



THIS IS ENERGY PROGRESS

STATE OF AMERICAN ENERGY

2020

energy **API**®

THIS IS ENERGY PROGRESS

"The work of the problem-solvers of our industry is never done. We are partnering with the best minds to meet the rising demand of affordable energy, while driving progress on the serious challenges posed by climate change."

**- API President and CEO
Mike Sommers**

API President and CEO Mike Sommers (right) and Steve Boyd of Boyd Landscaping - Lansing, Michigan

Boyd Landscaping is a local business that specializes in restoration projects after natural gas and oil activities such as pipeline construction. It's one of thousands of companies across the U.S. that supports natural gas and oil activities.



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Moon Township, Pennsylvania

Just northwest of Pittsburgh, Moon Township has had a growth spurt since 2013 thanks to nearby natural gas and oil development that has empowered economic resurgence in a number of business and industrial sectors.

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API President and CEO Mike Sommers (right) and Dick Peffley, Lansing Board of Water & Light general manager and CEO - Lansing, Michigan

Lansing's BWL broke ground in 2019 on a \$500 million natural gas-fueled power plant, expected to begin operations in 2021. The plant will be able to generate 250 megawatts of electricity - and do so more cleanly than BWL's two coal-fired plants it is replacing.

PRESIDENT &

CEO MESSAGE

The benefits of the American energy revolution are felt from the smallest communities to the global stage.

Across our country, communities have felt the positive impact of the abundance of American energy. From decreased energy costs for families to increased investments in school systems and infrastructure, Americans benefit from the economic growth driven by the U.S. natural gas and oil industry.

The domestic energy revolution has strengthened small businesses in Colorado, expanded agricultural production in New Mexico and created opportunities for tradespeople in Pennsylvania.

Surprisingly, there are those who respond to this progress with opposition and pushback. They suggest that we retreat – by banning hydraulic fracturing, the technology most responsible for U.S. energy leadership and emissions reductions and by promoting policies that would cost our communities jobs and impact our national security.

On the following pages we outline how, together, we will meet the challenges ahead, for a stronger economy and cleaner future – by expanding partnerships, developing best-in-class standards, driving new technologies, and supporting smarter regulations that boost innovation.

This is energy progress, and we're not done yet.



MIKE SOMMERS
President and CEO, API

THIS IS ENERGY PROGRESS ACROSS AMERICA

In the following section, see profiles of seven communities across America that are growing and prospering, with abundant energy from natural gas and oil playing a significant role.

AURORA, COLORADO

“The natural gas and oil industry helps maintain economic stability throughout the entire state of Colorado.”

– Michael Orlando, Economist,
University of Colorado Denver

▶ **\$3.4 Billion**
ADDED TO THE DISTRICT
ECONOMY ANNUALLY

MOON TOWNSHIP, PENNSYLVANIA

“This industry provides people with optimism instead of pessimism.”

– Sam DeMarco, Council Representative
At Large, Allegheny County, PA

▶ **18,390 Jobs**
SUPPORTED BY THE
NATURAL GAS AND OIL
INDUSTRY

RED WING, MINNESOTA

“Low-cost energy helps to keep our facilities operating so that families here can continue to earn a decent living.”

– Mike Goggin, State Senator, MN

▶ **\$5.1 Billion**
ADDED TO THE DISTRICT
ECONOMY ANNUALLY

"Energy infrastructure enables our plants and skilled workers to build some of America's best cars."

- Rich Studley, President and CEO, Michigan Chamber of Commerce

▶ \$1.7 Billion
ADDED TO THE DISTRICT ECONOMY ANNUALLY

"Energy fuels everything. It provides a way for everyone to have a life that they can enjoy."

- Luis Morales, Researcher and Entrepreneur, New Mexico State University

▶ 51,100 Jobs
SUPPORTED BY THE NATURAL GAS AND OIL INDUSTRY

"Low energy bills mean households have a better chance to thrive."

- Esmel Meeks, Executive Director, Citizens for Energy Equity

▶ \$1.2 Billion
ADDED TO THE DISTRICT ECONOMY ANNUALLY

"We weathered the recession thanks to the energy projects that created jobs and opportunities."

- Terry Hayden, President, Wisconsin Pipe Trades Association

▶ 19,960 Jobs
SUPPORTED BY THE NATURAL GAS AND OIL INDUSTRY

AURORA

COLORADO



Lilla Ramos, La Cueva Restaurant - Aurora, Colorado

Operated by the Nuñez family for more than 40 years, La Cueva is an Aurora landmark that has seen business growth alongside natural gas and oil industry activity in the area.

NATURAL GAS AND OIL PARTNER WITH AURORA IN CITY'S STEADY GROWTH

For more than 40 years, the Nuñez family has been serving home-style Mexican recipes from the same restaurant location in Aurora, Colorado. Today, Alfonso and his wife, Doña, proudly keep the family business going — serving dishes made from scratch, including handmade tortillas, using recipes passed down from his parents, while also infusing creative touches of his own.

Nuñez has seen much change over the years, and he'll be the first to say that not all the changes have been easy. However, **La Cueva** stands as a warm reminder that, just like a good meal, stability and growth in many aspects of life often require a nod to tradition, a good mix of fresh and local ingredients and a spirit of innovation.

That's Aurora. Tradition, local investment, and innovation have combined to help the city emerge from nearby Denver's shadow. It's home to more than a dozen thriving business sectors, with 11 development deals bringing thousands of jobs and driving nearly \$290 million in capital investments in 2017, according to the city's Economic Development Council.¹ In this, abundant natural gas and oil energy, much of it produced in the state, has played an empowering part in this. Colorado today is the seventh-largest producer in the United States.²

Aurora has seen success that comes with staying true to its identity, while also creating a path for economic growth. From bio-science and healthcare to cybersecurity, aerospace, and the military, Aurora has it. Aurora Chamber of Commerce President Kevin Hougen points to job growth, quality of life, outdoor activities, and what he calls "attainable housing" as key reasons why Aurora's population grew by more than 6,000 from 2017 to 2018.³

Economist and University of Colorado-Denver professor Michael Orlando says the state is shaped and strengthened by its varied industrial mix, and points to the significant contributions of natural gas and oil.

"The natural gas and oil industry ... helps maintain economic stability throughout the Denver metro area, and the entire state of Colorado." - Michael Orlando

Indeed, although the nearby city of Denver is relatively low in production, it is the state and regional hub for natural gas and oil companies that operate in Colorado and the Rocky Mountain West, supporting the most direct industry jobs in the state.⁴ Jobs include everything from petroleum engineers, environmental experts, and rig hands to truck drivers, caterers, and contractors. Despite low production, Denver acts as both a state and a regional hub for natural gas and oil companies that operate in Colorado and the Rocky Mountains, supporting the most direct industry jobs in the state with nearly 13,000 paying over \$161,000 dollars a year.⁵ And most importantly, all benefit from local energy-related economic activity.

That productivity generates tax revenues for schools, roads, and other public priorities. Meanwhile, industry-sponsored volunteer and community programs — from cleanup days with area students to mental health crisis help groups — work alongside active area churches and school programs to help tie communities together.

This engagement is part of a broader energy industry commitment to be a good neighbor — to hear and respond to local concerns, improve operations, and protect the environment. In turn, the environmental performance of industry facilities, fuels, and other products are constantly improving.

"So much about the lifestyle we, as fellow residents, enjoy centers around our natural environment and the outdoors," says Brian Cain of Extraction Oil & Gas. "We take pride in being good stewards and good community partners."

NEW PROJECTS FUEL AURORA ECONOMIC GROWTH

Aurora has its sights set on continued economic growth with a number of exciting development projects underway.

Colorado Air and Space Port, located a few miles west of Aurora and the Denver International Airport, is the state's first spaceport and a U.S. hub for commercial space transportation, research and development. In 2019, Reaction Engines, Inc., in collaboration with the U.S. Defense Advanced Research Projects Agency (DARPA), began high-temperature airflow testing of HTX, an engine pre-cooler designed to stop rocket engine components from overheating at high-flight speeds. The testing took place within their new Testing Facility 2 located at the spaceport.⁶

Access to affordable and reliable natural gas and oil has helped to spur Colorado's success as the nation's second-largest aerospace economy.⁷

Gaylord Rockies Resort & Convention Center, located in Aurora, opened its doors in December 2018. For years, area leaders had their sights set on establishing Aurora as a premier meetings destination. The \$800 million⁸ property is playing a major role to do just that.⁹ The city is quickly climbing the list of top 50 U.S. meeting destinations, thanks in part to its new, massive anchor.¹⁰

With 1,501 rooms and suites, 69 meeting rooms, and 486,000 square feet of meeting and exhibition space, the 85-acre property is the largest combined resort and convention center in Colorado.¹¹ By 2016, prior to its opening, Gaylord Rockies booked over 400,000 gross room nights for all future years.¹²

And its impact on the greater Aurora/Denver area shows no signs of slowing down. Several mixed-use developments are slated to be developed, including Rockies Village, which is expected to open in late 2020. Situated next to the Gaylord, the property will offer a ski-village experience with a host of eateries and shops.





In Colorado's 6th Congressional District, home to Aurora, the natural gas, oil, and petrochemicals industry:



- ▶ Adds **more than \$3.3 billion** - 7.5% of the district's total economy
- ▶ Supports **24,900 jobs** - almost 6% of the district's employment

RK Mission Critical, a privately-owned offsite manufacturing and modular solutions company, plans to headquarter its manufacturing operations in Aurora. The new 140,000-square-foot facility is expected to be operational by 2020. Following a nationwide search, the company selected Aurora due to a successful partnership with the city, the area's strong workforce, and its available space for world-class facilities. More manufacturing is moving back to the U.S. due to availability of affordable and reliable U.S. natural gas.

Aurora Economic Development Council president and CEO Wendy Mitchell says the headquarters will create new primary jobs and inject a significant amount of capital into the city's economy.¹³

JAG Logistics Center at DIA, is a planned business park near Denver International Airport that is slated to deliver its first building in 2020. Located in Aurora, the business park will encompass approximately 250 acres of commercial and industrial zoned land and provide direct access to the airport cargo tarmac. Once complete, the business park will include over 3 million square feet of planned development.¹⁴ Over the past 10 years, Aurora's growth has grown due in part to natural gas and oil.

MOON TOWNSHIP PENNSYLVANIA



Dick Wolf, Coraopolis Bicycle – Coraopolis, Pennsylvania

Wolf's shop has been in operation for 50 years and is among local businesses that are now growing because nearby natural gas development in the Marcellus shale has the Western Pennsylvania economy thriving.

ENERGY EMPOWERS SEVERAL WESTERN PENNSYLVANIA COMEBACK STORIES

The Coraopolis Bicycle Shop is celebrating 50 years in business. Walk through its unassuming front door and Dick Wolf, the shop's quiet owner, appears from the back room, where he rehabs gears, brakes, and tires for customers young and old. His story is a tale of Western Pennsylvania.

Wolf has served generations of riders by surviving economic cycles, like the closing of the nearby steel mills and changes to his own business model. Much like Wolf, his hometown, located about 15 miles northwest of Pittsburgh, is a survivor that is once again thriving thanks to a decade of natural gas and oil development in the region - as well as the broader economic benefits of abundant domestic energy.

Despite its up-and-down past, the region today is experiencing significant growth. Information technology jobs are up 18%, transportation and Warehousing have grown about 12%, Arts, entertainment, and recreation 11%; and Mining, quarrying, oil, and gas extraction are up 8% since 2013.¹

Today, Moon Township, where Coraopolis is located, boasts an unemployment rate under 3%, and the median income was well over \$70,000 annually (compared to about \$60,000 nationally²) in 2017.³ It doesn't matter if your collar is blue or white, it seems everyone has an opportunity to earn a good living. However, this story is about more than new jobs.

County Councilman Sam DeMarco says utility bills in the region have dropped sharply, helping seniors, low-income residents, and other vulnerable groups. There are even unforeseen benefits such as investments in new runways and passenger terminal at Pittsburgh International Airport and additional funding for projects such as park rehabilitation and improved roads and bridges. "This industry provides people with optimism instead of pessimism," DeMarco says.

It is doing so safely and responsibly, with a focus on reducing emissions, ensuring a smaller production footprint, and protecting the environment.

In Pennsylvania's 17th Congressional District, home to Moon Township, the natural gas, oil, and petrochemicals industry:



▶ Adds **more than \$1.78 billion** each year—6% of the district's total economy

▶ Supports **18,400 jobs**—almost 5% of the district's employment

Ann Flask is one of the optimists that DeMarco references. A welder in the Steamfitters union, she and many other members are benefiting from new projects, such as a multibillion-dollar chemical plant under construction in nearby Beaver, Pennsylvania. This plant alone will provide work for about 6,000 people at peak construction.⁴ "It's been a great provider for me," Flask says.

"I am excited to be part of something that is going to provide for the long term."

- Ann Flask

The challenge for the Steamfitters and other local businesses is how to best staff the jobs flowing into the region. An Allegheny Conference on Community Development study, "Inflection Point," projects a need for 80,000 workers to fill some of these high-paying jobs by 2025.⁵

Even with these challenges, local business owners are bullish on the future. Back in Coraopolis, Dick Wolf muses on this positive economic trend as he helps a customer whose bicycle is desperately in need of repair.

"This energy progress is good for all of us," he says. "I have a lot of loyal customers from all over Western Pennsylvania, Ohio and West Virginia, and I am proud of the businesses here in town like mine that have survived for two and three generations."

SHALE REVOLUTION — AND A LITTLE LUCK — ARE TIMELY FOR HUNTER TRUCK

One hour north of Moon Township, leaders at Hunter Truck's corporate headquarters needed qualified workers so badly they decided to build their own training center. The company has seen more than 40% growth since 2008. And it all started with a little gamble.

"About 10 years ago, our vice president of sales decided to buy 80 water trucks without any orders because he heard there was a real need in the [natural gas and oil] industry."

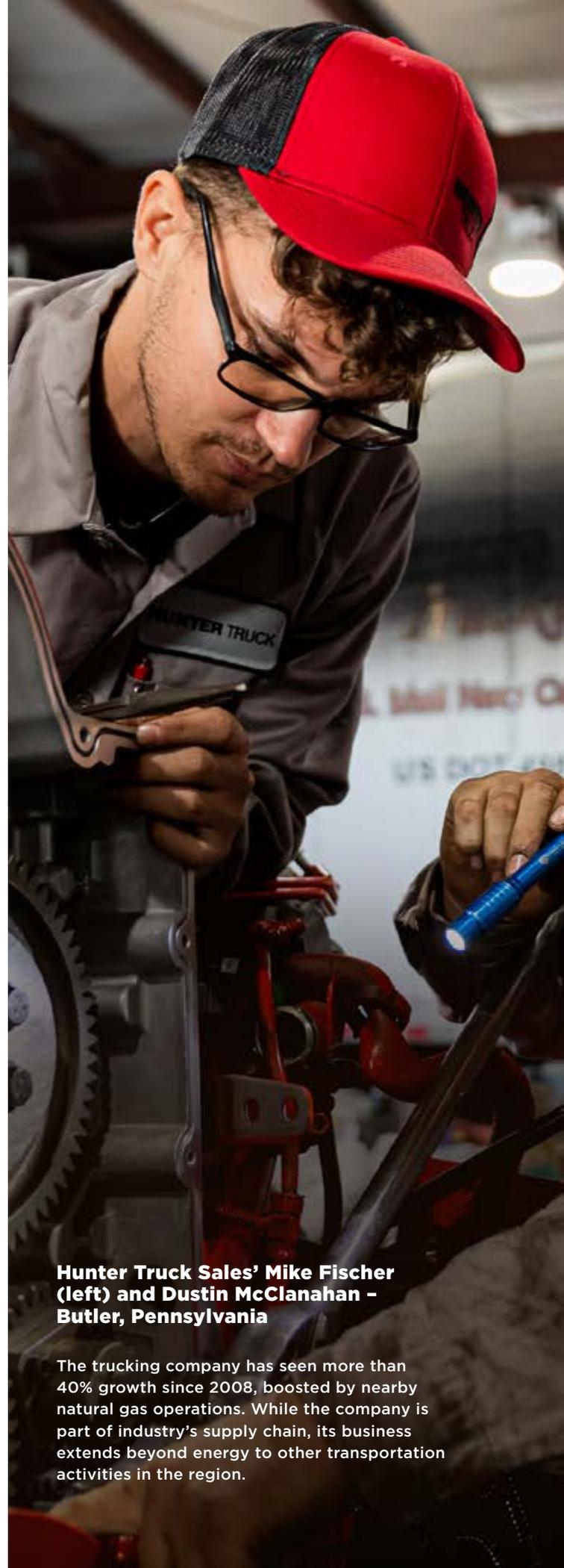
- Nancy Hunter Mycka

Nancy is one of the third-generation owners of the company. "We all thought he was crazy at the time, and then all but one of those trucks sold before they even arrived. And the last truck sold the same day it got here."

Hunter needed to attract new talent fast. They gave raises throughout the organization and then went to work recruiting during one of the largest expansions in the company's 80-year history. Today, the company has more than 1,000 employees, sells more than 3,000 trucks annually, and maintains a network of garage/maintenance facilities that can service more than 10,000 trucks a year. Thanks to natural gas.

As manufacturing and energy development increased in the area, the company's repair business also blossomed. "We went from fighting for every repair job to signing long-term repair contracts where we guarantee 24/7 service," says Mycka. "Many of these trucks have more parts than an advanced jet fighter so it's a complex job. We even have techs that work on site today."

Trucking is so important in the region that the team claims that a CDL driver's license can be as valuable as a Ph.D. these days.



Hunter Truck Sales' Mike Fischer (left) and Dustin McClanahan - Butler, Pennsylvania

The trucking company has seen more than 40% growth since 2008, boosted by nearby natural gas operations. While the company is part of industry's supply chain, its business extends beyond energy to other transportation activities in the region.



SURGING ENERGY PRODUCTION SPURS OPPORTUNITY FOR WATER RECYCLING, OTHER SUPPORT SERVICES

Environmental Services' Nick Haden grew up in Moon and describes what happened when his natural gas and oil services company began to expand in the early days of the shale boom.

"At the time, our employees would say things like, 'Thank you, this is going to be the best Christmas we have ever had,'" he says. "Hearing that from the people you work with means a lot."

HADEN'S COMPANY PROVIDES WATER RECYCLING SERVICES TO THE NATURAL GAS AND OIL INDUSTRY. TODAY, IT HAS 90 EMPLOYEES AND WILL SOON OPEN ITS THIRD RECYCLING PLANT - JUST ONE PIECE OF THE PUZZLE IN A THRIVING ECONOMY, AND INTEGRAL TO THE INDUSTRY'S STEWARDSHIP EFFORTS.

"When we see it helping local manufacturing and lowering utility bills right here in the Commonwealth, that is creating serious economic upside. And those economic benefits extend to every county in Pennsylvania even if they don't have a single well within their borders."

**Nick Haden - Environmental Services,
Moon Township**



RED WING MINNESOTA



Red Wing Shoe Company - Red Wing, Minnesota

The iconic manufacturer of work footwear, based about an hour south of Minneapolis/St. Paul, has benefited from affordable natural gas in its operations as well as from fuels to transport its products.

INDUSTRY, AGRICULTURE EMPOWERED IN SOUTHEASTERN MINNESOTA

The morning sun rises over the bluffs that frame the town of Red Wing in southeastern Minnesota, hugging the Mississippi River's southern bank about 55 miles from Minneapolis. In the nearby fields and pastures, the soil is black and fertile, supporting a cornucopia of planted grains, as well as cattle ranches and chicken farms. Soon, the bounty raised here will make its way to American dinner tables all over the country.

A few miles north, an industrial corridor is home to Red Wing's robust manufacturing sector. Together, industrial manufacturing and farming have driven the Red Wing economy for more than a century.

Today, perhaps more than ever, both are thriving in this part of the country because of abundant U.S. natural gas and oil – energy that empowers all sectors, benefits consumers, and helps protect the environment. Red Wing native and state Sen. Mike Goggin recognizes the vital role affordable energy plays across the regional economy.

"Manufacturing is energy-intensive, and it's our bread and butter," Goggin says.

"Low-cost energy helps to keep our facilities operating so that families here can continue to earn a decent living and enjoy all the things that make Red Wing so special."

- Mike Goggin

Statewide, the natural gas and oil industry supported more than 117,000 jobs, or more than 3% of Minnesota's total employment, in 2015. The industry provided more than \$7 billion in wages and contributed more than \$14 billion to the state economy¹ – including \$4.5 billion to the economy of the 2nd Congressional District, where Red Wing is located.²

But industry's impact is more than it and its suppliers. It's energy that fuels and produces across all sectors – manufacturing, construction, logistics, banking and more. Energy is foundational to growth and the opportunity to prosper. They're seeing it in Red Wing and the surrounding area.

The home of headquarters for global players including Red Wing Shoe Company, 3M, Riedell, and BIC Graphic – the parent company of a half-dozen other well-known brands – the town of 16,000 has an oversized impact on the world.³ Just up the road, Marathon Petroleum's St. Paul Park refinery produces essential fuels for the nation's transportation sector.

Overall, things are good here. The area's unemployment rate was 2.1% in October and is consistent with national rates.⁴ There's growth, and energy is playing its part. Just ask Tito Warren, vice president of global sales at Red Wing Shoes.

"From the natural gas used to power Red Wing manufacturing facilities and retail stores to the fuel we rely on to transport products, and the hard workers who rely on our products, energy is tied to everything we do," says Warren.

Others point to energy's positive role, as well. David Ybarra, president of the 9,000-member Minnesota Pipe Trades Association, says the U.S. energy revolution helps support much-needed job growth at a critical time.

"The commercial and residential segments of the pipefitting industry were hit hard during the recession, and we didn't have a lot of other options," Ybarra says. "The shale boom sustained us, drew more people to pipefitting, and led to jobs at nearby refineries and natural gas plants that are just as important to trade workers today."

HANISCH BAKERY & COFFEE BREWS UP GROWTH

Bill Hanisch, Red Wing native and owner of Hanisch Bakery & Coffee Shop, began working there as a teen more than two decades ago. Today, his son is learning from the ground up as part of Hanisch's team of nearly 40 employees.

These are great times for the locally owned bakery and coffee shop. But Hanisch remembers 2007, when things weren't so great. As natural gas and oil prices were at some of their highest levels, Hansich's operating costs skyrocketed.

"Flour went from \$9 a bag to \$49, and gas[oline] prices were around \$4 a gallon," Hansich says. "We tried our best to avoid raising our prices but, in the end, we had to tack on delivery fees and make other adjustments to cover all of the indirect cost increases."

Conversely, as energy prices decreased – helped by resurgent domestic natural gas and oil production – so, too, did the costs for a number of the ingredients for his 80 varieties of donuts and pastries. Thanks to steady growth, Hansich says he plans to expand the bakery and coffee shop in 2020.

"Today's affordable domestic energy provides greater stability, which in turn enables me to forecast and budget more accurately."

In Minnesota's 2nd Congressional District, home to Red Wing, the natural gas, oil, and petrochemicals industry:



- ▶ Supports **28,730 jobs** – 7.5% of the district's employment
- ▶ Adds **more than \$2 billion** in wages, salaries, and benefits for the district's workforce
- ▶ Adds **more than \$5 billion** almost 13% of the district's total economy



Bill Hanisch
Hanisch Bakery & Coffee –
Red Wing, Minnesota

NATURAL GAS, OIL = SKILLED TRADES OPPORTUNITIES

The U.S. energy revolution has increased demand for pipefitters to help build natural gas and oil facilities, infrastructure, and refineries. Minnesota Pipe Trades Association President David Ybarra says school boards and high school administrators within the state have responded with initiatives to help meet that need.

“The U.S. shale boom created a number of new pipe trade jobs in Minnesota,” Ybarra says. “As school boards and administrators saw the opportunities within our industry, that opened the doors for us to form pre-apprenticeship programs within high schools.”

Today, some Minnesota school districts offer one-day, multi-craft career days that introduce students to various trades. Students interested apply to take part in the North America’s Building Trades Unions Multi-Craft Core Curriculum, administered by state and local Building Trades Councils. The standardized, comprehensive, 120-hour construction course helps students select and go on to succeed in apprenticeship programs after high school. The number of students enrolling remains strong.

A career in the pipe trades can provide good wages, benefits, and retirement.

He says first-year apprentices earn roughly \$40 per hour in wages and benefits. Most programs generally require apprentices to complete five years of training or 8,000 hours.⁵ Ybarra sees a long future for skilled trades people working on natural gas and oil projects.

“Natural gas resources, fuel and oil will continue to be in high demand for decades to come. Our own training facility demonstrates our long-term commitment to training people to ensure we continue to meet the needs of America’s natural gas and oil industry.”

Updating important energy infrastructure in Minnesota, including Enbridge’s Line 3 project, offers such opportunities. The company estimates Line 3 will create 8,600 jobs in the state during construction.⁶

POWERING MANUFACTURING

Natural gas provides the base ingredients to produce plastics, fabrics, and other essential materials developed in Red Wing and around the world.

Over 10 years, Minnesota reduced its carbon dioxide emissions from power generation by about 25%.⁷ Minnesota’s use of natural gas to generate electricity has increased more than 75% since 2007.⁸



25%
REDUCTION
IN CO₂

OVER 10 YEARS,
MINNESOTA REDUCED
ITS CARBON DIOXIDE
EMISSIONS FROM
POWER GENERATION
BY **ABOUT 25%**

The industrial sector is the largest consuming sector for natural gas. In 2018, industrial users accounted for more than one-third of the total natural gas deliveries in the state.⁹

The U.S. Energy Information Administration (EIA) reports that nationwide, the industrial sector alone accounted for 30.4% of natural gas deliveries in 2018. The natural gas will primarily be used for lighting, as well as heating, cooling, and other applications to support manufacturing.¹⁰

LANSING

MICHIGAN



API President and CEO Mike Sommers (right) and Dick Peffley, Lansing Board of Water & Light general manager and CEO - Lansing, Michigan

Lansing BWL's upgrades in power generation, including construction of a new natural gas-fueled plant, are helping drive economic development. "We're a much different city today," Peffley says.

POWER FOR A NEW GROWTH NARRATIVE IN MICHIGAN'S CAPITAL CITY

It's 8 a.m. at Blue Owl Coffee in East Lansing, Michigan, the twin city to Lansing, the state capital. Blue Owl sits just a few blocks from Michigan State University and prides itself on serving "community driven coffee." Locals, college students, and faculty alike know Blue Owl's baristas by name. Like many other locally owned businesses throughout the area, Blue Owl is hiring.

That's a small clue to a big story. People here can remember when things were much different: double-digit unemployment and folks talking about the entire state approaching an economic abyss. "There was a bumper sticker on cars all over town that read, 'Will the last person leaving Michigan please turn off the lights?'" recalls Rich Studley, president and CEO of the Michigan Chamber of Commerce. "The city was at risk of losing General Motors, which, at the time, was one of our last major manufacturers."

Those unhappy days are a memory. The unemployment rate in the Lansing-East Lansing area is about 3.6% today.¹ Jobs have increased over the past year and local officials are optimistic the area is positioned for growth in the years to come. General Motors stayed; Lansing is home to the automaker's two newest manufacturing plants.

PLAYING A SIGNIFICANT ROLE HERE AND IN OTHER PARTS OF THE COUNTRY: ABUNDANT DOMESTIC NATURAL GAS AND OIL, HELPING GROW THE LOCAL ECONOMY AND EMPOWERING PEOPLE, BUSINESSES, AND MANUFACTURING.

Studley says the area's energy infrastructure was a significant factor in GM's decision to stay and has supported growth. "Manufacturers need access to safe, reliable, and abundant energy," he says, "and we're proud that Lansing has the energy infrastructure that enables plants and skilled workers to build some of America's best cars."

Of course, natural gas and oil also mean fuels for consumers and consumer-serving sectors. In December 2017, the Lansing Board of Water & Light (BWL), the municipal utility, announced it would replace the last of its coal-fired generation facilities with a \$500 million natural gas-fueled power plant. BWL broke ground in mid-2019.² The station is expected to be completed by 2021 and will be capable of generating 250 megawatts of electricity.

BWL General Manager Dick Peffley says the plan is vitally important for the future of the Greater Lansing region.

"Natural gas enables BWL to provide clean, affordable, and reliable electricity to our customers while reducing our carbon footprint." - Dick Peffley

"As we work to integrate wind and solar, natural gas will also serve as an important backup for our growing renewable power systems."

Peffley says BWL's upgrades are benefiting consumers while also helping to drive economic development, along with road and other infrastructure improvements. "We're a much different city today," he says.

Other locally owned businesses have benefited, too. Jennifer Van Dyke and her brother, David, are third-generation co-owners of Swan Electric, an electrical construction company that does natural gas and oil-related work across the state. "Whether we're working with oil and natural gas companies, utilities or large industrial manufacturers, most of our work is tied to energy in some way, and we're proud to provide jobs within our communities," she says.

For companies like Swan Electric, BWL, and Blue Owl Coffee, natural gas and oil is powering their success and that of Lansing as a whole. For growth all across the economic spectrum, it takes energy.

"American oil and natural gas play an important role in our economy," Van Dyke says. "Lower energy costs attract industrial manufacturers to Greater Lansing, and that leads to more work for tier-two suppliers like Swan Electric and businesses of all kinds."

OPPORTUNITY KNOCKS FOR BLUE OWL COFFEE – THANKS TO ENERGY

Since an early age, Nick Berry wanted to own a coffee and exhibition space. Twenty or so years later, he decided to go for it.

The company began life as a coffee bike, serving drinks from the handlebars, before moving into its first brick-and-mortar location in the REO Town neighborhood in 2017. In the following three years, Berry opened two more Blue Owl Coffee locations throughout the greater Lansing area.

The walls at all three shops feature works from local artisans and the two larger locations in REO Town and East Lansing are open until 10 p.m., offer non-alcoholic “coffee cocktails,” and frequently host musicians and other local entertainment. Berry set out to create a space where he could give back to the community, and the community has welcomed him with open arms.

“Our REO Town location is right next to the Lansing Board of Water & Light’s new offices and they’ve become some of our best customers and friends,” said Berry. “They use our products and services exactly the way they were meant to be used: they’ve had us at events, hired us for catering, and rented our space for meetings.”

Berry realizes that opening three locations in three years was aggressive, as is his long-term goal of opening

10 LOCATIONS **▶ IN 10 YEARS**

but it was important for him to provide for his employees and his community.

“Our first three locations took root really quickly because the community wanted and needed what we could provide,” said Berry. “The heart of the people got tired of just being either the capital city tied to the government or a factory town. They just wanted to say this is Lansing, this is who we are, and this is the identity we’re going to build.”



**Nick Berry, Blue Owl Coffee
Lansing, Michigan**

Local economic growth, helped by abundant energy, has supported expansion to three locations, and Berry has a long-term goal of opening even more stores in the next 10 years.

NATURAL GAS, OIL CREATE BENEFITS FOR SWAN ELECTRIC, OTHER BUSINESSES

In 2004, Jennifer Van Dyke was teaching sculpture and design courses at Virginia Commonwealth University in Richmond, when she got a call from her father. Swan Electric, their family-owned electrical construction firm, had been chosen for a large GM project in Lansing, and he needed her help.

Sixteen years and two kids later, what was meant to be a short-term relocation has turned into a bustling third-generation, family-owned business.

Van Dyke's grandfather, Herb Swan, founded the company in 1966 and her father took the helm in 1980. Then, in 2015, Van Dyke and her brother began leading the company.

Swan Electric performs all aspects of electrical construction including power, lighting, control and teledata installations. And, although oil and gas contracts represent only a portion of the company's business, U.S. energy production has helped the company grow. "A lot of our customers are either in the energy industry or significantly tied to it," said Van Dyke.

"We've seen large energy infrastructure projects start a chain reaction and, by the end of it, these projects have facilitated thousands of jobs and provided immense benefits to our community"

- Jennifer Van Dyke

Across Michigan, the natural gas and oil industry contributed \$14.6 billion to the state's economy while supporting more than 159,000 jobs, or nearly 3% of the state's total employment, in 2015.³ Van Dyke doesn't see that changing, "We're very optimistic. Unions and local businesses have a lot of energy and enthusiasm and excitement."

In Michigan's 8th Congressional District, where Lansing is located, the natural gas, oil and petrochemicals industry:

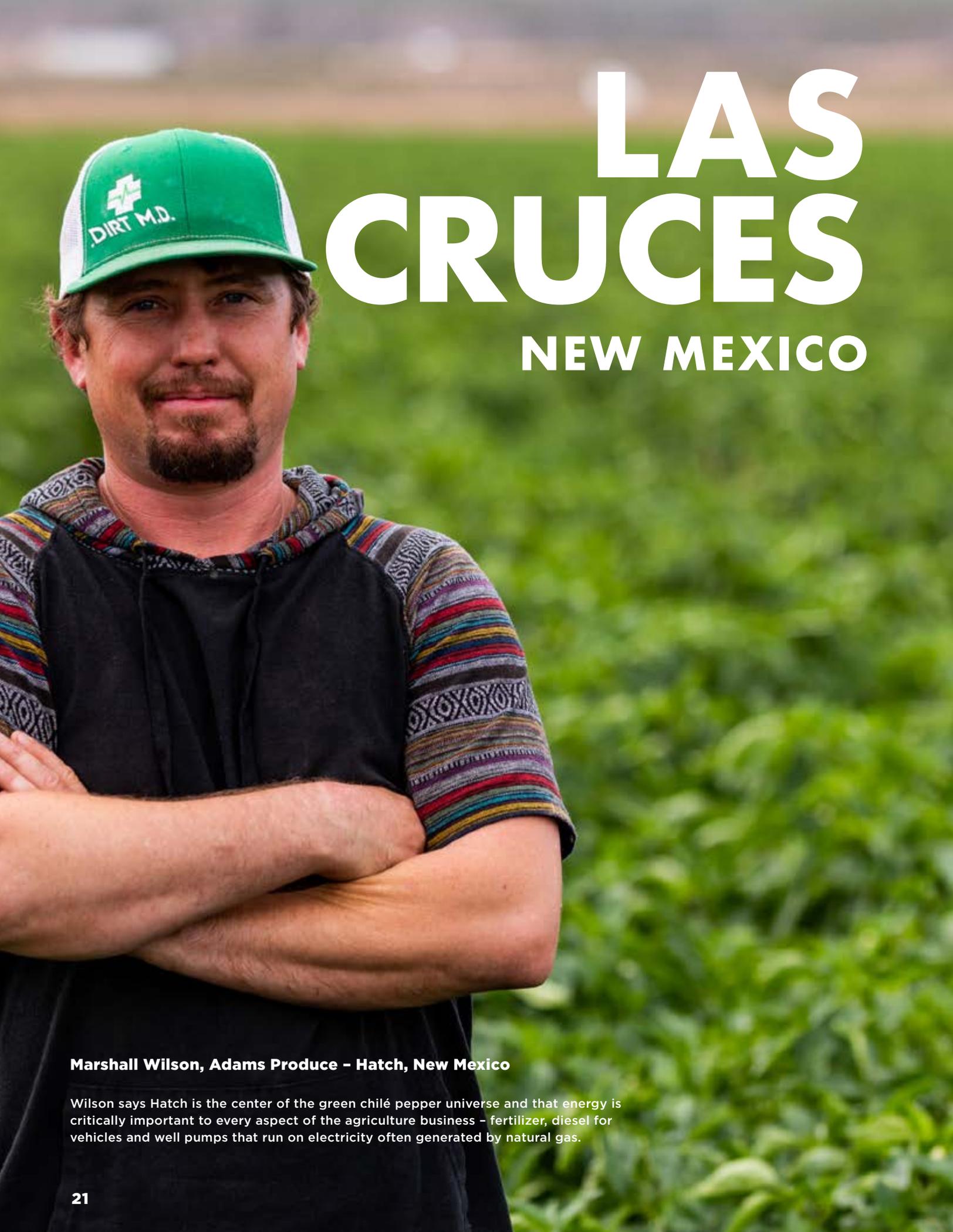


- ▶ Adds **\$222 million** in wages, salaries, and benefits that go to the district's workforce
- ▶ Supports an additional **\$791 million** in wages, salaries, and benefits to workers in the supply chain and local sectors of the economy
- ▶ Adds **more than \$1.7 billion** to the district's overall economy - nearly 5% of the total



Jennifer Van Dyke, Swan Electric Lansing, Michigan

Swan Electric's Van Dyke says abundant energy helps stimulate broad growth, which has translated into more business for her firm, including power, lighting, control and tele-data installations.



LAS CRUCES

NEW MEXICO

Marshall Wilson, Adams Produce – Hatch, New Mexico

Wilson says Hatch is the center of the green chilé pepper universe and that energy is critically important to every aspect of the agriculture business – fertilizer, diesel for vehicles and well pumps that run on electricity often generated by natural gas.

ABUNDANT NATURAL GAS, OIL FUEL NEW INVESTMENTS

The sun sets on the valley of the Rio Grande River near Hatch, New Mexico, splashing rows of green chilé pepper plants with one last burst of warmth. It's a scene that has been re-enacted here since the conquistadors introduced the spicy plant to the region. Today, New Mexico agriculture is getting a boost from a new benefactor – natural gas and oil.

This is the desert Southwest, where, surprisingly, agriculture long has been a pillar of the regional economy. As you drive down Interstate 25, patches of green crowd around the banks of the river – part of a sector that provides more than 40,000 New Mexicans with a living, including Marshall Wilson.¹ At 18, he joined Adams Produce, and more than a decade later, as he manages vast chilé fields, he appreciates the way energy and agriculture are interwoven.

“Energy affects everything we do, whether it's the fertilizer that's produced from natural gas or the diesel fuel for tractors, pumps, and transportation,” Wilson says. “These are all bottom-line considerations for farmers. Even the power we use on-site to process the crops and support electric well pumps ties back to energy production.”

Wilson's chilé fields are hundreds of miles from the nearest natural gas and oil well. Yet, he's aware of the broad empowerment abundant energy brings: jobs, investments, and generated revenues for governments. Affordable American energy is at the heart of virtually all other endeavors provided by affordable energy across industries and economic sectors all over New Mexico.

Natural gas and oil are produced in a handful of the state's 33 counties, yet state and local governments are seeing a funding renaissance sourced by industry's activities – including retail, hotels, and restaurants, as well as energy operations and supporting infrastructure. In addition, the New Mexico Oil and Gas Association says its members contributed more than \$2.2 billion to the state's general fund in 2018 – for schools, bridges, water treatment plants, and other critical state and local priorities in growing municipalities, like Las Cruces.²

Located 40 miles south of the Hatch chilé fields, Las Cruces is the state's second-largest city. It's a hub for military installations, education institutions including New Mexico State University, space flight companies, and retirees – all of which have benefited from significant infrastructure upgrades enabled by energy. “If we go back 10 or 15 years and look at where we were with growth in the county, we see a dramatic increase that could never have occurred without a significant infrastructure build-out supported by natural gas and oil revenues,” says Sue Padilla, former Doña Ana County manager.



FUELING EDUCATION



THE NATURAL GAS INDUSTRY Poured MORE THAN **\$1 BILLION** INTO NEW MEXICO'S SCHOOLS IN 2018.

Take education. Statewide studies reveal the industry poured more than \$1 billion into the state's schools in 2018. That's \$2,472 for every student.³ In addition, Gov. Michelle Lujan Grisham has proposed free college tuition for all state residents – largely funded by natural gas and oil.⁴

This would benefit future entrepreneurs and business leaders like Luis Morales. He's 36, holds a doctoral degree in biochemistry from NMSU, and is CEO of a startup company that is creating an advanced pipeline coating to protect the infrastructure for transporting natural gas and hydrogen.

“Energy fuels everything,” Morales says. “It's not just economics. It's also building infrastructure, investing in education, letting businesses thrive, and providing a way for everyone to have a life that they can enjoy.”

BUSINESS START-UP STARTS WITH ENERGY

Luis Morales is a homegrown success story for Las Cruces and New Mexico State University. He also is a living example of the significant opportunities natural gas and oil development present to the desert Southwest.

Morales was inspired by one of his high school teachers to become a scientist. Today, he is using his biochemistry doctorate from NMSU, to pursue his vision to create safer pipeline infrastructure.

“We are mixing sugar and yeast in a fermentation process to make this biopolymer coating,” says Morales.

“It’s simple, but not simple. And the product has some interesting properties that will provide a low-cost solution to protect pipelines.”

- Luis Morales

He credits the nation’s growing understanding of energy’s role in our daily lives with helping companies like his begin to flourish. Called H-Trap One, the fledgling startup is getting noticed by everyone from natural gas and oil industry investors to NASA.

In New Mexico’s 2nd Congressional District, where Las Cruces is located, the natural gas, oil, and petrochemical industry:



▶ **Supports 51,070 jobs** - more than 15% of the district’s overall employment

▶ **Adds more than \$8 billion** - more than 24% of the district’s total economy



**Luis Morales, H-Trap One
Las Cruces, New Mexico**

A product of New Mexico State University, Morales’ business start-up is developing coatings that make pipelines safer, attracting attention from the natural gas and oil industry and NASA.



NEW INVESTMENTS, GROWTH BUILT ON ABUNDANT ENERGY

Las Cruces is poised for a time of growth and prosperity that directly reflects the regional expansion from El Paso to the Permian Basin near Carlsbad. Sue Padilla, former manager for Doña Anna County, has a clear-eyed view of how important it is to seize this moment.

"My husband and I worked hard all of our lives to get where we are today, but that wouldn't have happened without opportunities afforded us by economic development in the region."

- Sue Padilla

Las Cruces is the county seat and home to Padilla and her small pecan and hay farm. After retiring from the county, she started a woman-owned engineering business focused on infrastructure development that is primarily focused on expanding utility needs, such as water and power, that are foundational to growth of all kinds.

Her small firm is actively working both in the producing areas near Carlsbad in the southeast corner of the state and throughout the center of New Mexico back to Las Cruces. She notes that the economic benefits and need for new infrastructure extend far from the wellhead. Padilla says this new wave of investment is a direct product of new natural gas and oil development.

Sue Padilla - Doña Ana County New Mexico



VIRGINIA BEACH

VIRGINIA



Donnie Mills, Mills Marine & Shipyard Repair - Suffolk, Virginia

Mills' company services shipping - military and commercial - all over Hampton Roads. His firm has benefited from the region's economic growth, which has been supported by abundant energy.

ENERGY SUPPORTS MILITARY, EMPOWERS SHIPPING AND TOURISM ECONOMY IN VIRGINIA'S HAMPTON ROADS

Just footsteps from the Great Dismal Swamp in southeastern Virginia, an inconspicuous warehouse is Donnie Mills' business headquarters. From this facility and another, both located in Suffolk, workers from Mills Marine & Ship Repair deploy to the shipyards of Hampton Roads, the region's economic dynamo. They service electrical and HVAC systems, fuel tanks, and more aboard commercial and military vessels, including massive U.S. Navy aircraft carriers and submarines.

Mills' company, like so many others in these parts, is linked to the water culture of Hampton Roads and its member communities – Suffolk, Virginia Beach, Norfolk, Chesapeake, Newport News, and more. And everywhere you turn, abundant energy is playing important, empowering roles.

An industry that supports the Navy and commercial shipping, as Mills' company does, relies heavily on skilled workers and natural gas and oil. From the heavy machinery that shipwrights use to assemble and maneuver key parts and equipment, to marine fuels, lubricants, and other petroleum-based products, natural gas and oil help empower seagoing vessels cruising the world over, connecting the United States with important trading partners and defending American interests. For Mills, business equals opportunity.

"Ship repair and servicing is a stable industry where people can get trained without incurring any student loans or debt and make \$55,000 or more working on marine hydraulics right out of high school," he says.

ENERGY ALSO IS FOUNDATIONAL FOR THE ARMED FORCES' SPRAWLING REGIONAL PRESENCE, THE LARGEST CONCENTRATION OF MILITARY PERSONNEL OUTSIDE THE PENTAGON.

More than 85,000 service members¹ and their civilian colleagues represent every branch of the military at more than 75 federal facilities and defense installations.² While Virginia is not a natural gas and oil-producing state, these abundant, low-cost domestic energy resources are essential to the work these men and women do every day.

Others recognize energy's significance as well. Virginia Beach native Esmel Meeks says affordable domestic energy boosts the state's economy, supports the area's robust tourism industry and improves the overall quality of life for all Virginians – especially the commonwealth's lower-income citizens.

"I want community leaders and those who work on behalf of our most vulnerable residents, to understand the importance of smart energy policy and what access to reliable, low-cost domestic energy means for everyone," says Meeks, executive director of Citizens for Energy Equity, a nonprofit that works to keep Virginia energy policy focused on people.³

"Low energy costs lead to price stability and job creation for businesses and industries."

- Esmel Meeks

"That translates to opportunities for families. And low energy bills mean households have a better chance to thrive. ... Energy education at the community level is a must in order to move Virginia forward."

Certainly, a part of that education is understanding the benefits that safe offshore oil and natural gas development could bring to Virginia if federal offshore areas are opened for development – tens of thousands of jobs and billions in industry spending and economic contributions to the state.⁴

According to Jim Kibler, president of Virginia Natural Gas (VNG), the region's gas utility, homes and businesses throughout the area save more than \$1,000 annually in energy costs. He attributes much of this to new techniques in natural gas and oil production that have helped to stabilize energy prices and support the area's workforce.

"Stable, predictable prices help manufacturers build business plans with greater confidence," Kibler says, "and ultimately, that translates into job growth."

TOURISM IS REGION'S STRONG SUIT

Ocean beaches and history have always topped the list of attractions to the Hampton Roads region.

The Neptune Festival, a private non-profit organization, holds more than 40 events annually in the city of Virginia Beach alone – from athletic events to wine tastings and free concerts.

While some are drawn to high-energy music events, other travelers take in the more historic sites found throughout the region. Referred to as America's First Region,⁵ the Historic Triangle includes Jamestown, the first permanent English settlement in the Americas; Colonial Williamsburg, one of the nation's first planned cities;⁶ and Yorktown, the site of the last battle of the Revolutionary War.⁷

Donnie Mills, president and general manager of Mills Marine and Ship Repair, is proud of the area he has called home for four decades. Mills moved from North Carolina to Hampton Roads in the late 1970s to start his own career. He says an area so rich in history, one that's thriving today, is well on its way to continued growth.

“With much for tourists to see and do, good-paying jobs, a well-trained workforce, and a continued commitment to ensuring a strong energy infrastructure is in place to support it all, even better times are ahead.”

In Virginia's 2nd Congressional District, where Virginia Beach is located, the natural gas, oil, and petrochemicals industry:

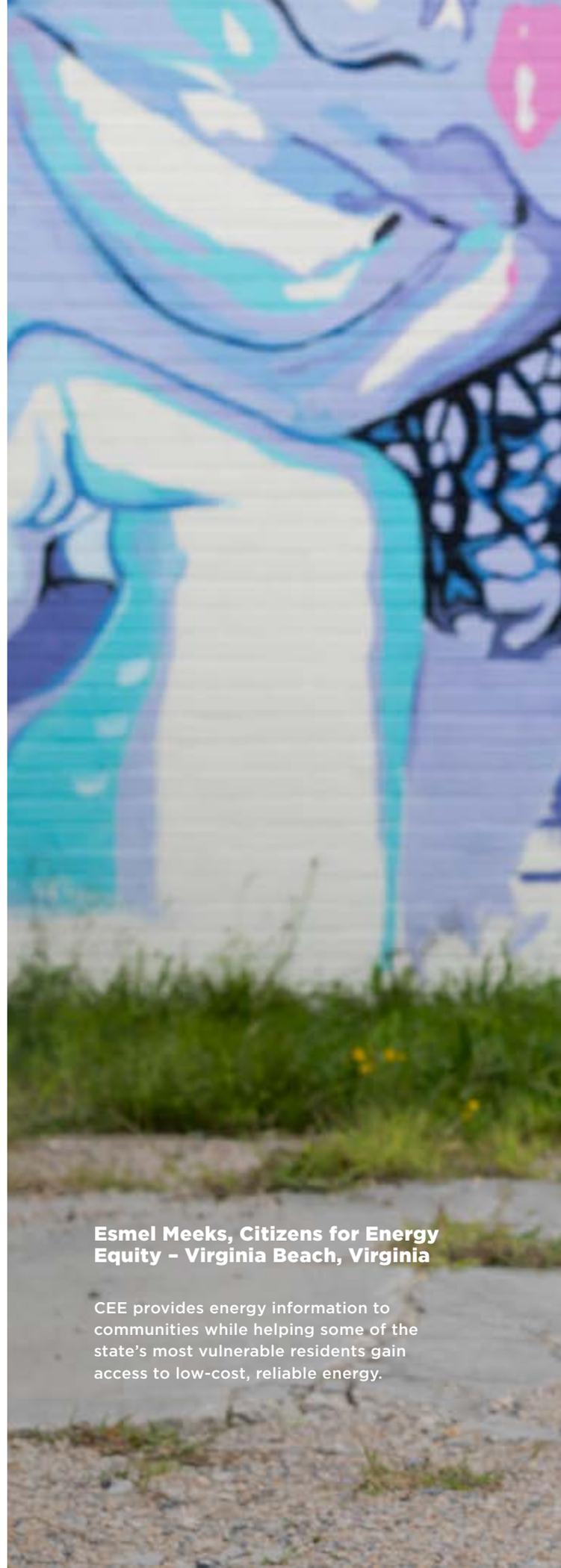


▶ **Adds \$122 million in** wages, salaries and benefits for the district's workforce

▶ **Supports an additional \$546 million** in wages, salaries and benefits to workers in the supply chain and other local sectors of the economy

Esmel Meeks, Citizens for Energy Equity – Virginia Beach, Virginia

CEE provides energy information to communities while helping some of the state's most vulnerable residents gain access to low-cost, reliable energy.





ENERGY EDUCATION SEEN AS INTEGRAL TO VIRGINIA PROGRESS

Citizens for Energy Equity, a Virginia statewide organization, was formed in 2019 to reach and educate communities about energy policy that helps Virginians access low-cost and reliable energy.⁸

Virginia Beach native Esmel Meeks is the coalition's executive director. He says affordable domestic energy boosts the state's economy, supports the area's robust tourism industry, and improves the overall quality of life for all Virginians – especially the commonwealth's lower-income citizens.

Meeks believes energy education at the community level is essential to move Virginia forward.

"Community leaders and others who work on behalf of the Virginia's most vulnerable residents must understand the importance of smart energy policy and what access to reliable, low-cost domestic energy means for the people they serve," says Meeks.

"Low energy costs also create price stability and job creation for businesses and industries. That translates into opportunities for families."

- Esmel Meeks





EAU CLAIRE

WISCONSIN

James Hanke, Market & Johnson - Eau Claire, Wisconsin

America's natural gas and oil revolution has boosted regional businesses, including Market & Johnson, a construction management and general contracting firm. Abundant energy also has created a path for regional economic stability.

ENERGY REVOLUTION HELPS LEAD EAU CLAIRE'S TRANSFORMATION

When James Hanke completed his undergraduate studies at the University of Wisconsin-Eau Claire in 2001, staying around after graduation wasn't the plan. A native of Chippewa Falls, about 20 miles to the northeast, Hanke expected his future would unfold elsewhere.

Today, Hanke's glad he stayed – a member of Wisconsin's "sticky population," natives who stay put instead of migrating elsewhere – and to be part of an economic comeback in the northwestern part of the state, closely tied to another comeback: U.S. natural gas and oil.

The U.S. energy revolution sustained the region as the nation faced its worst economic setback since the Great Depression, says Hanke, an employee of Market & Johnson, the largest construction management and general contracting firm in western Wisconsin. Innovations in hydraulic fracturing that unlocked vast, energy-rich shale reserves generated a corresponding demand all over the country for Wisconsin sand, some of the best for use in fracking.

"America's natural gas and oil renaissance catapulted the region's industrial sand mine industry and, in turn, created a path for economic stability and ultimately, growth for Market & Johnson, our employees, and workers across a number of sectors," Hanke says.

Abundant domestic natural gas and oil are economically empowering well beyond the industry itself – as fuel for transportation or power generation, as a component in materials that make Americans' lives more comfortable, as building blocks for manufacturing processes, and more. Natural gas and oil are the leading energy sources that drive the United States' 21st-century economy.

Western Wisconsin is home to some of the best industrial sand quarries in the country. Market & Johnson helped build processing facilities in states across the U.S. where hydraulic fracturing has been used to develop natural gas and oil. Eau Claire sand is used in the majority of the shale plays in North Dakota, Oklahoma, and Texas.

Frac sand mining and other industries associated with natural gas and oil have helped transform Eau Claire, a relatively quiet, small Wisconsin town of just under 68,000.¹ Today, the "Indie Capital of the Midwest" is varied and vibrant, attracting indie music lovers, foodies, and fans of locally brewed beers.

"America's natural gas and oil renaissance ... created a path for economic stability and ultimately, growth for Market & Johnson. " - James Hanke

Eau Claire's unemployment rate is under 3%² and the median family income tops \$76,500 (compared to about \$76,400 nationally).³ The cost-of-living index is 93.9, compared to the national average and the Twin Cities' index of 105 in 2018.⁴

Benn Haas, owner of The Plus, a popular bar downtown, has seen Eau Claire's thriving economy benefit small business owners like himself. During the 1980s, large shopping malls drew people out of the city center, putting a damper on small businesses. But the city, reinvigorated as it helped support production of U.S. energy, worked to bring people back downtown.

Haas was part of the area's revitalization. In addition to The Plus, he also owns an arts supply store, a framing store, a tea shop, and a cupcake shop, and he lives in and leases the apartments above The Plus. His next venture? "A restaurant," he says, "but only if it comes with a parking lot."

Terry Hayden, president of the Wisconsin Pipe Trades Association, attributes Eau Claire's transformation to a mix of private and public investments, including natural gas and oil. "It's heartwarming to see that Eau Claire has gone from being simply a good place to live to a city people are drawn to with so much to do," says Hayden.

CLEAN, AFFORDABLE ENERGY FOR NORTHWESTERN WISCONSIN

The Chippewa Valley Energy co-op provides propane fuel, heating oil and lubricants to the Eau Claire area – places including Black River Falls, Menomonie, Hudson, and Barron.⁵ The co-op’s Barry Hines says its “follow the farmer” program supplies propane and diesel directly to farmers, which has helped expand the customer base.

In turn, the co-op is part of a supply chain for companies including Market & Johnson, the regional construction and contracting company. Chippewa Valley Energy owns two oil refineries and provides fuel to power heavy machinery and other equipment at construction sites.

Meanwhile, Eau Claire is home to the Wheaton Generating Station, a natural gas-fueled power station that produces 330 to 430 megawatts of electricity.⁶ The station is part of an energy system that provides affordable energy to Eau Claire and the surrounding area – commercial rates more than 10% lower than the national average and residential rates 2% below the national average.

At the same time, Eau Claire’s electricity emissions were just 0.37 metric tons of carbon dioxide per megawatt-hour in 2017,⁷ or a little more than half the statewide average of 0.66 metric tons per megawatt-hour.⁸

In Wisconsin’s 3rd Congressional District, home to Eau Claire, the natural gas, oil, and petrochemicals industry:



▶ **Supports 19,960 jobs** – almost 5% of the district’s overall employment

▶ Adds more **than \$1.5 billion** to the district’s economy



Barry Hines, Chippewa Valley Energy Co-op – Eau Claire, Wisconsin

The co-op, which supplies propane, heating oil and lubricants, is part of an energy supply chain for other companies that are contributing to regional economic growth.



TECHNICAL TRAINING PREPARES LOCAL STUDENTS FOR INDUSTRY JOBS

Chippewa Valley Technical College in Eau Claire has 18,000 students enrolled in associate degree, technical diploma, or vocational continuing education programs to support the area's demand for manufacturing, distribution and other skilled laborers.⁹

"We weathered the recession thanks to the energy projects that created jobs and the opportunity for young people to come into our industry," says Terry Hayden, president of the Wisconsin Pipe Trades Association. "These are lifelong careers that provide a good life in Wisconsin, and it's important to us to provide training resources to prepare them for a bright future."

► 18,000 Students

ENROLLED IN PROGRAMS TO SUPPORT THE AREA'S DEMAND FOR MANUFACTURING, DISTRIBUTION, AND OTHER SKILLED LABORERS

Statewide, the natural gas and oil industry supports nearly 100,000 jobs, \$4.8 billion in wages, and nearly \$8.4 billion in economic impact.¹⁰

The Brewing Project, Eau Claire, Wisconsin



AMERICA'S PROGRESS AT RISK

Hard-earned economic progress and opportunity - illustrated in Colorado, Pennsylvania, New Mexico, Minnesota, Wisconsin, Virginia and Michigan, thanks largely to America's energy transformation - could be lost if the U.S. energy revolution is halted by banning fracking or ending new federal natural gas and oil leasing, as some advocate.

**Mario Ulizzi, Sewickley Shoe Repair
Sewickley, Pennsylvania**

IMPACTS OF BANNING FRACKING, FEDERAL LEASING

Ending hydraulic fracturing would cause significant impacts to the U.S. economy and household energy costs, and increase our dependence on foreign energy, according to soon-to-be-released independent analysis.¹

TODAY THE U.S. IS

No. 1 IN THE WORLD

IN NATURAL GAS AND OIL PRODUCTION

BUT

ENDING HYDRAULIC FRACTURING WOULD MEAN:

\$900 Billion

INCREASE IN U.S. HOUSEHOLD ENERGY COSTS THROUGH 2030.

\$6.3 Trillion

LESS FOR FAMILIES TO SPEND ON PRIORITIES.

\$7.1 Trillion

IN POTENTIAL LOSSES TO THE U.S. ECONOMY BY 2030.

Up to 7.3 Million

FEWER U.S. JOBS BY 2022.



By 2030, the U.S. would be more dependent on foreign energy and would go from a net exporter to net importer of natural gas and oil.

THE U.S. WOULD IMPORT 40%

OF OUR OIL AND PETROLEUM PRODUCTS AND

29% OF OUR NATURAL GAS

Even with more renewables, the U.S. would use more coal to generate electricity with a

40% INCREASE IN COAL GENERATION

up from today.

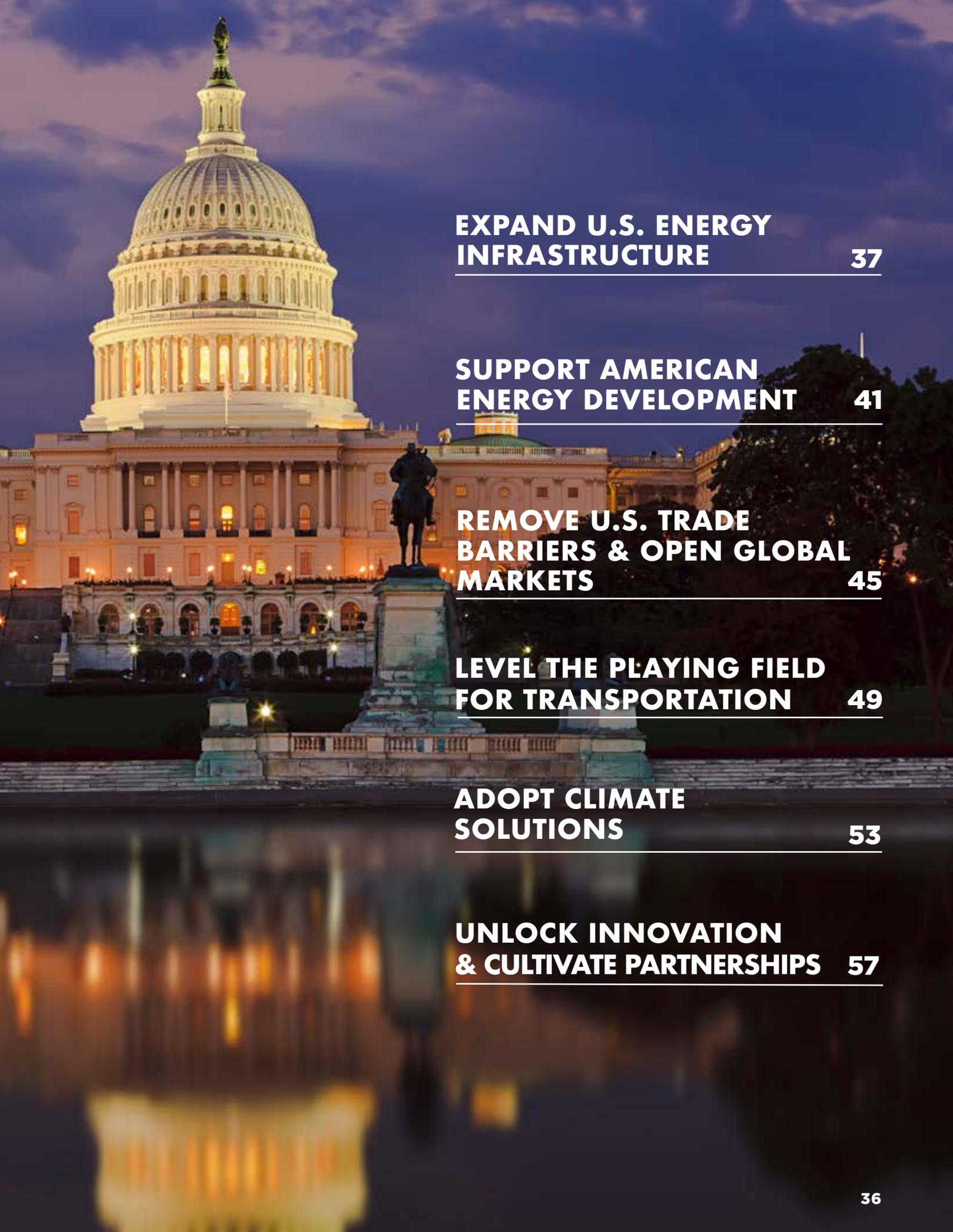
POLICY PATHWAYS

POLICY PRIORITIES TO CONTINUE U.S. ENERGY PROGRESS

Natural gas and oil power America's 21st-century economy, strengthen our nation's security and support U.S. global leadership in reducing greenhouse gases.

The U.S. is No. 1 in the world in natural gas and oil production – thanks to abundant reserves and today's modern, technologically advanced industry.¹

Now is no time for turning back. To grow American energy leadership, we must look to the future and prepare for projections that global energy demand will rise with policies that support safe, responsible domestic natural gas and oil production. The following pages describe forward-looking policies that will foster sound, well-managed development that benefits American families, creates opportunity and helps secure our country well into the future.



**EXPAND U.S. ENERGY
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& CULTIVATE PARTNERSHIPS 57**

THIS IS ENERGY
PROGRESS





**EXPAND
U.S. ENERGY
INFRASTRUCTURE**

DELIVERING AFFORDABLE, RELIABLE ENERGY

U.S. energy infrastructure, including pipelines, export terminals and ports, is a complex and extensive network that seamlessly delivers energy to consumers.

Pipelines are the safest and most efficient way to transport natural gas and petroleum for everyday use. Over the past five years, liquids pipeline mileage increased by nearly 12 percent to accommodate America's energy production growth.² Infrastructure expansion will ensure that our abundant, homegrown energy reaches American households, businesses and U.S. trading partners.

To keep pace with rising energy demand, over

**\$1 TRILLION
IS NEEDED FOR
INFRASTRUCTURE**

investments through 2035.³



Increasing efficiency, transparency and certainty in federal permitting is essential to aligning smart regulations with responsible and timely investment in necessary projects.

For example, modernizing the National Environmental Policy Act's (NEPA) maze of permitting rules is necessary to the sustainable development of the nation's vast energy resources.

▶ **API RP 1173, PIPELINE SAFETY MANAGEMENT SYSTEMS:** helps pipeline operators benefit from a safety management system (SMS) and systematically manage pipeline safety and measure progress to improve overall performance.



THIS IS ENERGY PROGRESS



A photograph of an offshore oil rig structure, featuring yellow steel beams and pipes, set against a blue sky and ocean background. The rig is a complex of steel beams and pipes, with a prominent yellow structure in the foreground. The background shows a vast blue ocean under a clear sky.

SUPPORT AMERICAN ENERGY

DEVELOPMENT

ACCESS TO ENERGY

KEY TO SECURITY

With global energy demand projected to increase more than 45 percent by 2050, access to energy is more important than ever.⁴ Safe and responsible production in the U.S., including on federal lands onshore and offshore, is critical for a reliable, affordable and cleaner energy mix. In addition, investments in natural gas and oil support communities by contributing to lower household energy costs, more jobs, and greater state revenue for education and public projects.

The federal government should expand offshore natural gas and oil leasing opportunities to promote continued **domestic production since offshore natural gas and oil reserves can take over 10 years to develop and will help to secure our country's long-term security.**

Transparent, streamlined and expedited federal permitting processes are necessary for the timely review of natural gas and oil production - which in turn promotes economic growth for local communities, investments in parks, roads, and schools, and good-paying jobs.



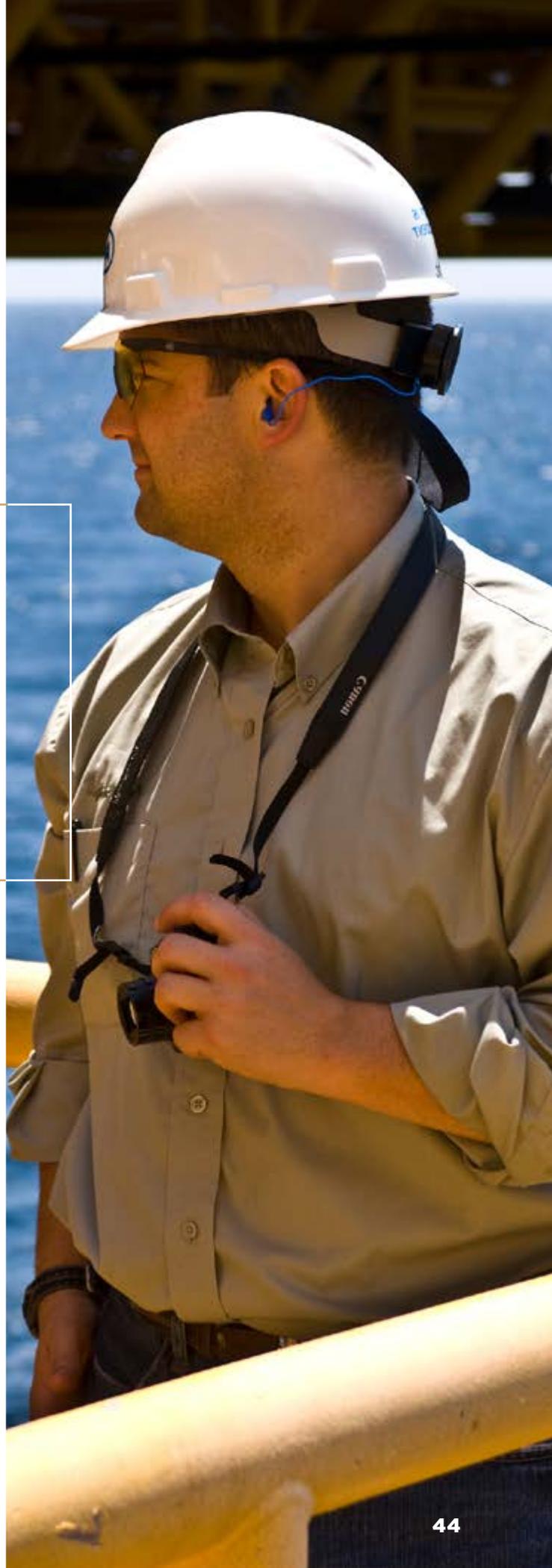


2.37 MILLION ACRES OF PARKS, FORESTS, AND RECREATION AREAS

in 50 States federally funded primarily by offshore energy royalties.⁵

▶ **API RP-75, RECOMMENDED PRACTICE FOR DEVELOPMENT OF A SAFETY AND ENVIRONMENTAL MANAGEMENT PROGRAM FOR OFFSHORE OPERATIONS AND FACILITIES:**

foundational offshore safety and environmental management standard that reflects state-of-the-art systems to drive safety and environmental protection in offshore operations



THIS IS ENERGY PROGRESS



An aerial photograph of a busy port at dusk. The sky is a mix of deep blue and purple, with a few clouds catching the last light of the day. The water is dark blue, and numerous ships of various sizes are scattered across the port, their lights glowing. A long bridge or pier structure extends from the right side towards the center. The overall scene is one of active maritime commerce.

REMOVE U.S. TRADE BARRIERS & OPEN GLOBAL MARKETS

FREE TRADE AGREEMENTS SUPPORT U.S. JOBS & INVESTMENTS

Free-trade agreements like the USMCA – that eliminate tariffs, create energy trading zones, and protect U.S. energy investments in other countries – help open markets for the American natural gas and oil industry, boosting domestic production and job growth. Provisions in free-trade agreements, including the elimination of tariffs on products, create a level playing field for the U.S., which enables greater energy trade and investment all around. That benefits energy consumers and energy security for the U.S. and our partner countries in these agreements.

Policymakers and regulators must insist on international agreements that strengthen free market energy trading relationships between the U.S. and the rest of the world, coupled with domestic policies that allow for exports to the global market.

In 2019, the U.S. produced

**12 MILLION
BARRELS OF OIL
PER DAY.⁶**



89,000 BARRELS OF OIL PER DAY IN U.S. EXPORTS.⁷

This includes de-escalating trade disputes with China and other nations that take America in the wrong direction. The U.S. needs to de-escalate the trade war with China: through commitments that remove U.S. tariffs that still remain on hundreds of industrial components that are used in the U.S. natural gas and oil industry and that remove retaliatory Chinese tariffs against U.S. exports of crude oil, LNG, and chemicals products. And the U.S. needs to remove tariffs on imports of specialty **steel used in the American natural gas and oil industry that we import from our allies, working together rather than against our allies to address the unfair trade practices of other nations.** Trade wars block American progress and the global competitiveness of the U.S. natural gas and oil industry.

The U.S. recently became a net exporter of energy for the first time since the 1950s – a milestone that brings with it a slew of economic benefits, including lower energy prices and renewed investment in resource development, processing, and transportation.



These exports strengthen America's standing as a world energy superpower and create opportunities for the U.S. to use its energy to alleviate poverty and reduce emissions around the world. Going forward, policies should support additional export capacity, which will help meet expected growth in global energy demand, boost energy trade, spur domestic production, and grow the economy.

THIS IS ENERGY
PROGRESS



A photograph of a multi-lane highway during sunset. The sky is a mix of blue, orange, and yellow. In the foreground, a large white semi-truck is partially visible on the left. Several cars are driving on the highway, their headlights on. A concrete barrier runs along the right side of the road. The background shows a line of trees and distant hills.

LEVEL THE PLAYING FIELD FOR TRANSPORTATION

PROTECTING

U.S. CONSUMERS

Consumer-friendly transportation policies require a free-market approach to ensure a level-playing field for all Americans. Government mandates and subsidies harm consumers by unfairly disrupting market decisions.

For example, biofuel mandates distort the marketplace to use products that can damage vehicles, while electric vehicle (EV) tax credits subsidize upper-income households purchasing luxury vehicles at the expense of taxpayers.

The Renewable Fuel Standard's (RFS) objective of reducing crude oil imports is obsolete given growing domestic oil production, and its goal of producing commercially viable cellulosic biofuel has never materialized. **Today, about 70 percent of vehicles on the road weren't designed to run on E15 fuel, per manufacturers' manuals, and no boats, small engines or motorcycles can use the product.**⁸ The outdated ethanol mandates puts consumers at risk by incentivizing higher ethanol blends in the fuel supply.

80% OF ALL FEDERAL EV SUBSIDIES HAVE GONE TO INDIVIDUALS MAKING \$100,000 OR MORE.⁹



Electric vehicles can and should coexist with internal combustion engine vehicles (ICEV) on our roadways in a vibrant, free market. However, subsidies for EV purchases disproportionately advantage upper-income households, and many federal and state transportation policies exempt EV owners from paying their fair share for road maintenance and repair. Those same households also get assistance by having the EV charging infrastructure paid for by electricity rate payers regardless of whether they own an EV or not.

Fuel policies should safeguard consumers against unfair subsidies and mandates that do not harm all U.S. consumers.

▶ **API STANDARDS [ILSAC GF-6A, GF-6B AND API SP]:** improved performance standards for engine oils that will provide greater protection and fuel efficiency for today's gasoline-engine-powered cars and trucks



E15 AND OTHER HIGHER ETHANOL VOLUME FUELS CAN DAMAGE:



BOAT
ENGINES



OUTDOOR POWER
EQUIPMENT



VEHICLE
ENGINES



MOTORCYCLE
ENGINES

THIS IS ENERGY PROGRESS



Stacey Nachbaur - Hess Corporation
Production Manager, North Dakota



ADOPT CLIMATE SOLUTIONS

INVESTING IN A CLEANER ENERGY FUTURE

The U.S. natural gas and oil industry is laser-focused on delivering affordable, reliable, and ever-cleaner energy to businesses and consumers around the world.

The increased use of natural gas in power generation, industry's leadership and continuous innovation, and creation of state-of-the-art standards have driven U.S. carbon dioxide emissions to their lowest levels in a generation, even as global emissions are on the rise.

Now that the U.S. is the world's leading producer and a net exporter, cleaner natural gas is more readily available in areas that experience energy poverty - **reducing global emissions, raising standards of living, and supporting the uptake of renewable energy.**

\$108 BILLION
INVESTED IN GREENHOUSE GAS MITIGATING TECHNOLOGIES

between 2000-2016.¹⁰



Karen Work
ConocoPhillips,
Orla, Texas

API and its members commit to delivering solutions that reduce the risks of climate change while meeting society's growing energy needs. We support global action that drives greenhouse gas emissions reductions and economic development.

The natural gas and oil industry is part of the global solution and plays a vital role in developing and deploying technologies and products that continue to reduce GHG emissions while advancing human and economic prosperity and that are essential to extending the benefits of modern life to all.

▶ **API RP 50, NATURAL GAS PROCESSING PLANT PRACTICES FOR PROTECTION OF THE ENVIRONMENT:** for natural gas processing to help companies reduce methane and other greenhouse gas emissions



Klint VanWingerden,
Alyeska Pipeline
Anchorage, Alaska

API ENGAGES ON CLIMATE POLICY FROM A PRINCIPLED APPROACH AND SUPPORTS BIPARTISAN LEGISLATION TO INCENTIVIZE RESEARCH AND DEVELOPMENT OF CCUS, INCLUDING THE USE IT ACT (S. 383) AND THE LEADING ACT (S. 1685).

THIS IS ENERGY PROGRESS





**UNLOCK
INNOVATION
& CULTIVATE
PARTNERSHIPS**

ENERGY PROGRESS

IS NOT DONE ALONE

It has always been a mixture of industry leadership, opportunities to innovate, and partnerships with the best minds – from academia to government scientists, such as those in U.S. national labs. The natural gas and oil industry’s continued advancement of engineering technologies over time, such as hydraulic fracturing and horizontal drilling, benefit the nation’s economic strength and energy security.

Constant innovation, smart regulations, collaborative efforts, and industry initiatives, help to ensure that industry is providing affordable and reliable energy to consumers, while reducing its environmental footprint and emissions.

For instance, The Environmental Partnership, which is comprised of companies in the U.S. oil and natural gas industry committed to continuously improving the industry’s environmental performance, serves as a model of industry leadership. The U.S. leads the world in producing natural gas and oil and is committed to reducing emissions relative to production in basins across the country.



67% DECLINE IN METHANE EMISSIONS RELATIVE TO PRODUCTION,

2011 - 2018, in five of the major producing areas.¹¹

API works to constantly evaluate and strengthen industry standards to drive progress in safety, environmental protection, and efficiency across the industry. **API's Global Industry Services (GIS) drives safe production globally through critical partnerships, including signing four memoranda of understanding (MOU) with international parties and working with emerging nations on standards adoption.**

Additionally, API partners with energy trade associations around the world to cultivate partnerships focused on global sustainability. We work together with associations including IPIECA and IOGP to convene and produce standards and guidance that our member companies use globally to conduct operations in a safe, environmentally responsible manner that is responsive to communities around us.



METHANE EMISSIONS

Since 1990, methane emissions from natural gas systems nationally **have dropped 14%** while natural gas production has **increased more than 50%**.¹²

▼
14%
DECREASE
IN EMISSIONS

▲
+50%
INCREASE IN
PRODUCTION

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HOW CAN WE KEEP R
WHILE MEETING AMER
BY WORKING TOGETH

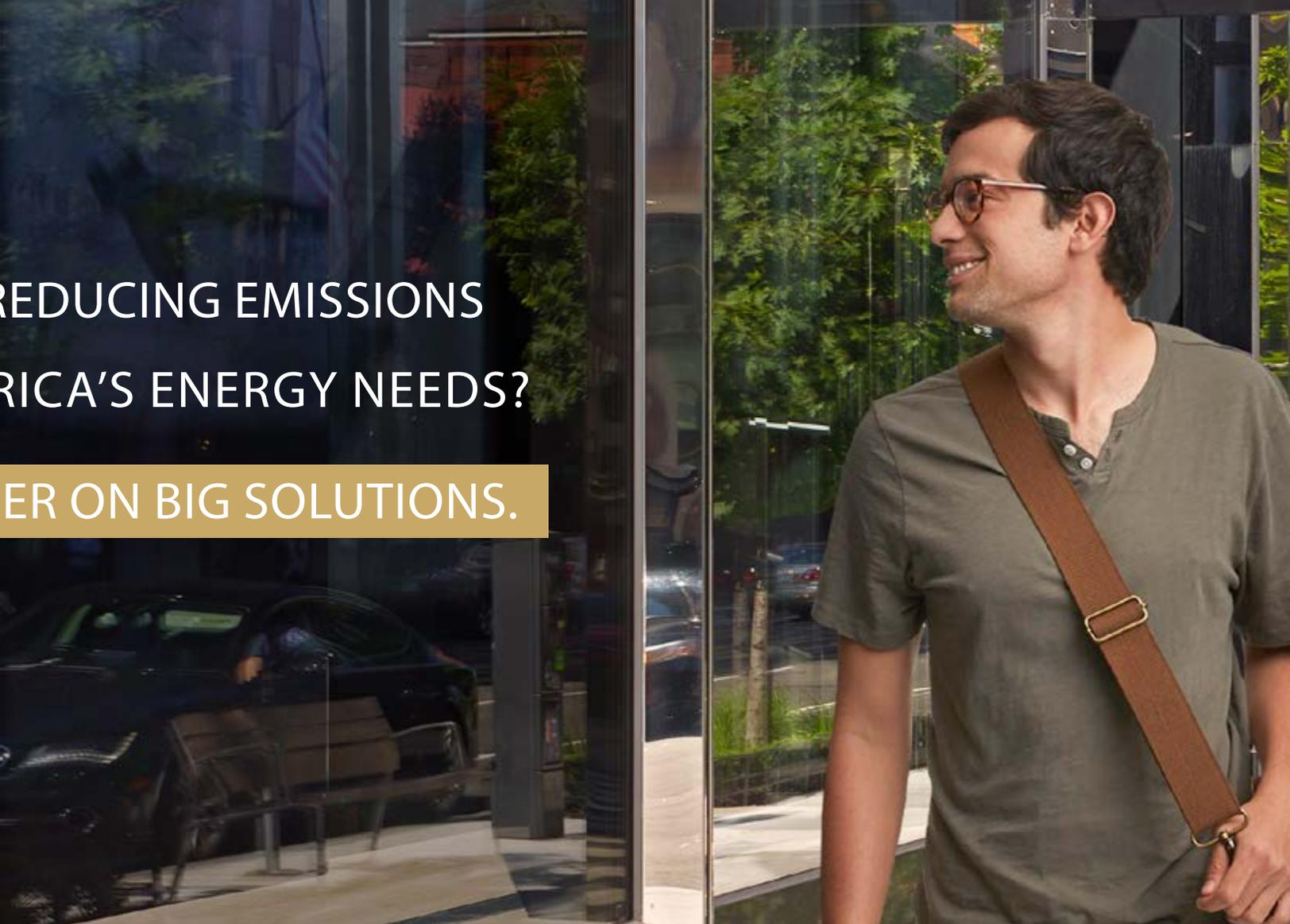


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