

**WE
MAKE
PROGRESS**
AMERICAN
FUEL &
PETROCHEMICAL
MANUFACTURERS

2018 ANNUAL REPORT





AFPM

American
Fuel & Petrochemical
Manufacturers



we make progress

WE MAKE PROGRESS

A MESSAGE FROM THE CHAIRMAN OF THE BOARD AND THE PRESIDENT AND CEO OF AFPM

The American Fuel & Petrochemical Manufacturers (AFPM) is proud to represent the makers of the fuels that keep our country and the world moving and the petrochemicals that are the building blocks for modern life. Our industries are noble and our products have transformed the world. We manufacture the fuels that power the cars, trucks and buses that get millions of people to work and to school each day. We make the petrochemicals that go into literally thousands of products like plastics, computers and medical equipment. Our industries make life better, safer, healthier and, most of all, possible.

We are critical to boosting the nation's energy security and sustaining the U.S. economy. Over three million jobs in 33 states are supported by our 117 refineries and over 230 petrochemical facilities. Together, these industries add nearly \$600 billion to the U.S. economy each year, and we do so while investing heavily in innovations, technological advancements and process efficiencies that reduce our environmental impact.

Our highest priority remains the safety and security of our employees, surrounding communities and our facilities. A continued focus on enhanced performance and operations, combined with advancements in our use of cutting-edge technology, have made the fuel and petrochemical industries among the safest and most secure in the nation.

This past year, our industries faced many challenges with unprecedented storms that threatened the heart of our operations. Despite the widespread flooding and devastation, our highly committed and talented workforce got operations up and running, resulting in minimal disruptions for consumers. And they contributed in countless ways to aid their communities by working alongside first responders and helping their neighbors rebuild. Their dedication, vigilance and courage are a testament to the character of the people who work in our industries.

In the coming year and beyond, AFPM will advocate for policies that promote growth and investments in our industries so that consumers have the products they have come to rely upon. Policies that enhance transparency, promote competition and balance the needs for all Americans will further improve the standard of living and strengthen the foundation of our nation.

As we look back on the accomplishments of 2017 and look ahead to the future, one thing is clear: the fuel and petrochemical industries are resilient, innovative and determined. We make many things, but above all, we make progress.



A handwritten signature in black ink, appearing to read 'Joe Gorder'.

Joseph W. Gorder
Chairman, President and Chief Executive Officer,
Valero Energy Corporation
AFPM Chairman of the Board



A handwritten signature in black ink, appearing to read 'Chet Thompson'.

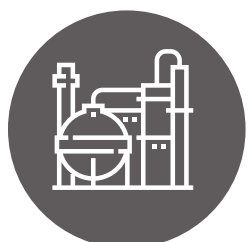
Chet M. Thompson
President and Chief Executive Officer
American Fuel & Petrochemical Manufacturers

**WE MAKE
THE PRODUCTS
THAT FUEL THE
GLOBAL ECONOMY
AND WILL REMAIN
ESSENTIAL
FOR YEARS.**



U.S. refineries are among the most technologically advanced and efficient in the world. Our members own and operate 117 refineries that manufacture 96 percent of the refined petroleum products made in the United States.


Today, petroleum supplies about 98 percent of U.S. transportation fuels and is projected to continue supplying about 90 percent through mid-century, according to the Energy Information Administration (EIA).¹ Petroleum products are also consumed in the commercial, industrial and residential sectors. In 2016, petroleum products supplied more than 25 percent of industrial demand for energy, four percent of commercial and four percent of residential demand.



Our members own and operate **117 REFINERIES THAT MANUFACTURE 96 PERCENT** of the refined petroleum products made in the United States including: ▶

18.6 M
BARRELS DAILY

In 2016, U.S. refining capacity increased to more than 18.6 million barrels per day, accounting for almost 20 percent of global refining capacity.²



The majority of petroleum products are used as transportation fuels.

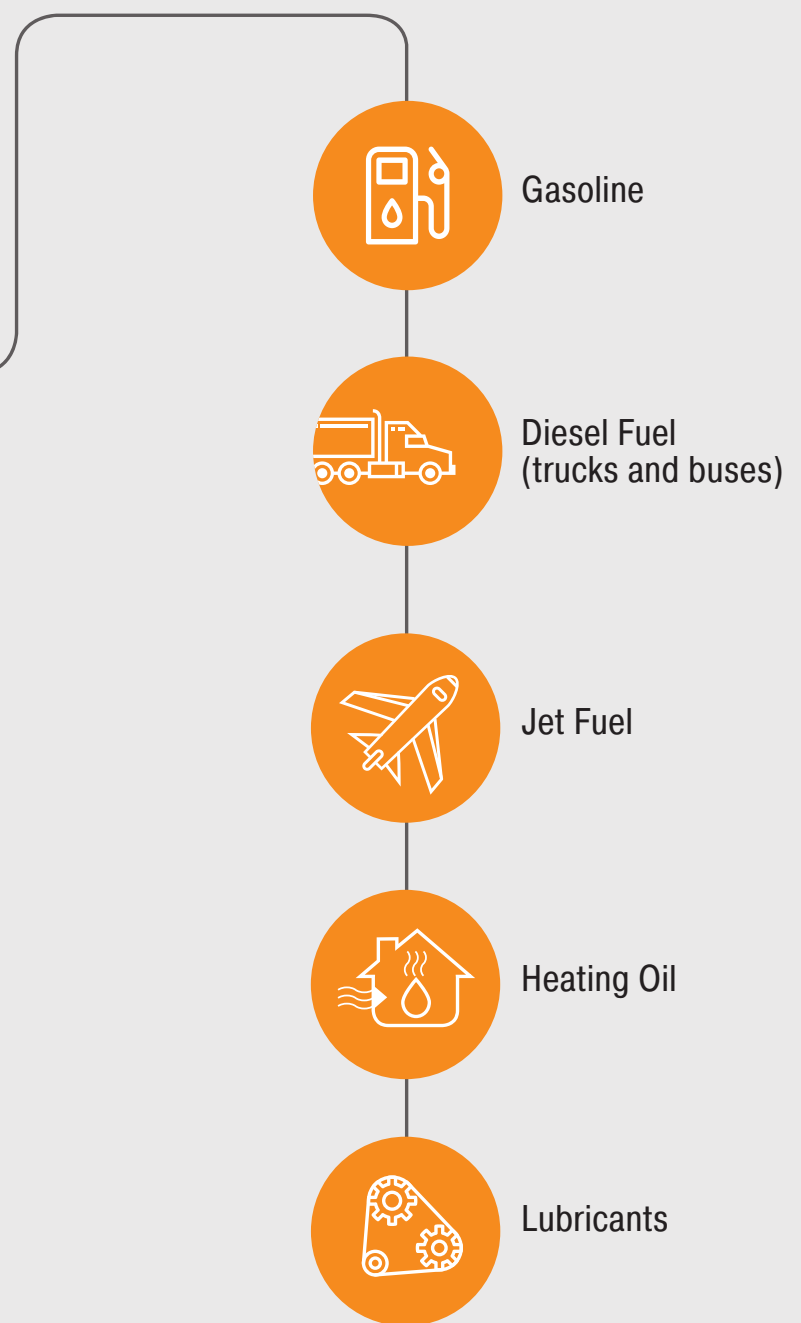
Last year, the United States consumed 143 billion gallons of gasoline and 84 billion gallons of diesel fuel, heating oil and jet fuel.³



143 B Gallons
Gasoline

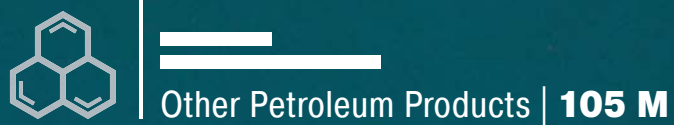
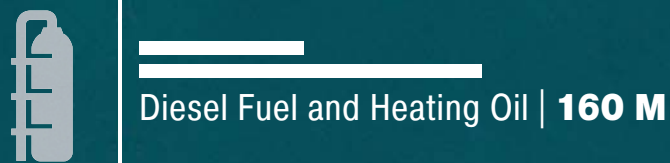
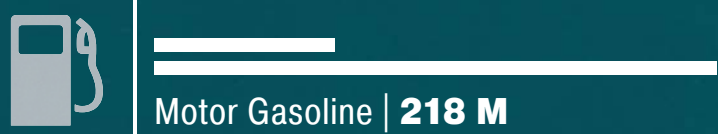


84 B Gallons
Diesel Fuel



The United States currently exports nearly 80 billion gallons of petroleum products to consumers in 99 countries. By 2040, U.S. exports are expected to top 110 billion gallons, and our products are expected to supply 30 percent of total world energy demand through 2050, according to the EIA.⁴

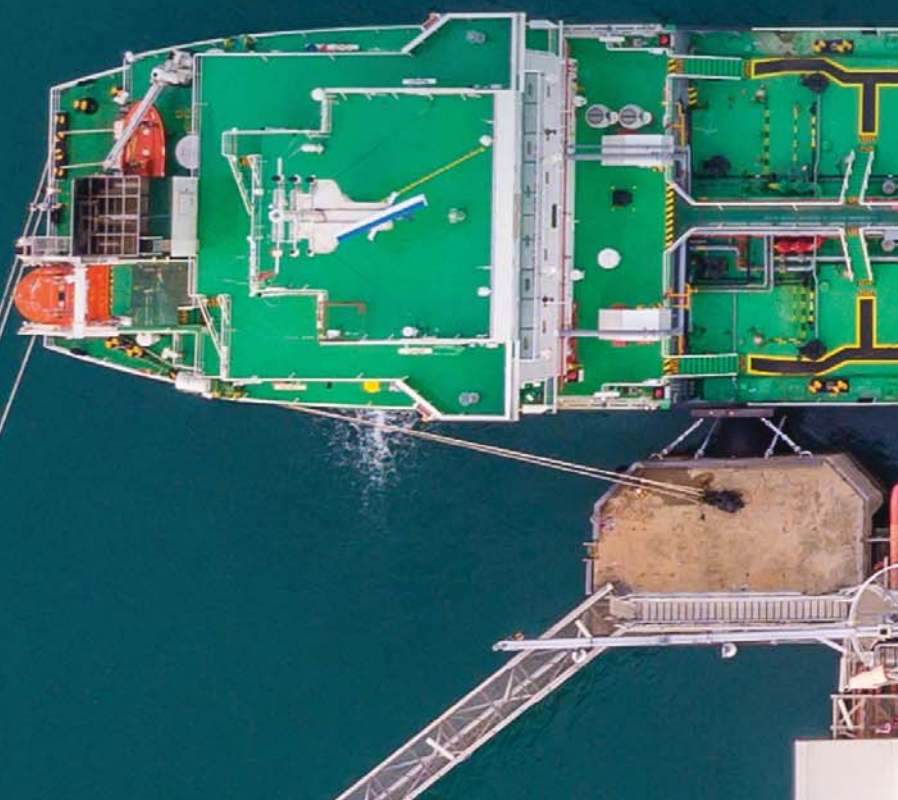
**MONTHLY U.S. REFINED PRODUCT EXPORTS
IN MILLIONS OF GALLONS PER DAY
(2010-2017 increases)**

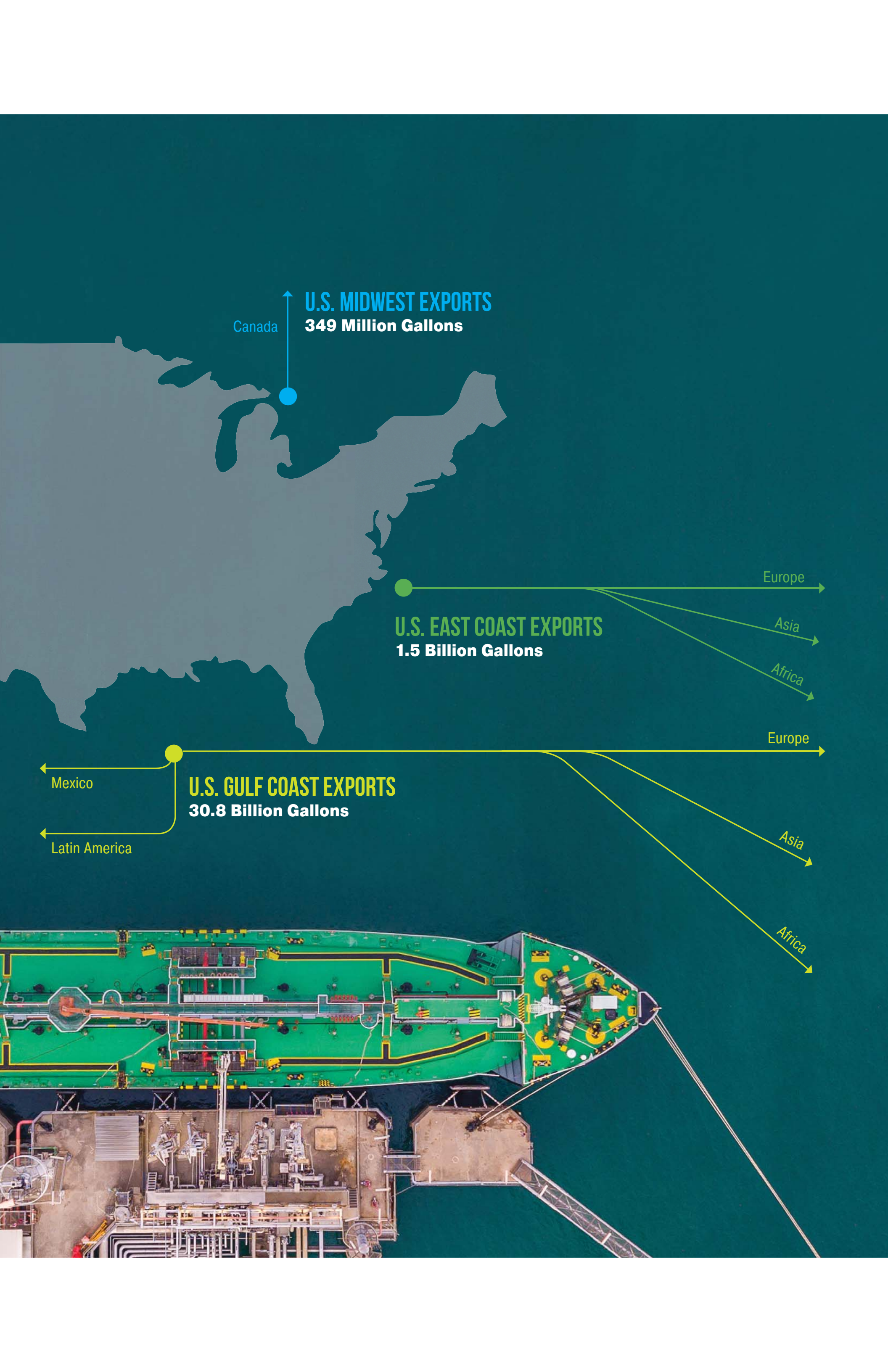


**U.S. WEST COAST EXPORTS
2.8 Billion Gallons**

Mexico

Latin America





Canada
U.S. MIDWEST EXPORTS
349 Million Gallons

Europe
Asia
Africa
U.S. EAST COAST EXPORTS
1.5 Billion Gallons

Mexico
Latin America
Europe
Asia
Africa
U.S. GULF COAST EXPORTS
30.8 Billion Gallons

MEETING GROWING PETROCHEMICAL DEMAND

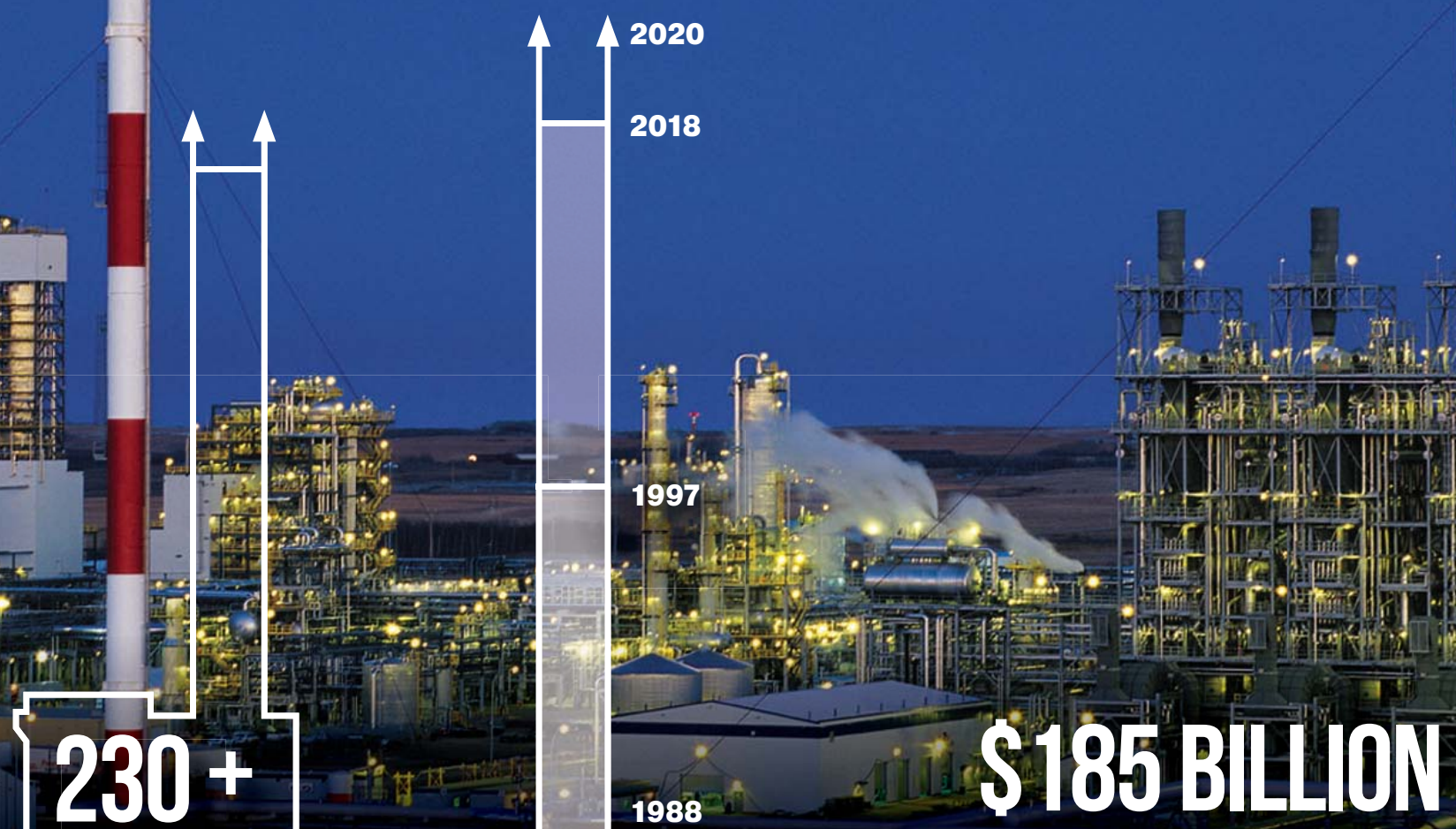


Photo courtesy of Joffre Moon and NOVA Chemicals.

PETROCHEMICAL MANUFACTURING FACILITIES THROUGHOUT THE UNITED STATES, WITH PLANS TO GROW.

PETROCHEMICAL CAPACITY HAS DOUBLED IN THE PAST 20 YEARS, WITH ANTICIPATED STEADY INCREASE THROUGH 2020.⁵

INVESTED BY PETROCHEMICAL MANUFACTURERS AND RELATED COMPANIES TO EXPAND OPERATIONS TO MEET THE GROWING GLOBAL DEMAND FOR PETROCHEMICALS.

The U.S. petrochemical industry is well positioned to meet growing demand and continue to be a world leader in petrochemical production.

The products our petrochemical members produce play a large role in our lives today and will continue to be a significant part of our future. Products like ethylene, propylene and butadiene may not get much attention, but the products they make do. In the future, innovations made possible by petrochemicals could dramatically enhance the quality of life through breakthroughs in prosthetics and artificial organs, significantly improve transportation, keep food fresh for much longer, and even make for cleaner skies. If you can imagine it, chances are our products will be part of it.

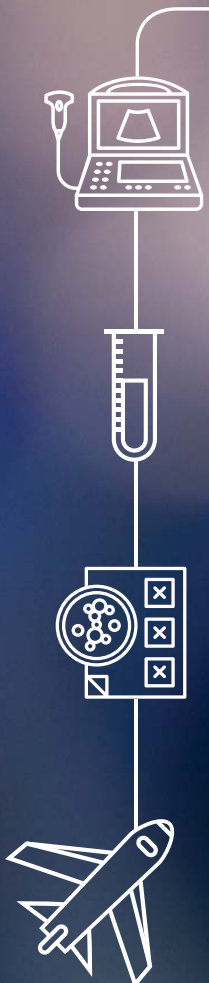
SAVING LIVES

Vince was diagnosed with polycystic kidney disease when he was nineteen. He managed his condition with medications for many years, but in 2011, it wasn't enough.

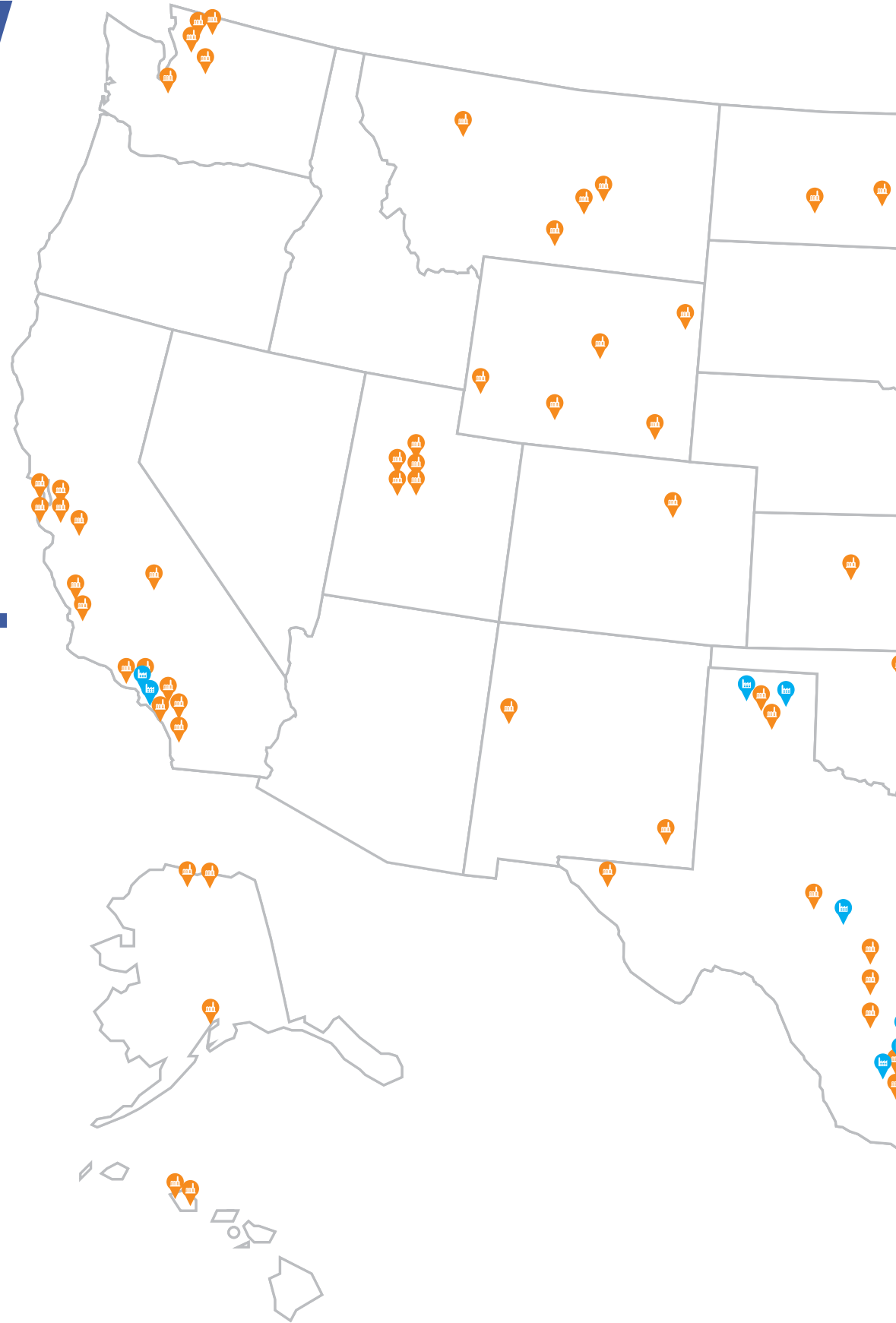
Family and friends were tested to see if they were a viable match, but none were found. Vince thought he had exhausted his list of possible donors, when a friend's sister offered to be tested. Finally, a match!

Plans were made for the surgery and on a Friday the 13th in 2012, his donor flew from Oregon to Pennsylvania for the procedure.

Today, not a day goes by without him, his wife and their triplets being thankful to his donor and for the medical devices made from petrochemicals that kept him alive and the fuels that made his transplant possible.



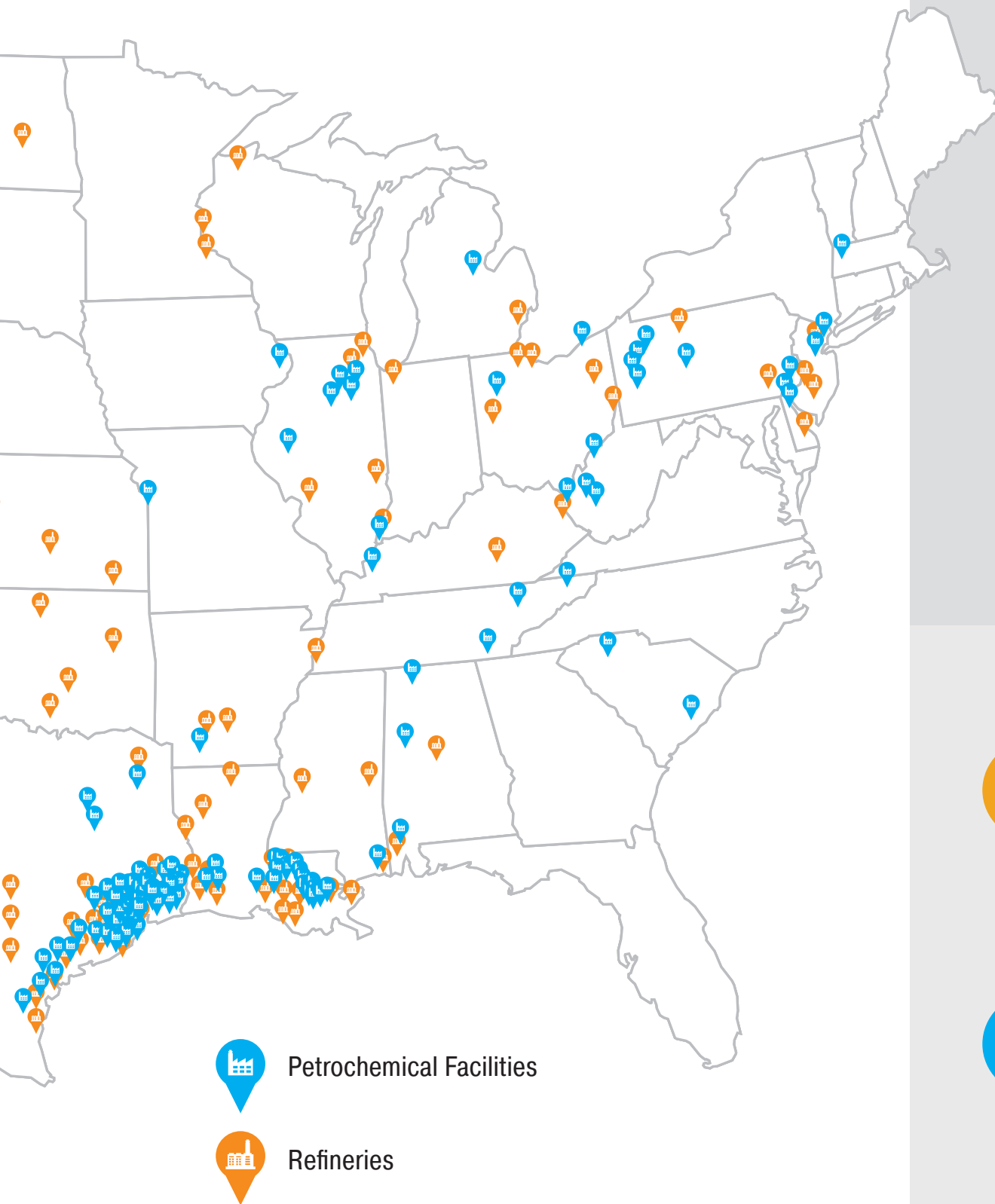
**WE CREATE
THE JOBS
THAT EMPLOY
OVER 3
MILLION
AMERICANS
IN 33 STATES.**



FUELING OPPORTUNITY

Today we are focused on educating the public about our industries to attract, educate and retain top talent who will encourage a diverse and valued workforce, while offering highly competitive salaries and levels of training and education. As we grow, so will the career opportunities for skilled and craft workers, U.S. veterans and those with business and STEM backgrounds.

The fuels and petrochemical industries have well-paying career opportunities for those with educational backgrounds that range from GED to PhD. Craft laborers in our industries earn higher salaries than teachers, nurses and other professions that require advanced degrees.



\$111,500

Average annual salary
of a refining worker⁷



\$93,000

Average annual salary
of a chemical industry worker⁸



\$44,148

Average annual salary
of a U.S. worker⁹

FUELING THE ECONOMY

We contribute nearly \$600 billion to the U.S. economy including more than \$65 billion in federal taxes and \$21 billion in state and local taxes last year.¹⁰ This money directly supports first responders, teachers and other individuals working in communities across the country. Not only do our taxes support first responders, we also make the products that make the materials that keep them safe.

OUR ECONOMIC IMPACT

\$600 BILLION
U.S. ECONOMIC CONTRIBUTIONS

\$65+ BILLION
FEDERAL TAXES

\$21 BILLION
STATE AND LOCAL TAXES

PROTECTING OUR PROTECTORS

In November 2006, Dan, a firefighter in Los Angeles, California, and his team were called to a two-story building that was fully engulfed in flames. While trying to put out the fire, the upper floor where he was standing gave way. Dan fell to the floor below and within seconds was up to his armpits in flames. Thankfully, his fellow firefighters pulled him from the blaze.

“I was certain my legs would be burned. I took my gear off; my legs were fine. I can’t say fossil fuels were at the top of my mind as I was struggling to escape from that building, but they were critical to saving my legs and my life that day.”

Dan and the thousands of firefighters across the country who have had similar experiences are thankful for the advances in products that are made from petrochemicals.

“I was grateful to the firefighters who pulled me out that day and to the oil and natural gas industries that develop the products that make us safe every day.”



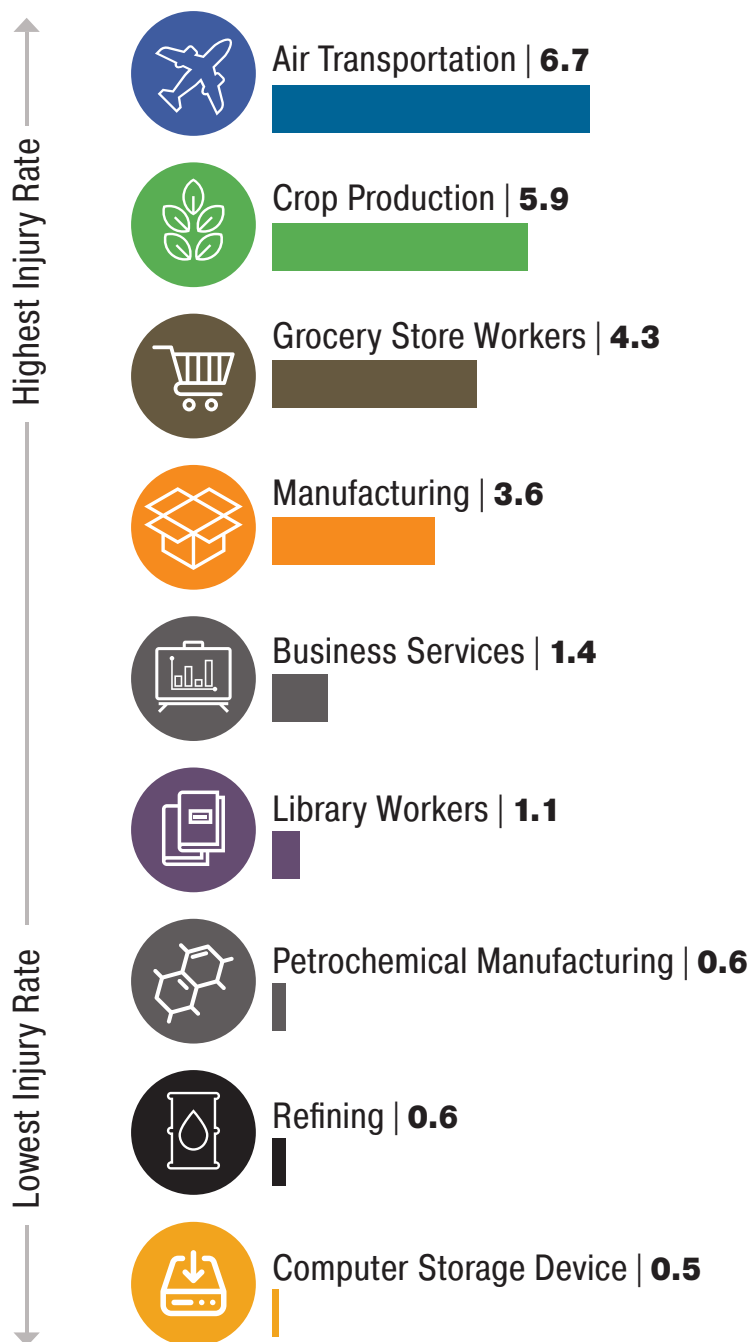
**WE MAKE THE
INVESTMENTS
THAT INCREASE
THE SAFETY OF
OUR EMPLOYEES,
FACILITIES AND
COMMUNITIES,
AND REDUCE
THE IMPACT
ON THE
ENVIRONMENT.**



KEEPING OUR PEOPLE SAFE

Safety is a core commitment of the U.S. refining and petrochemical industries. Providing a safe work environment for our employees and communities in which we operate is embedded in our culture, and we strive to achieve zero injuries, illnesses and process safety events.

Both the refining and petrochemical industries' annual injury and illness rate is 0.6 per 100 full-time employees, well below many other industries and occupations. The refining and petrochemical industries rank second and third out of 520 manufacturers for the lowest rate of injury and illness.



Sampling taken from source.¹¹

ADVANCING PROCESS SAFETY

AFPM is continuously working with our members to enhance performance and operations by offering a variety of tools and forums for our members to learn from each other to better protect the health and safety of our workers, contractors, neighbors and the environment in which we operate.

The goal of Advancing Process Safety is to reduce the frequency and severity of process safety events across our industries.

AFPM collects industries' process safety data, analyzes that data to find opportunities for improvement, and develops tools and sharing opportunities to help our industries improve their process safety performance.

Our Advancing Process Safety Program includes:

- WALK THE LINE
- HAZARD IDENTIFICATION
- PRACTICE SHARING
- SAFETY METRICS AND STATISTICS
- PROCESS AND OCCUPATIONAL REGIONAL NETWORKS
- EVENT SHARING

INJURY RATE DECREASE

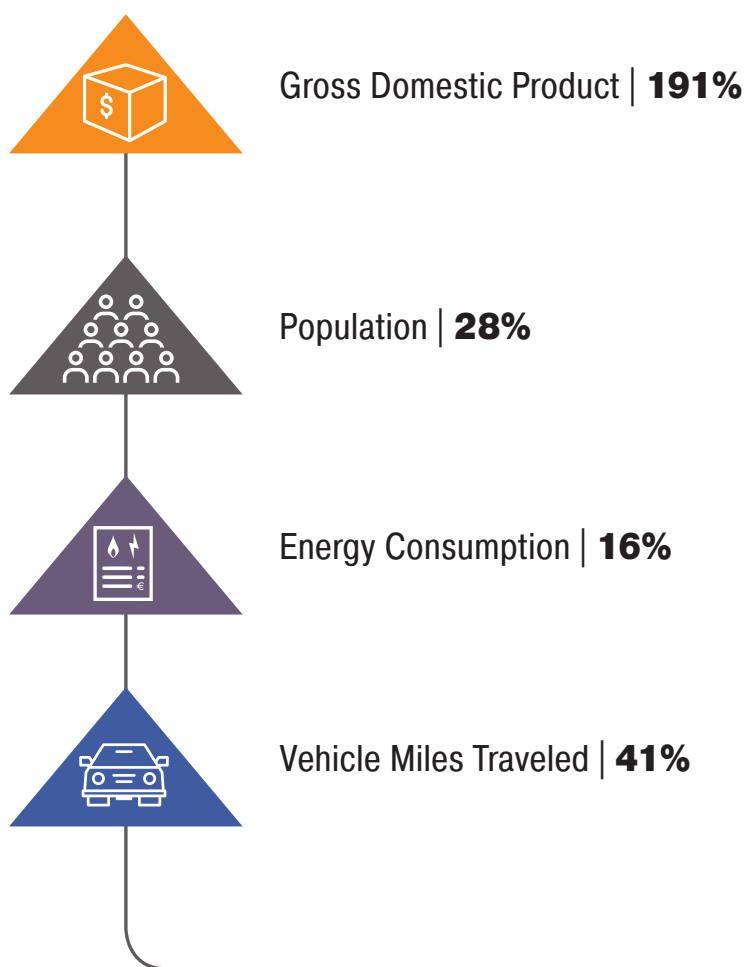


Over the past **28 YEARS** the refining and petrochemical industries have reduced their rate of injury by a **FACTOR OF TEN.**

REDUCING ENVIRONMENTAL IMPACT

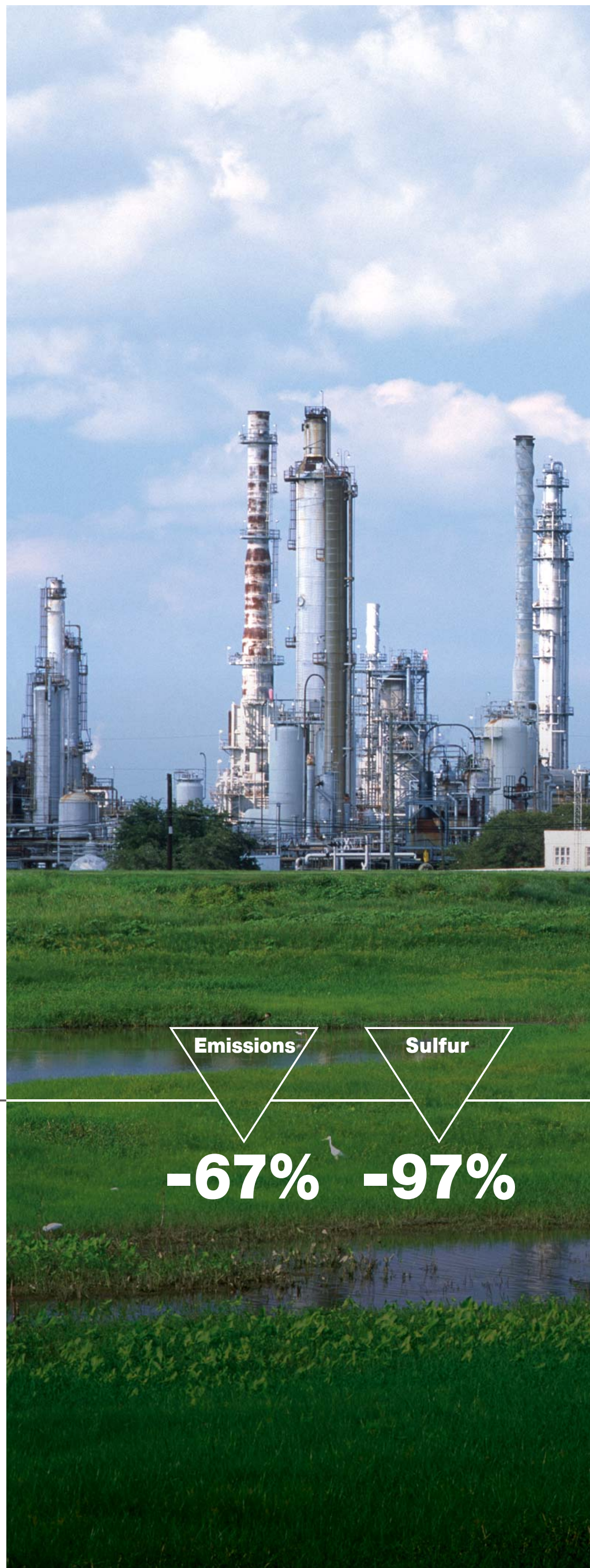
We have invested billions of dollars in technology, innovation and engineering efficiency to reduce the impact of our operations.

U.S. INCREASES SINCE 1990



Even with this growth, we reduced the six most common emissions by 67 percent. Transportation fuels are cleaner than ever today, and sulfur levels in gasoline have been reduced by 97 percent.¹³

Today, affordable fuels and petrochemicals are made and refined more safely, cleanly and efficiently than ever before, and more breakthroughs are to come.





REDUCTIONS IN CRITERIA POLLUTANT EMISSIONS¹⁴

REFINERIES

1990-2014 (Decrease in 1000 Tons)



PETROCHEMICAL FACILITIES

1990-2014 (Decrease in 1000 Tons)



USING LEADING-EDGE TECHNOLOGY

AFPM member companies are implementing leading-edge technology to reduce operational risk and increase efficiencies, making the workplace safer.



Drones

ENHANCE INSPECTIONS



Thermal Imaging and Detection



iPads and Cell Phones

REAL-TIME DATA ACCESS



QR Codes and RFID Tags



Virtual/Augmented Reality

IMPROVE TRAINING WITH IMMERSIVE LEARNING



Operator Simulations

Our industries are leaders in proactive cyber risk management of IT and industrial control systems. We continually test systems and software, keep up on the latest threats in the cyber world and educate company employees on “cyber hygiene.”



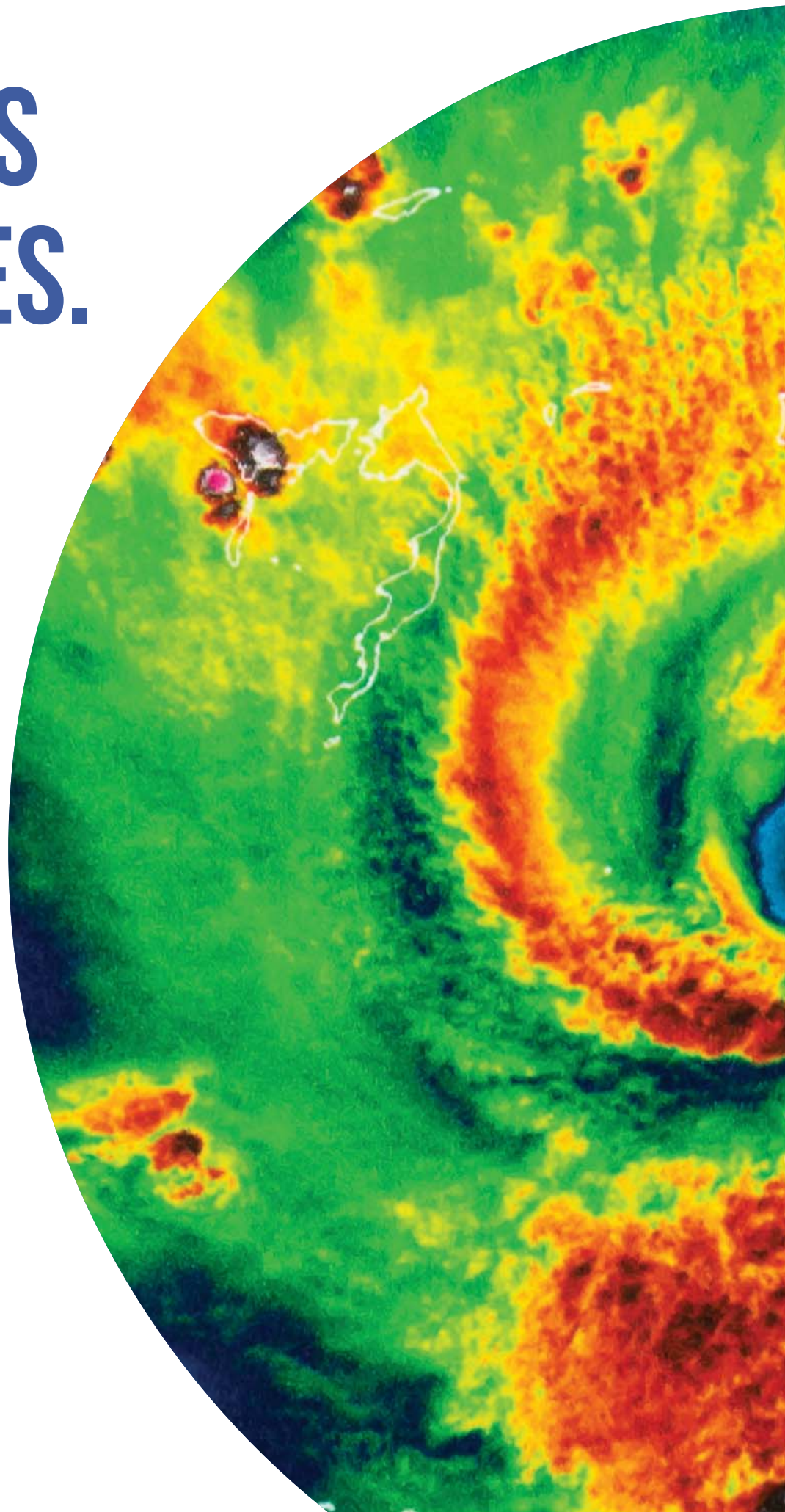


Improving Operations with Drones

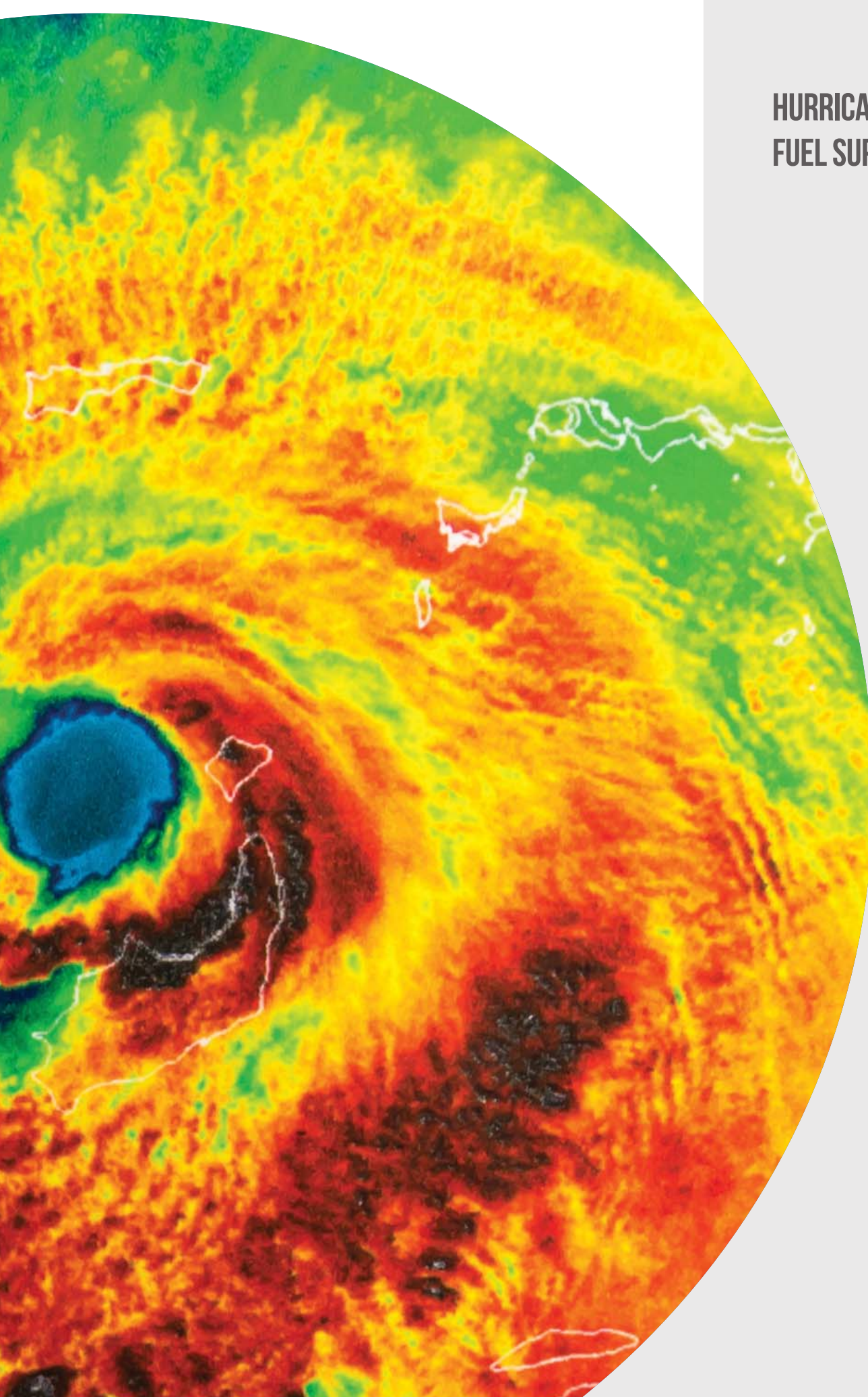
AFPM members are at the vanguard of using unmanned aerial vehicle technology (known as UAVs or drones) to improve operations, and effectively did so after Hurricane Harvey hit Houston in August.

In fact, they used drones to remotely take stock of facilities and identify damaged equipment. This helped shorten restart times and improve the safety of employees and surrounding communities, underscoring how important UAVs have become to refinery operations.



WE PLAN FOR EXTREME EVENTS TO MITIGATE CATASTROPHES AND SAVE LIVES.






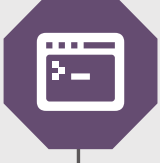




The 2017 hurricane season was one of the most daunting in decades. But, with a lot of planning, coordination and hard work, our member companies succeeded in supplying the gasoline, diesel and jet fuel that moved people out of harm's way and allowed first responders to reach those in need.



HURRICANE HARVEY IMPACTED:

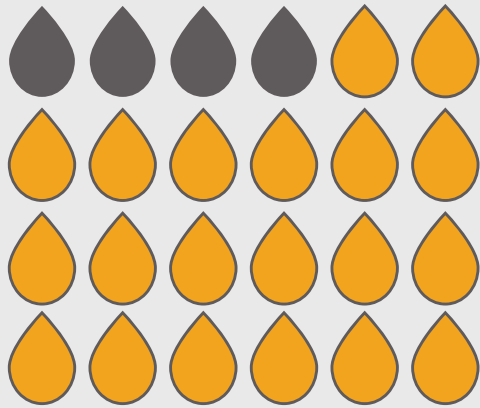
- 60%**
U.S. Petrochemical Production 
- 25%**
U.S. Refining Capacity 

HURRICANES ALSO IMPACTED THE ENTIRE FUEL SUPPLY CHAIN INCLUDING:

- Refineries 
 - Ports 
 - Pipelines 
 - Terminals 
 - Rail Stations 
 - Gas Stations 
 - Plant Feedstocks and Products' 
- 



THE HURRICANES HAD THE POTENTIAL TO BE CATASTROPHIC FOR THE FUELS AND PETROCHEMICAL SUPPLY CHAIN. BUT THEY WEREN'T.



20/24

Just two weeks after Harvey made landfall, 20 of the 24 refineries had restarted.



70 PERCENT

Three weeks after Harvey made landfall, 70 percent of the impacted petrochemical production was back up and running.

DEMONSTRATING OUR RESILIENCY

Even in the midst of recovery from Hurricane Harvey, the refining industry prepared for Hurricane Irma – getting as much fuel into market as possible in advance of the storm and staging fuel off of both coasts of Florida to expedite getting fuel to its residents as soon as conditions were safe and infrastructure allowed.

We were able to do this because our dedicated workforce – many of whom were personally impacted by these storms – who activated sophisticated preparedness plans strengthened by lessons learned in the aftermath of previous storms. With more sophisticated preparedness plans, improved storm monitoring, hardened critical infrastructure and upgraded IT systems to help with employee location and assistance, we were prepared.

AFPM member companies took immediate action at their facilities and in their communities, many establishing advanced crisis centers to support employees and help safely meet the needs of communities struggling to navigate the impacts of this once-in-a-thousand-years storm.

Beyond donating tens of millions of dollars to humanitarian organizations, AFPM member companies responded with aid in countless ways, including:



Pumping out and testing water in flooded neighborhoods



Arranging short- and long-term housing for employees



Deploying company maintenance crews to employee homes to tackle clean-up and repairs



Underwriting medical expenses



Working with city officials to restore tap water to homes



Coordinating rental vehicles for employees whose vehicles were damaged or lost



Bringing convoys into impacted areas and contributing supplies such as vaccines, gasoline, food, cleaning supplies and water

**WE PROMOTE
POLICIES
THAT POWER
PROGRESS AND
PREPARE US
FOR THE
FUTURE.**



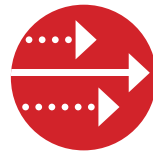
The United States needs policies that promote growth and investment in the refining and petrochemical manufacturing industries to help drive our economy, add jobs, increase energy security and remain competitive in a global economy. These policies must:

1. ENHANCE TRANSPARENCY



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

2. PROMOTE COMPETITION



The petroleum fuel refining and petrochemical industries welcome free-market competition unimpeded by market distorters, including mandates and subsidies.



Policymakers should 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.

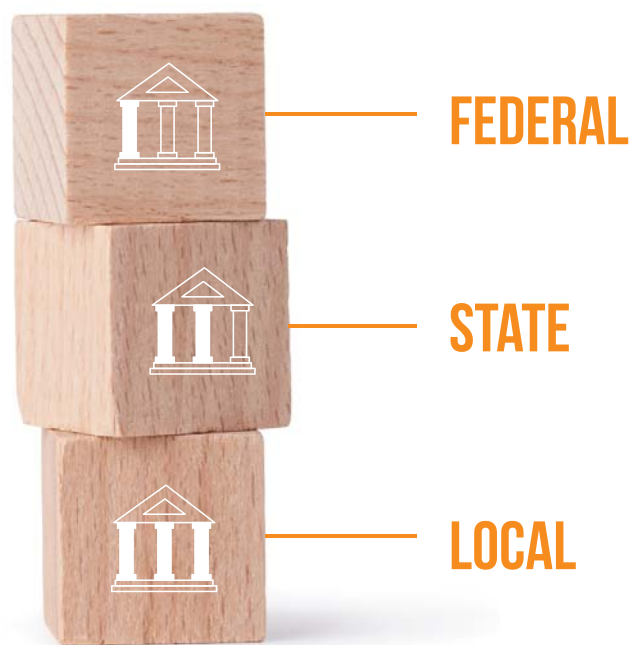
3. BALANCE NEEDS FOR ALL AMERICANS

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.



4. STRENGTHEN OUR FOUNDATION

The global gains of the U.S. refining and petrochemical industries can't 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.

INVESTING IN PIPELINES

The United States has the largest network of energy pipelines in the world, with more than 2.6 million miles of pipe transporting products including natural gas, crude oil and petroleum products.¹⁵

Today, the energy industry is committed to continually updating the existing pipeline network to incorporate advancements in pipe manufacturing, pipe materials, construction methods and maintenance practices. In addition, because of our nation's more efficient oil and natural gas production even more pipelines need to be constructed to fully unlock the potential of our domestic energy renaissance.



APPENDIX



2018 INDUSTRY MEETINGS

MARCH

Annual Meeting

March 11 – 13, 2018
New Orleans Hilton
New Orleans, LA

International Petrochemical Conference

March 25 – 27, 2018
Grand Hyatt San Antonio
San Antonio, TX

International Base Oils & Waxes Conference

March 25 – 27, 2018
Grand Hyatt San Antonio
San Antonio, TX

APRIL

Security Conference

April 23 – 25, 2018
Omni Royal Orleans
New Orleans, LA

Labor Relations/Human Resources Conference

April 26 – 27, 2018
Omni Royal Orleans
New Orleans, LA

MAY

National Occupational & Process Safety Conference

May 15 – 16, 2018
Grand Hyatt San Antonio
San Antonio, TX

Reliability & Maintenance Conference and Exhibition

May 22 – 25, 2018
Convention Center
San Antonio, TX

AUGUST

Cat Cracker Seminar

August 21 – 22, 2018
Royal Sonesta Houston
Houston, TX

SEPTEMBER

Board of Directors Meeting

By Invitation

OCTOBER

Operations & Process Technology Summit

October 1 – 3, 2018
Atlanta Marriott Marquis
Atlanta, GA

Environmental Conference

October 14 – 16, 2018
Marriott Rivercenter
San Antonio, TX

EXECUTIVE COMMITTEE



Mr. Joseph W. Gorder
Chairman of the Board
Chairman, President and
Chief Executive Officer
Valero Energy Corporation
San Antonio, TX



Mr. Dave Brownell
Senior Vice President
of Global Operations
ExxonMobil Fuels & Lubricants Company
Exxon Mobil Corporation
Spring, TX



Mr. Gary R. Heminger
Vice Chairman
Chairman and Chief Executive Officer
Marathon Petroleum Corporation
Findlay, OH



Mr. Graeme Burnett
Chairman of the Board
Monroe Energy, LLC
Atlanta, GA



Mr. George J. Damiris
Treasurer
Chief Executive Officer and President
HollyFrontier Corporation
Dallas, TX



Mr. Daniel Coombs
Executive Vice President,
Global Manufacturing,
Projects, Refining and Technology
LyondellBasell Industries
Houston, TX



Mr. Gregory J. Goff
Past Chairman
Chairman, President and
Chief Executive Officer
Andeavor
San Antonio, TX



Mr. Michael Coyle
President, Manufacturing
Chevron U.S.A. Inc.
San Ramon, CA



Mr. Robert A. Herman
Executive Vice President, Refining
Phillips 66
Houston, TX



Mr. Thomas J. Nimbley
Chief Executive Officer
PBF Energy Inc.
Parsippany, NJ



Mr. David Lamp
President and Chief Executive Officer
CVR Energy, Inc.
Sugarland, TX



Mr. Jeff Ramsey
President and Chief Executive Officer
Flint Hills Resources, LP
Wichita, KS



Mr. James S. Loving
Senior Vice President,
Refining, Pipelines and Terminals
CHS Inc.
Inver Grove Heights, MN



Mr. J. Douglas Sparkman
Chief Operating Officer of Fuels,
North America and Chairman
of the Board
BP Midstream Partners
Chicago, IL

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American Refining Group, Inc.

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Michael Coyle

CHS Inc.

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**CITGO Petroleum
Corporation**

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M.J. (Matt) Aguiar

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Placid Refining Company

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SABIC

Mike Walsh

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Sinclair Oil Corporation

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Solenis

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Douglas May

The International Group, Inc.

Ross Reucassel

Total Petrochemicals & Refining USA, Inc.

Christophe Gerondeau

TPC Group

Edward Dineen

U.S. Oil & Refining Co.

Cameron Proudfoot

Valero Energy Corporation

Joseph Gorder

Valero Energy Corporation

Lane Riggs

W. R. Grace & Co.

Thomas Petti

Westlake Chemical Corporation

Albert Chao

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Axion Energy

Federico Garcia Verdier

China Petrochemical

Technology Company Limited

Zhong Yonggang

Delamine B.V.

Gert van der Knaap

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IDESA, S.A. DE C.V.

Bernardo Alvarez Certucha

Evonik Corporation

Ronald Birnbaum

Irving Oil Limited

ITOCHU Chemicals

America Inc.

Takuya Kobayashi

Marubeni America

Corporation

Kazuki Aikawa

MEGlobal

Jim Ashworth

Mitsubishi International

Corporation

Miya Kumar

Mitsui & Co. (U.S.A.), Inc.

Yuichi Masuda

Petrojam Limited

Kailyn Burnett

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Jeremy Kim

Solvay

Sumitomo Corporation

of Americas

Jill Walters

UBE Industries

(America), Inc.

Shin Kawasuso

Versalis S.p.A.

Stefano Soccol

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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 21 committees that serve to assist the Board in achieving AFPM's goals.

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

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: Gary Heminger,
Marathon Petroleum Corporation
AFPM Secretary: Geoff Moody

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.

Chair: Jeff Webber, Altairstrickland Inc
AFPM Secretary: Latoya Britt

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: Chuck Rice, Marathon Petroleum
AFPM Secretary: Jaime Zarraby

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/regulations.

Chair: Michael Hopperton,
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AFPM Secretary: David Friedman

The **Fuels Committee** provides information and policy recommendations concerning legislative, regulatory and motor fuel specification developments.

Chair: Fred Walas,
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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: Jake Menefee,
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AFPM Secretary: Geoff Moody

The **Legal Committee** provides legal and litigation strategy recommendations to advance the interests of the Association membership.

Chair: Trevor Black,
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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: Chad Wilfong,
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AFPM Secretary: Daniel Strachan

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.

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The **Reliability & Maintenance Committee** promotes the exchange of technical information and proven practices on reliability, maintenance, inspection, procurement, project engineering and turnarounds.

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Secretary: Gordon Robertson

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

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

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AFPM Secretary: James McCloskey

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

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AFPM Secretary: Rose Sabijon

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: Adi Punuru, ExxonMobil
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Chair: Michael Ingraham,
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AFPM Secretary: Lara Swett

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: Pete Conroy,
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AFPM Secretary:
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The **Cybersecurity Subcommittee** provides information and recommendations on matters pertaining to cybersecurity and cyber threats.

Chair: Kenny Mesker,
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AFPM Secretary: Daniel Strachan

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: Audrey Miller, Phillips 66
AFPM Secretary: Geoff Moody

The **State & Local Outreach Committee's** provides a forum 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.

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AFPM Secretary: Don Thoren

The **Transportation & Infrastructure Committee** helps develop effective policy on regulatory and legislative matters related to transportation and infrastructure that promote AFPM member interests and improve the safe and efficient transport of fuels and petrochemical products. The committee advocates for AFPM member companies by communicating their key role in the supply chain and their efforts to improve the safe and efficient transportation of essential fuels and petrochemical products.

Chair: Ryan Biggs, Andeavor
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The **Base Oils & Waxes Committee** provides oversight and assistance on matters related to automotive oils, base oils and waxes.

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INFORMATION RESOURCES

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 www.afpm.org/publications.

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Transcripts

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- Operations & Process Technology Summit

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 and Facebook; an AFPM podcast called Flashpoint; the Petro Primer Blog at blog.AFPM.org. and Grounded in Fact blog at www.groundedinfact.com.



SOURCES

1. Energy Information Administration, Annual Energy Outlook 2017
2. Energy Information Administration, Refinery Capacity 2017
3. Energy Information Administration, Annual Energy Outlook 2017
4. Energy Information Administration, Annual Energy Outlook 2017
5. IHS presentation from 2017 at <http://industrialheartland.com/wp-content/uploads/2017/01/IHS-Mark-Eramo.pdf>
6. IMPLAN
7. API
8. The State of American Energy, 2014 and Guide to the Business of Chemistry, 2015, American Chemistry Council
9. U.S. Bureau of Labor Statistics, Oct. 2017
10. IMPLAN
11. Bureau of Labor Statistics; Industry, Injury, and Illness Data 2016
12. 2016 AFPM Occupational Injury and Illness Report
13. Environmental Protection Agency, Comparison of Growth Areas and Emissions, 1980 - 2016
14. AECOM, 2017
15. See "Pipeline Mileage and Facilities," <https://www.phmsa.dot.gov/pipeline/library/data-stats/pipelinemileagefacilities>



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