing research, innovation, and application of new technologies and products.

2020 Industry Meetings

Each of our live events is thoughtfully designed to provide state-of-the-industry information in a dynamic and interactive format that encourages connections between attendees, presenters and exhibitors.

Annual Meeting
JW Marriott Austin
Austin, TX
March 22 - 24, 2020

International Petrochemical Conference
New Orleans Marriott
New Orleans, LA
March 29 - 31, 2020

International Base Oils & Waxes Conference
New Orleans Marriott
New Orleans, LA
March 29 - 31, 2020

Security Conference
Westin Riverwalk Hotel
San Antonio, TX
April 13 - 15, 2020

Labor Relations / Human Resources Conference
Westin Riverwalk Hotel
San Antonio, TX
April 16 - 17, 2020

National Occupational & Process Safety Conference & Exhibition
Grand Hyatt San Antonio
San Antonio, TX
May 13 - 14, 2020

The Summit: Excellence in Plant Performance
Grand Hyatt San Antonio
San Antonio, TX
August 25 - 27, 2020

Environmental Conference
Austin Marriott Downtown
Austin, TX
October 18 - 20, 2020





New for 2020!
The Summit:
Excellence in Plant Performance

As the only conference for the petroleum refining and petrochemical industries focused on improving plant-wide performance, the Summit 2020 will provide an interactive event focused on various process technologies, improved reliability and operations, emerging technologies, strategies for risk management, process safety, mechanical integrity and turnarounds improvement opportunities. This event will also examine regulations that drive emerging technologies and data analytics.

We've taken the best elements of the Reliability and Maintenance Conference, Cat Cracker, and the Operations & Process Technology Summit to create a single conference that will provide attendees with maximum benefits.

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AFPM is governed by a Board of Directors, comprised of representatives from each of our regular members. When the Board is not in session, it delegates authority to the AFPM Executive Committee to render judgments and govern the Association. The Board of Directors elects a chairman, seven vice presidents and a treasurer who, together with the immediate past chairman, comprise the Executive Committee. The Board also elects a president to serve as chief administrative officer of the Washington-D.C.-based staff and the headquarters office.

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AFPM is the leading trade association representing the makers of the fuels that keep us moving and the petrochemicals that are the building blocks for modern life.

Our industries make life better, safer, healthier, and most of all, possible.

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Volkan Goren

Petroleum Service Corporation
Houston Haymon

Pilko & Associates, Inc.
George Pilko

Porocel International, LLC
Terence McHugh

Praxair Inc.
Andrew Sarantopoulos

PricewaterhouseCoopers
Reid Morrison

Process Consulting Services Inc.
Scott Golden

Procter and Gamble Company
George Koehnke

RAMBOLL
Andrew Edwards

Reliability Management Group (RMG)
Donald Deutsch

Repcon, Inc.
Joshua Causey

Richard Industrial Group, Inc.
Richard Gaona

RLG International Inc.
Rick Heyland

Roddey Engineering Services, Inc.
Michael Newton

S&B Engineers and Constructors Ltd.
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Sabin Metal Corporation
Bradford Cook

Sage ATC Environmental Consulting
Taras Lewus

Savage Services
Jason Ray

Seqens Solvents & Phenol Specialties
Laurent Castor

SI Group
Paul Tilley

Associate Members

continued

SLR
Geoffrey Swett

SNC-Lavalin
Lark Chapin

Sojitz Corporation of America
Yuichi Hattori

Solomon Associates LLC
Charles Reith

Southern Chemical Corporation
Jan Spin

Stancil & Co.
Jeffrey Nichols

STARCON International Inc.
Peter Cianchette

Sulzer Chemtech USA, Inc.
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T.A. Cook
Mark Rigdon

TapcoEnpro, LLC.
Mark Taylor

Tauber Oil Company
Richard Tauber

TEAM, Inc.
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TechnipFMC
Poornima Sharma

Tecnon OrbiChem Ltd.
Charles Fryer

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Melbern Glasscock

The Equity Engineering Group
David Osage

Third Coast International
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TIMEC
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Total Safety U.S., Inc.
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TRICORD Consulting, LLC
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Trihydro Corporation
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Trinity Consultants, Inc.
John Hofmann

TrinityRail
Gregg Yates

Turner Industries Group, LLC
Tobie Craig

Turner, Mason & Company
Michael Leger

United Rentals, Inc.
Michael Abbey

Universal Plant Services, Inc.
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Vapor Point
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Harrison Lee

Vopak Americas
Dick Richelle

Waid Environmental
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Standing Committees

The AFPM Board of Directors relies on the counsel and support of experts among its membership to accomplish specific Association functions and plan for the Association's future. There are 23 standing committees and subcommittees that serve to assist the Board in achieving AFPM's goals.

The **Associate Steering Committee** provides a forum for the Association's contractors, suppliers, vendors and consultants, to communicate with the Board of Directors on items of mutual interest and support.
AFPM Secretary: Latoya Britt

The **Base Oils & Waxes Committee** provides oversight and assistance on matters related to automotive oils, base oils and waxes.
Chair: H. Don Davis, Ergon, Inc.
AFPM Secretary: Susan Yashinskie

The **Communications Committee** shares information, ideas and communications strategies to increase support by external audiences for policy positions established by the Executive Committee and adopted by the AFPM Board.
Chair: Jake Reint, Flint Hills Resources, LLC
AFPM Secretary: Jaime Zarraby

The **CyberSecurity Committee** provides information and recommendations on matters pertaining to cybersecurity and cyber threats.
Chair: Blake Larson, Sinclair Oil Corporation
AFPM Secretary: Maggie O'Connell

The **Environmental Committee** provides a forum for members to exchange views and discuss environmental activities and advises the AFPM Board and staff on current environmental laws and regulations.
Chair: Christopher Drechsel, Marathon Petroleum Corporation
AFPM Secretary: David Friedman

The **Fuels Committee** provides information and policy recommendations concerning legislative, regulatory and motor fuel specification developments.
Chair: Rita Hardy, Flint Hills Resources, LLC
AFPM Secretary: Tim Hogan

The **Government Relations Committee** serves as the principal forum for sharing information, ideas and strategies on legislative and regulatory issues important to the refining and petrochemical industries.
Chair: Salo Zelermyer, Valero Energy Corporation
AFPM Secretary: Geoff Moody

The **Issues Committee** advises the Executive Committee and provides direction and guidance to AFPM staff on current policy issues important to the refining and petrochemical industries.
Chair: Jeff Ramsey, Flint Hills Resources, LLC
AFPM Secretary: Geoff Moody

Please visit the AFPM website for a complete description of all committees and their rosters at www.afpm.org/committees.

The **Labor Relations & Human Resources Committee**

facilitates the exchange of information on matters related to industrial and labor relations, human resources practices and collective bargaining.

Chair: Terrence Martin, Phillips 66
AFPM Secretary: Susan Yashinskie

The **Legal Committee** recommends litigation strategies to advance the interests of AFPM's members and the industries. The Committee also provides guidance to the AFPM staff on legislative and regulatory proposals and general legal issues affecting the industry.

Chair: Sherry Hesselbein, Marathon Petroleum Corporation
AFPM Secretary: Rich Moskowitz

The **Manufacturing Committee** provides technical support and recommendations on matters that affect facility operations and products including federal, state and local laws and regulations.

Chair: Jay Richert, Marathon Petroleum Corporation
AFPM Secretary: Gordon Robertson

The **Operational Planning Control & Automation Technologies Committee** focuses on sharing practical experience with the application management, and integration of computing technology in areas including process control and automation, modeling, real-time optimization and Internet-based applications.

Chair: Michael Barham, Marathon Petroleum Corporation
AFPM Secretary: Susan Yashinskie

The **Petrochemical Committee** advises the AFPM Board and staff on current issues of importance to the petrochemical industry.

Chair: Mary Kurian, BASF Corporation
AFPM Secretary: Rob Benedict

The **Petrochemical Statistics Subcommittee** advises and assists the Petrochemical Committee and AFPM staff on matters pertaining to the collection and dissemination of statistics on petrochemicals, including trade, production and inventories.

Chair: Lindsey Stephens, The Dow Chemical Company
AFPM Secretary: Rose Sabijon

The **Maintenance Committee** provides information and advice on issues related to process plant reliability, maintenance practices, mechanical integrity and workforce issues. The Committee promotes the exchange of technical information and proven practices on reliability, maintenance, inspection, procurement, project engineering, and turnarounds through the annual AFPM Summit.

Chair: Hardy Kemp, Flint Hills Resources, LLC
AFPM Secretary: Gordon Robertson

The **Security Committee** provides a forum for the exchange of information among the membership on security-related issues within the petroleum refining and petrochemical manufacturing industries.

Chair: Jeff Culver, Koch Industries, Inc.
AFPM Secretary: Jeff Gunnulfsen

Standing Committees

continued

The **State & Local Outreach Committee's** purpose is to discuss state level legislative and regulatory issues of importance to AFPM's refining and petrochemical members. The Committee will advocate for AFPM policies at the state and local levels, as directed by the Issues Committee.

Chair: Calli Daly, Koch Industries, Inc.

AFPM Secretary: Don Thoren

The **Tax Policy Committee** provides analysis and recommendations on tax-related legislation and engages in regulatory matters at the U.S. Treasury Department and Internal Revenue Service.

Chair: Nicole Busey, Marathon Petroleum Corporation

AFPM Secretary: Justin Sykes

The **Transportation & Infrastructure Committee** analyzes policy, regulations and guidance relating to the transportation of oil, natural gas, and the products derived from these critical resources, as well as other transportation and infrastructure issues that may arise.

Chair: Kent Avery, PBF Energy Inc.

AFPM Secretary: Rob Benedict

The **Waxes Subcommittee** promotes the benefits of current and new wax uses and technologies to the marketplace as well as issues related to the safe handling transportation and specifications of petroleum wax.

Chair: George Hudak, Baker Hughes, a GE Company

AFPM Secretary: Susan Yashinskie

The **Safety & Health Committee** provides a forum for members to exchange views and share occupational and process safety best practices and developments in safety related legislation and regulation.

Chair: Randy Patton, HollyFrontier Corporation

AFPM Secretary: Danny Forest

The **Industrial Hygiene Subcommittee** provides a forum for the exchange of information on industrial hygiene, regulatory and legislative trends and developments as well as other matters concerning industrial hygiene standards and practice.

Chair: Trevor Gillig, Marathon Petroleum Corporation

AFPM Secretary: Danny Forest

The **Occupational Safety Subcommittee** advises the Safety & Health Committee on AFPM occupational safety programs, including the Regional Network program, as well as data and metric collection programs such as the Incident Classification Matrix and the Injury & Illness Metrics.

Chair: Scott Willis, Phillips 66

AFPM Secretary: Rebecca O'Donnell

Occupational Safety Regional Network

Central States Regional Network

Chair: Scott Willis, Phillips 66

AFPM Secretary: Rebecca O'Donnell

East Coast/Mid-West Regional Network

Chair: Chris Conley, BP

AFPM Secretary: Rebecca O'Donnell

Eastern Gulf Coast Regional Network

Chair: Drew Graham, Phillips 66

AFPM Secretary: Rebecca O'Donnell

Pacific Coast Regional Network

Chair: Mike Kulakowski, Marathon Petroleum Corporation

AFPM Secretary: Danny Forest

Rocky Mountain Regional Network

Chair: Dan Foster, Silver Eagle

AFPM Secretary: Rebecca O'Donnell

Texas Gulf Coast Network

Chair: Drew Owen, Flint Hills Resources, LLC

AFPM Secretary: Rebecca O'Donnell

The **Process Safety Advisory Group (PSAG)** provides leadership, support and guidance to Advancing Process Safety (APS) programs in an effort to promote process safety performance excellence across the association's memberships.
Chair: Jim Stump, Holly Frontier Corporation
AFPM Secretary: Lara Swett

The **Process Safety Workgroup** is responsible for implementing the direction and vision of the Process Safety Advisory Group by providing oversight and direction to the Advancing Process Safety Programs.
Chair: Randy Patton, Holly Frontier Corporation
AFPM Secretary: Mawusi Bridges

Hazard Identification & Practice Sharing

Chair: David Thompson, Koch Industries, Inc.
AFPM Secretary: Mawusi Bridges

Industry Outreach and Learning

Chair: Ryan Wong, Exxon Mobil Corporation
AFPM Secretary: Mawusi Bridges

Process Safety Regional Networks

[Central States Regional Network](#)

Chair: Randall Wilburn, Phillips 66
Secretary: Alyse Keller

[East Coast Regional Network](#)

Chair: Brian McTiernan, Monroe Energy, LLC
Secretary: Alyse Keller

[Eastern Gulf Coast Regional Network](#)

Chair: Brett Cowart, Placid Refining Company
Secretary: Eileen Scherzinger

[Mid-West Regional Network](#)

Chair: Samantha Garner, Ergon Inc.
Secretary: Eileen Scherzinger

[Rocky Mountain Regional Network](#)

Chair: Kyle Walter, CHS, Inc.
Secretary: Eileen Scherzinger

[Texas Gulf Coast Regional Network](#)

Chair: Amber Joppa, Flint Hills Resources, LLC
Secretary: Alyse Keller

Information Resources

Communications

Through a combination of traditional and social media outlets, AFPM reaches the press, policymakers, and the public to educate them on the facts about our industries' work and value, and to inform member company employees about important issues impacting the industry.

AFPM continues to increase its media visibility and rapid response capabilities across print, online, radio, and television outlets.

AFPM also has an active social media presence that includes Twitter, LinkedIn, Facebook, YouTube and Instagram.



Publications

AFPM publications inform our members about industry statistics, technical innovations, environment and safety developments, security, and many other relevant issues.

AFPM's online store allows you to search technical papers and reports by keyword, author, and/or meeting and directly download to your computer. Learn more at afpm.org/publications.

Newsletters and General Publications

- Annual Report
- Daily Alert
- Energy in Motion – The AFPM Transportation & Infrastructure Newsletter
- Fuel Line
- Green Room Report
- Security Watch
- Tech Update

Statistics

- Annual Survey of Occupational Injuries & Illnesses
- Process Safety Event Report
- AFPM U.S. Refining & Storage Capacity Report

Petrochemical Statistics Subscriptions

- AFPM Petrochemical Surveys, Production & Inventory Statistics – quarterly
- AFPM Selected Petrochemical Statistics U.S. Trade Data – monthly

Technical Papers

- Annual Meeting Papers
- Cybersecurity Conference Papers
- Environmental Conference Papers
- International Base Oils & Waxes Conferences Papers
- National Occupational & Process Safety Conference Exhibition Papers
- Operational Planning Control and Automation Technologies Conference Papers (2019 and previous)
- Reliability & Maintenance Conference Papers (2019 and previous)

Transcripts

Operations & Process Technology Summit (2019 and previous)

* Publications are distributed to members only.



Join AFPM Today!

The vast majority of American petroleum refiners and petrochemical manufacturers, along with hundreds of industry service companies, are currently members of AFPM.

To find out more contact Latoya Britt at
membership@afpm.org
202.457.0480
www.afpm.org/benefits-of-membership

Endnotes

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