BE AN ENGINEER

An opportunity to solve some of the world’s toughest challenges. Millions of cool jobs. Higher salaries. These are just a few of the many reasons why kids should consider becoming engineers. Help us inspire our future engineers.

Visit BeAnEngineer.com

ExxonMobil
Energy lives here°
During his address at IHS CERAWeek, the international gathering of energy leaders and policymakers, Exxon Mobil Corporation Chairman and CEO Rex W. Tillerson cited how scientific and engineering advances are shaping the modern world.

But, he also noted that while 21st century society is benefiting from a transformed energy landscape, our U.S. industry struggles under policies shaped by 1970s thinking. Mr. Tillerson outlined four policy changes to address this, while increasing supplies, jobs and energy security. A summary of his speech begins on the next page.

Our cover story, starting on page 5, highlights ExxonMobil’s half-century of partnership and progress in Malaysia. From early exploration efforts in the 1960s to our operations today, our long relationship has helped Malaysia become one of Asia’s leading economies.

The U.S. chemical industry is experiencing a renaissance, and ExxonMobil Chemical is at the forefront of this growth, investing in new facilities. As part of this story, which begins on page 9, Neil Chapman, president of ExxonMobil Chemical Company, discusses the opportunities presented by demand growth, and his organization’s long-term approach to continued success.

We started production at the Hadrian South field in the Gulf of Mexico. At 7,600 feet, this development set a world record, and next year the nearby Julia field will begin producing oil from reservoirs nearly 5 miles below the seafloor. The story of these challenging projects begins on page 13.

Plus Plenti, a new consumer loyalty program (page 17); pro bono community service by ExxonMobil attorneys (page 21); looking back at the King Ranch (page 25); and added oil production in Angola (page 31).

We hope you enjoy this issue of The Lamp.
U.S. needs energy policies worthy of today’s technology

Exxon Mobil Corporation Chairman and CEO Rex W. Tillerson cites four policy changes that could stimulate new investment, increase job creation, boost oil and gas production, and provide greater environmental protection.

A technology revolution that has created an era of energy abundance could benefit society even more with the help of 21st century energy policies.

Chairman and CEO Rex W. Tillerson, speaking at the 2015 IHS CERA conference in Houston, said that the energy industry and the United States have reached a turning-point moment in history. At the same time, a “new world” is being created across the transformed energy landscape whose full parameters remain to be determined.

“For nearly all of us in the energy sector, these abundant new supplies and the resulting decline in prices have created new pressures that will demand increased discipline and focus,” Tillerson said. “But for consumers and the economy, there have already been significant benefits.

“New supplies of energy have created and supported millions of jobs, led to a renewal of manufacturing and increased government revenues – all during a severe recession and through a period of anemic economic growth.”

Essential change

Tillerson noted that the energy industry has shown just a fraction of what scientific and engineering advances can mean for the safety and progress of society.

“Unfortunately, as much as our investments and technologies are shaping – and will shape – the 21st century, our industry continues to struggle under the weight of policies that are products of 1970s thinking. This must change.”

Tillerson said that if society is to benefit fully from the technology revolution at this turning-point moment, the United States will need “energy policies worthy of the science and engineering and entrepreneurial daring that have redefined the modern energy landscape.”

He added that optimistic policies are required that reflect the shared aspirations of industry and society for energy and environmental protection, and that appreciate the power of free markets to create revolutionary innovations. Further, these policies must proceed with the conviction that a new world is best constructed on free trade and global cooperation.

Proven technology

Tillerson cited four areas where policy changes would ensure that North American technologies and supplies contribute to increased energy security, diversity and flexibility.

“First, we need governments to recognize that our advanced technologies and techniques have been thoroughly proven in some of the most delicate ecosystems and harshest conditions on Earth.”

Tillerson noted that this was one of the implications of the Arctic Research Study, produced by the National Petroleum Council at the request of Dr. Ernest Moniz, secretary of the U.S. Department of Energy. As chair of this collaborative effort, Tillerson said the study found that U.S. arctic oil and natural gas resources can contribute significantly to enhancing national and global energy security, and that its potential can be developed
using existing technologies. “The political challenge will be to act on the collaborative and science-based findings of the study and open the U.S. Arctic to field-proven technologies and cutting-edge techniques.”

**Free trade**
Second, Tillerson said that the U.S. government should promote free trade in natural gas and crude oil, “as we do for virtually every other good manufactured in the United States.

“Whether we are talking about the export of liquefied natural gas [LNG] or ending the ban on crude oil exports, economists and leaders from across the political spectrum agree that free trade in energy will lead to increased investment, increased job creation and increased energy production.”

**Keystone XL**
A third policy change is approval of such critical infrastructure projects as the Keystone XL pipeline.

Tillerson said that the pipeline would do more than deliver oil from Alberta, Canada, and North Dakota’s Bakken Shale to refiners on the U.S. Gulf Coast.

“It would improve U.S. competitiveness, increase North American energy security, and strengthen the relationship with one of our most important allies and trading partners.”

**End complexity**
Finally, transparency and certainty are needed in the regulatory process.

“The delays and political machinations that have delayed the Keystone XL pipeline are the poster child for a much deeper problem hindering progress and advancement in this country. Regulatory complexity increasingly burdens companies and investors with expensive delays, onerous reworks, unnecessary duplication, and extended and costly legal wrangling.”

Tillerson added that it is a “fundamental tenet of good government that leaders and policymakers provide a clear and certain pathway to regulatory compliance.”

He concluded by saying that energy policy will increasingly be at the center of public discussions and debate. “It will be up to the leaders in our industry to tell the extraordinary story of how human ingenuity and innovation can transform the energy sector – and the world – for the better. We have achieved so much in the past decades. But with sound policies, we can enable more investment, which will enable new technologies.

“And with the ability to invest confidently and efficiently, we will find new ways to deliver energy in a way that is safe, secure and reflects our highest ideals for individual opportunity, economic growth and wise stewardship of the environment. In doing so, we can sustain our quality of life and lift millions out of poverty.”

*The Lamp*
Malaysia has achieved enormous economic progress since gaining its independence from the United Kingdom in 1957. Blessed with abundant natural resources, its economy has grown by an average of more than 6 percent annually for 50 years. Few nations have achieved such progress, and ExxonMobil has been a key partner in that remarkable journey.

“Esso Exploration Malaysia was formed in 1965 to conduct petroleum exploration activities in Malaysia,” says Kok-Yew See, president of ExxonMobil Exploration & Production Malaysia Inc. and chairman of the ExxonMobil subsidiaries in Malaysia. “We received our first exploration concessions in 1968. Three years later, we struck oil offshore the state of Sabah in Borneo, and two years after that, we discovered oil offshore Terengganu state in peninsular Malaysia. Our ventures here have been successful right from the start.”

In 1976, the company signed its first production sharing contract (PSC) with the new national oil company, Petronas, generally referred to as Petronas. First production from the Tapis field began in 1978. ExxonMobil operates in Malaysia under PSC terms under contract with Petronas.

Expanded energy production
Company operations in Malaysia have grown substantially from those early days. Today, ExxonMobil operates 35 oil and gas platforms in 12 fields offshore Terengganu, and

A half-century of partnership and progress
Since 1965, ExxonMobil has joined with Malaysia’s government to develop the nation’s vast energy resources.
One of ExxonMobil’s successes in Malaysia is human resource development. In 1978, when the company began production operations from the Tapis field, fewer than 50 percent of its 300 employees were Malaysians. Today, more than 95 percent of its approximately 1,200 employees in the upstream are Malaysians. There are also 64 Malaysians abroad, with about one-third working in leadership positions, contributing to ExxonMobil’s operations around the world.

interest in another 10 platforms in five fields in the South China Sea. These combined operations produce about 15 percent of Malaysia’s crude oil and condensate of 600,000 barrels a day, and more than half of peninsular Malaysia’s natural gas of more than 2 billion cubic feet per day.

While oil and gas production has always been the company’s primary business in Malaysia, refining and marketing operations were also part of the mix for many decades.

Today, other ExxonMobil activities in Malaysia include support organizations in the capital city of Kuala Lumpur that provide a wide range of technical and business services to company affiliates around the world, with a particular emphasis on IT, refining and production operations. ExxonMobil Chemical Company also markets a range of specialty products throughout Malaysia.

“Our partnership with Petronas and the Malaysian government was strong from the very beginning and has continued for a half-century,” says Tom Walters, president of ExxonMobil Production Company. “With innovative technologies, development and operational excellence, and by leveraging mutual experiences, we have collaborated to produce needed energy resources for the country. Petronas and ExxonMobil have been true partners in every sense of the word, and we have since expanded this partnership outside of Malaysia to activities in Chad, Africa. The cooperation has been exceptional, which is why the partnership has worked so well for so long for both parties.”

Enhanced oil recovery
ExxonMobil has some 2,000 regular employees in Malaysia, 95 percent of whom are nationals. Many of these workers are helping bring onstream the nation’s first enhanced oil recovery (EOR) project. With several producing fields offshore gradually approaching maturity, EOR represents an opportunity to unlock remaining reserves in the reservoirs. The Tapis field EOR project began in 2010 and started up in late 2014. The $2.6 billion venture uses injected water and gas to gradually sweep remaining oil to producing wells.

“Virtually everything about this project is Malaysian-based,” notes Noorassihah Zainai, Tapis asset manager. “Engineering, fabrication, procurement, construction, marine and aviation services, turbo machinery services, and offshore installations have been provided by Malaysian suppliers. We installed the platform in April 2014, and five months later we had startup. Given that this is the first large-scale EOR project in Malaysia and one of the largest such projects in Southeast Asia, it speaks volumes about the local capability and talent that have developed over the past half-century in this country.”

Broadening economy
That talent and capability – supported with ample domestic energy supplies – has broadened Malaysia’s economy far beyond oil and gas production. Key sectors include light manufacturing, electronics, pharmaceuticals, medical technology, banking and tourism. Such diversity has helped Malaysia become one of Asia’s leading economies, and ExxonMobil is proud of its long history with partner Petronas and its contributions to the country’s success.
Brightly colored paper displaying the names of students who passed the Advanced Placement (AP) exam cover the walls of calculus teacher Keesha Bruce’s classroom at Pasadena High School near Houston.

Students come back after they graduate just to see their names on the wall. They even take pictures, Bruce says. Their source of pride — passing an exam that signifies college readiness and qualifies them to earn college credit — has changed the entire culture of the school district.

“We used to constantly encourage our students to apply for college. Now, it’s a given,” Bruce says.

A proven approach
That wasn’t the case five years ago, when the Pasadena Independent School District (ISD) began implementing the National Math and Science Initiative’s (NMSI) College Readiness Program. The school district serves more than 50,000 students – the majority from economically disadvantaged circumstances. For those going on to college, most are the first in their families to have that opportunity.

As part of NMSI’s program, the district expanded its college preparatory focus, opening its AP classes to any student wishing to take advantage of a more demanding curriculum. This was no easy accomplishment, since economically challenged schools often don’t have the same resources or teachers available to provide AP courses.

Teachers like Bruce receive training support, including experienced mentors and hands-on, project-based lesson plans to help them teach math and science more effectively. A key component of the program provides...
students with after-school and Saturday study sessions.

Teachers are given stipends for meeting goals based on how well students perform, with the students receiving a bonus when they earn a qualifying score of 3 or higher on the AP exam.

But it’s the dramatic increase in the number of students participating and succeeding in college-level coursework that is the true sign of the program’s success.

“Kids cry with happiness when they get their results,” Bruce says. “They gain so much confidence when they see that they can do it.”

**Boosting performance**

In just eight years, NMSI has trained more than 50,000 teachers; attracted an additional 125,000-plus students into rigorous math, science and English courses; and boosted annual AP performance in partner high schools by nearly 70 percent – 10 times the national average. Currently, 535 schools in 24 states offer the program, which is expanding access to traditionally underrepresented students, including female students, African Americans and Latinos.

**Ongoing support**

ExxonMobil provided $125 million to NMSI when the organization began in 2007 to address the shortage of U.S. workers and students proficient in science, technology, engineering and math (STEM).

The corporation is continuing its commitment to NMSI with a five-year, $60 million grant to support the strategic growth of the College Readiness Program. Plans are already underway for NMSI to expand the program in southwestern Pennsylvania and Louisiana later this year and to North Dakota in 2016.

“We leverage private and public partnerships with companies like ExxonMobil to serve teachers and students across the country,” says Matthew Randazzo, NMSI’s interim CEO. “We’re closing achievement gaps, especially for those underrepresented in STEM, and providing a foundation of college readiness for students.”

NMSI’s goal is to reach as many schools as possible across all 50 states. With new commitments from the Department of Defense and a coalition of partners, NMSI also plans to expand the reach of the program to 200 military-connected schools, ensuring consistent, high-quality education for thousands of students required to relocate during high school.

In 2013, NMSI partnered with two public high schools in Pittsburgh, Pennsylvania, and after just one year in the program, the schools were leaders in the state with respect to the greatest percentage increase in AP qualifying scores in math and science.

“Seven out of my eight students who took the AP computer science exam qualified with a median score of 4 out of 5, which is unheard of, especially in an inner-city school,” says Ann Gollapudi, computer science educator at the Pittsburgh Science and Technology Academy.

One of her former students, now at Penn State majoring in computer science, emailed her a thank-you note when he got his first A in computer science. “The AP exam is just a starting point. Insisting high academic standards has its own benefits,” Gollapudi says.

**Teacher support key**

NMSI’s UTech Expansion Program, a partnership with the UTech Institute at The University of Texas at Austin that recruits and trains students in math and science to become teachers, has also seen dramatic growth. It is now at 44 universities across the country.

“The single most effective and impactful thing we can do to move the needle on student achievement is to put a highly qualified teacher in front of the classroom,” says Randazzo, a former school administrator. “NMSI provides teachers with content knowledge and instructional skills and strategies to set them up for success, not just with the 30 kids in an AP course. It builds their capacity to convey content effectively and get all students excited about STEM education.”

For Pasadena ISD’s Bruce, the results speak for themselves. “Over the last five years, our enrollment in AP calculus has more than doubled, and the number of qualifying AP scores has more than quadrupled,” says Bruce.

As for her wall of fame, Bruce says that it’s filling up so quickly, she has to change it out every three years.

“They are college-driven and college-bound,” she adds.
A bright outlook for chemicals

Strong growth expected for ExxonMobil Chemical Company.

The U.S. chemical industry is experiencing a renaissance. Fueled by abundant supplies of shale gas in North America, the industry is spending $100 billion in U.S. expansions, adding new jobs and boosting exports.

As the largest U.S. oil and gas producer and integrated chemical company, ExxonMobil is leading the charge, investing several billion dollars in new facilities in Baytown, Texas, where one of the world’s largest ethane steam crackers will come online in 2017, with a capacity of over 1.5 million tons per year. The Baytown plant will provide ethylene for further chemical processing, including feedstock for two new 650,000-tons-per-year high-performance polyethylene lines at ExxonMobil’s nearby Mont Belvieu plastics plant.

The expansion is estimated to create 10,000 construction jobs and an additional 4,000 permanent local jobs, including 350 new positions at ExxonMobil.

One reason for the revitalization is a steady rise in chemical demand. More than 95 percent of manufactured goods involve...
An interview with
Neil Chapman,
president of ExxonMobil
Chemical Company

Why is this a good time to be in the chemical business?
ExxonMobil is first and foremost an energy company. It also has a business in its broad portfolio that grows faster than energy – faster than the economy – and that’s the chemical business.

Demand for our products is growing one-and-a-half times the rate of global gross domestic product for this simple reason: the growth of the middle class in developing economies around the world.

When the middle class grows, buying habits change. People who once shopped at local markets now shop at grocery stores, where food is sold in plastic-based packaging – one of our major markets. They start to buy appliances and cars, all of which have significant plastic content.

Over the years, ExxonMobil has become the leader in extracting value from refinery streams to produce petrochemicals. We’ve enhanced that model by applying our technology to include gas and natural gas liquids as feedstock. We have leading positions in some of the largest-volume and highest-growth commodity petrochemical products in the world.

So if you combine our strong competitive position with expanding global market opportunities, it’s a good time to be in the chemical business.

What are the opportunities as a result of shale energy?
Over the last 15 years, there has been very little investment in the chemical industry in North America. In fact, over the last three decades, we estimate that 75 percent of all global industry capacity was built in the Asia-Pacific or the Middle East. That is changing due to the shale gas phenomenon in North America.

Shale gas provides low, competitively priced energy, and to produce chemicals you need a lot of energy. Plus, it provides an abundance of chemical feedstock. United States gas production has grown by 45 percent over the past six years. The nation now has a nearly 100-year gas supply, and estimates continue to grow.

The industry is building eight world-scale steam crackers in the United States today, including one of the largest that ExxonMobil is constructing at our Baytown Olefins Plant. For those of us who’ve been in the business a while, it’s really extraordinary to think that the next wave of capacity is here in the United States, and that the U.S. Gulf Coast is the epicenter of global capacity expansion.

Our new capacity in Baytown will enable ExxonMobil to take advantage of this new, abundant source of feedstock, manufacture additional volumes, and
then move them to the developing world, where growth in the middle class is raising demand.

How has the recent drop in oil prices impacted the chemical industry?
In general, lower-cost crude is good for the chemical industry, which produces the majority of chemicals from crude-based feedstock. Our liquids crackers in Europe and Asia are seeing reduced costs in the current environment. A lower crude price also typically stimulates economic activity, as people spend less on gasoline and more on other goods, often packaged in products made from chemicals. And lower production costs typically lead to lower product prices, which can in turn stimulate chemical demand.

However, we don’t manage our business on short-term fluctuations of feedstock or product prices. Our portfolio is robust across a wide range of product and feed scenarios, irrespective of short-term volatility in energy markets. We continue to project long-term demand that is strong, and shale technologies have unlocked a tremendous new source of energy and feedstock to meet that demand.

What is your company’s strategy for success and growth?
We understand how to create an advantage throughout the value chain by upgrading fuel streams to chemicals. Today, we’re even more integrated with our upstream and downstream businesses. Having everyone together on our new campus in north Houston enhances collaboration to add more value.

Perhaps the greatest strength of our company is our long-term approach to focus on technology development – in feed, process and product.

We pioneered metallocene catalyst technology in the 1980s, which enables production of polyethylene to make thinner film that retains the strength and durability of conventional films. Today, this technology forms the cornerstone of our industry-leading position in the largest-volume plastic, polyethylene.

What are the opportunities globally?
We are one of the largest chemical companies in the world based on earnings, revenue and returns. And we have a number of unique, competitive strengths. I believe we have the strongest manufacturing base in the industry. That’s because we have built...
By the numbers:
- 10,000 employees worldwide.
- World-scale manufacturing sites in 16 countries.
- Markets 1,300 high-quality chemical products in more than 100 countries.
- 12 percent contribution to the corporation’s average annual earnings.
- Expected 50 percent growth in global chemical demand over next 10 years.

Plastics and other chemicals. As economies grow and living standards rise, especially in emerging economies like China and India, so does demand for goods made of plastics and other chemical products, such as packaging, appliances and automobiles. For example, by 2040, the world is expected to have almost 900 million more cars than today – and the plastic content of cars has grown to more than 50 percent.

According to ExxonMobil’s Outlook for Energy, global demand for ethylene, the largest petrochemical building block, will rise by 150 percent from 2010 to 2040, or 3 percent a year. Nearly two-thirds of this growth will come from developing countries, with half from China alone. That is why ExxonMobil doubled the size of its chemical complex in Singapore, which now accounts for nearly a quarter of the company’s global chemical capacity.

The impact of shale energy on the North American petrochemical industry is one of the biggest that Neil Chapman, president of ExxonMobil Chemical Company, has seen since he began his career in 1984 as an engineer at the Esso Refinery at Fawley, U.K.

Our facilities either near natural gas processing plants or next to large refineries, which provides us with advantages based on that integrated model.

We also have a unique global footprint, which allows us to access markets in every major region of the world and supply our customers from multiple facilities. Over the years, we’ve developed commercial and technology organizations in all regions, both in mature and developing economies. For the last 20 years, we’ve been building a commercial marketing organization in China and throughout the Asia-Pacific, and we’re on the path of replicating that in South America, the Middle East and Africa.

The key to our success is matching market opportunities with our competitive strengths. With our long-term investment in technology, our global footprint, and integration with our upstream and downstream businesses, we have a competitive position that is as strong as any in this industry.
ExxonMobil is going deep, way deep, in its latest developments in the Gulf of Mexico.

Earlier this year, the company announced production startup in the Hadrian South field in water more than 7,600 feet deep – a world record for ExxonMobil-operated production.

Next year, the Julia field, in about 7,100 feet of water, is scheduled to begin producing oil from reservoirs nearly 5 miles below the seafloor – among the deepest in the Gulf.

Hadrian South (ExxonMobil interest, 47 percent) is the company’s first operated development project in the Gulf in a decade. It features a subsea production system with flow lines connected to a floating production platform 8 miles to the north.

Anadarko Petroleum operates the platform as part of the Lucius field (ExxonMobil interest, 23 percent). One of the project’s two gas wells has produced more than 200 million cubic feet per day, among the highest rates ever produced in the Gulf. The other project participants are Eni (30 percent) and Petrobras (23 percent).

Julia (ExxonMobil interest, 50 percent), some 50 miles east of Hadrian South, is expected to...
produce up to 30,000 barrels per day from six subsea wells as part of first-phase development. Production life is estimated at 30 years – the longest of any planned ExxonMobil subsea development in the world. The oil will flow 14 miles to the Chevron-operated Jack/St. Malo floating production platform, and ExxonMobil and co-venturer Statoil (50 percent interest) expect to develop an initial 200 million barrels of oil.

The Julia reservoir, spanning five lease blocks in the Walker Ridge area, is the largest in the Gulf. Nearly a half-mile thick, it covers an area larger than downtown Houston and contains some 6 billion barrels of resources.

**The deepwater frontier**

“These projects are on the deepwater frontier for ExxonMobil in the Gulf of Mexico,” says Neil Duffin, president of ExxonMobil Development Company. “They are highly complex and involve the very latest advances in subsea technology. Through them, we are pursuing development that would not have been possible as recently as two years ago.

“It’s not just about having the capability to develop these projects; it is also being able to develop them safely and make them economic,” says Duffin. “That’s where ExxonMobil’s project-execution capabilities, commitment to quality resources and leveraging of advanced technology come into play. And, just as we have done with connecting the Hadrian South and Julia subsea wells to platforms operated by others, it’s important that we and industry work together to make our ultradeepwater developments as capital-efficient as possible.”

**ExxonMobil, industry firsts**

As ExxonMobil moves into deeper water, it is increasingly applying next-generation technology, especially at Julia.

“We have contracted for the new Maersk Viking drillship, built specifically for ultradeepwater projects,” says Tom Upton, Julia Drilling manager. “Julia is its first drilling operation. We set an ExxonMobil record when we ran an intermediate string of casing weighing 2.1 million pounds. It was also among the heaviest strings ever run in the industry on a floating rig. Most deep Gulf wells do not run casing strings.
heavier than 1.5 million pounds.”

Upton notes that Julia wells at the seafloor have very high pressures of about 13,500 psi.

“Consequently, ExxonMobil is using subsea wellhead equipment rated for 15,000 psi, which is industry’s current technical limit.”

Julia’s subsea production equipment is also setting records. Its single-phase booster pumps, rated for 13,500 psi, have the industry’s highest design pressure and will be installed in a record water depth. ExxonMobil will be the first to deploy a dual-pump station on the seafloor with these high-pressure pumps.

Other firsts are an ExxonMobil-designed Universal Master Control System (UMCS) and a High-Integrity Pressure Protection System (HIPPS).

“The UMCS functions like a software translator to facilitate the integration and deployment of equipment and systems from multiple vendors,” says Marilyn Tears, ExxonMobil Development’s Julia Project manager. “It will save costs by allowing us to use different vendor components without a lot of specialized work.”

Tears describes the contingency-planned HIPPS as a system of valves, pressure sensors and controls that provide contingency protection if higher-than-expected production pressures are encountered in Julia’s high-pressure wells.

It has been used in the North Sea, but this is the first time it has been permitted for the Gulf and subsea installation.

**Well containment**

In addition, one of the Julia wells was the first to receive a cap-and-flow permit from the Bureau of Safety and Environmental Enforcement, based on the response capability of the Marine Well Containment Company (MWCC). The well was a pre-existing exploratory well that ExxonMobil re-entered for development. It could not have used the well without the cap-and-flow permit.

In an emergency where potential well flow or pressure won’t allow containment with a cap on the wellhead, a system must be in place for flowing the oil to a capture vessel. MWCC, an offshore emergency-response organization established in 2011 after the Macondo oil spill, can store up to 700,000 barrels of liquids in each of its two capture vessels. The liquids would then be brought ashore via shuttle tankers.

The MWCC system can operate in water depths up to 10,000 feet and has the capacity to process 100,000 barrels of liquids and handle 200 million cubic feet of gas per day using the two capture vessels. The vessels will be deployed in tanker-lightering
service in the Gulf of Mexico region when not involved in a spill response.

Clay Vaughn, Deepwater Projects vice president for ExxonMobil Development, notes that ExxonMobil, working with three other sponsor companies, took the lead in building the containment system and organizing MWCC. Following handover earlier this year, MWCC now owns, maintains and will operate the containment system on behalf of its 10 member companies.

“This was a tremendous effort of which ExxonMobil is very proud,” says Vaughn. “It came during a time when both industry and federal regulators were under tremendous pressure to enhance offshore safety and environmental protection.”

Vaughn adds that ExxonMobil is an active participant in other global industry initiatives to enhance deepwater drilling safety and oil-spill preparedness and response.

**Stronger credibility**

Vaughn says that ExxonMobil’s leadership also allowed the company to strengthen its working relationship with federal regulators.

“Through our interaction on MWCC and through resuming project operatorship at Hadrian South and Julia, we have added to our credibility as a leader in safety and environmental responsibility in the Gulf.”

Tim Arthur, who managed ExxonMobil’s MWCC contributions and served as Hadrian South project manager, adds that the company has achieved an excellent safety and environmental performance at Hadrian South and Julia.

“Hadrian South had no safety or environmental incidents during the more than 1 million work-hours at its onshore construction sites and during the offshore installation phase,” says Arthur. “And we achieved this while completing the project under budget and on schedule. Julia so far has recorded more than a half-million work-hours and has also been incident-free.”

**Young engineers**

Arthur says that another noteworthy achievement was the sharing of staff across the Hadrian South, Julia and MWCC projects. This Gulf-wide collaboration not only contributed to safety and environmental success but promoted efficiencies in a very high-cost operating area.

He is particularly proud of ExxonMobil’s efforts to place early-career professionals in senior-level positions across the three projects with close access to Gulf of Mexico-seasoned project personnel.

“This was facilitated by the projects being near our Houston-based engineering organization. Such assignments would not be as feasible in more remote areas of the world.”

Vaughn adds that providing these advanced-level opportunities to ExxonMobil’s future high contributors will provide a great foundation of experience for the company as it advances into deeper waters.

“Industry has just begun to tap into the more than 85 billion oil-equivalent barrels of undiscovered resources that the Bureau of Energy Management estimates lie beneath the Gulf’s deep and ultradeep water,” says Vaughn. “The experience these young engineers are gaining today and the technology available to them will give ExxonMobil a competitive advantage in developing the oil and gas resources that will increasingly be needed to support a more secure U.S. energy supply.”
ExxonMobil joins first U.S. coalition consumer loyalty program

Lots of points. Lots of places. One rewards program.
On a typical Saturday, you might refuel your car and have it washed, shop at the mall for a coat and then stop by the pharmacy for vitamins. Many of the merchants you visit are likely to invite you to enroll in a “consumer loyalty program” to earn credits toward future purchases. Such programs are commonplace today, and the average American is enrolled in 22 of them. But most people actively participate in fewer than 10.

“Research shows that the ability to earn credits for use with a single merchant or single brand does not create much consumer loyalty,” explains Matt Bergeron, vice president of marketing for ExxonMobil Fuels, Lubricants & Specialties Marketing Company. “Such programs can lead to frustration, as they rarely allow a consumer to acquire enough reward points to matter. What consumers really want is a simpler rewards program that allows them to shop at a range of companies and earn reward points that can be redeemed at any of those companies.”

That’s exactly what the new consumer loyalty program Plenti delivers. Launched in May, the free program is the first coalition loyalty program in the United States. ExxonMobil joins American Express, AT&T, Macy’s, Nationwide, Rite Aid, Direct Energy, Enterprise Rent-A-Car and Hulu as the initial participants.

ExxonMobil is the exclusive nationwide fuel sponsor, and companies in other business categories will join Plenti in the future, expanding the program’s appeal to consumers.

Transactions earn points
Plenti offers many ways to save on purchases. You can earn points when buying fuel or other qualifying merchandise at any participating Exxon- or Mobil-branded service station or con-
Plenti fast facts

- Plenti is a free consumer loyalty program.
- Points and discounts are earned using any form of payment accepted by a sponsor.
- Every 1,000 points translates to at least $10 in savings.
- Initial sponsors: ExxonMobil, American Express, AT&T, Macy’s, Nationwide, Rite Aid, Direct Energy, Enterprise Rent-A-Car and Hulu. Additional sponsors will be added.
- Website: www.plenti.com.

You can also earn Plenti points when signing up with AT&T for a qualifying wireless account, when subscribing to a new Hulu service, or when paying for your eligible Nationwide auto or property insurance. Every qualifying transaction with a Plenti sponsor earns points that can be redeemed when purchasing goods or services offered by certain sponsors. Every 1,000 points will translate to at least $10 in savings. Plenti consumers can also earn points by activating special promotional offers with participating sponsors or through Plenti’s online offer center and marketplace.

“The Plenti program lets consumers earn points almost every time they shop, including online,” says Bergeron. “Now, instead of carrying around a dozen or more rewards cards, they’ll have just one card for one program covering a wide range of brands and businesses. They’ll earn reward points faster and can use them to save on a variety of products and services. That’s why we see Plenti as a gamechanger for consumers and for sponsor companies.”

US Loyalty, a division of American Express, operates Plenti. But Plenti is not exclusive to American Express cardholders. US Loyalty issues Plenti rewards and oversees the centralized marketing of the program in coordination with the founding sponsor companies. In addition, American Express is responsible for securely managing consumer data collected through Plenti.

For several years, American Express has operated successful multibrand consumer loyalty
programs in Europe, Asia and Mexico, but Plenti is the company’s first multibrand U.S. program. “This is a perfect time to launch a coalition loyalty program in the United States,” says Abeer Bhatia, chief executive officer of US Loyalty. “Online marketing is becoming more efficient, and American consumers are becoming more influenced by rewards programs, special offers and discounts. We at American Express have extensive experience operating loyalty programs of this scale. And with Plenti, we’re delighted to feature such celebrated brands as Exxon and Mobil.”

Bhatia notes that more than 70 percent of consumers live near at least two sponsor locations. “We’re really excited about this opportunity and will use extensive advertising to introduce consumers to Plenti and explain its many benefits,” he says.

**Distributors participate**

“All independent fuel distributor customers who supply fuel to Exxon- and Mobil-branded service stations in the United States are eligible to participate in the Plenti program,” says Russ Green, vice president of retail for ExxonMobil Fuels, Lubricants & Specialties Marketing Company. “Plenti is not only a great program for consumers, it’s also great for our fuel distributors and for ExxonMobil shareholders. Plenti provides us a unique competitive tool that will drive consumer traffic to Exxon- or Mobil-branded stations and deliver value to our fuel distributors who are expanding market share.”

Plenti members visiting a participating Exxon- or Mobil-branded station earn one point per gallon of fuel purchased, two points for every dollar spent on a car wash and two points for each dollar spent on eligible items in the convenience store. Plenti members can earn additional points by taking advantage of special offers, such as 200 points earned when purchasing 10 or more gallons of fuel in a single visit. Additional points can also be earned for Plenti members on the Plenti website (www.plenti.com) and the Plenti mobile app.

Consumers can pick up a welcome kit and Plenti card at any participating Exxon- or Mobil-branded service station or at other Plenti sponsor locations. Then they can finish signing up at plenti.com, on the Plenti mobile app or by contacting the Plenti call center. Consumers can also sign up online and have the Plenti card sent to them. After sign-up, members can receive regular communications from Plenti with special offers from sponsors.

Green says that Plenti offers sponsor companies the chance to show their consumers how much they appreciate them. “Many of our consumers have been with us for years,” he says. “Plenti provides a unique way of saying ‘thank you’ because it provides them added value for being our consumer. We also expect Plenti to provide an incentive for new consumers to experience the advantages of purchasing fuel at Exxon- and Mobil-branded stations.”

ExxonMobil’s Russ Green (left) and Matt Bergeron say that the new Plenti consumer loyalty program lets consumers earn points nearly every time they shop.
Raising the bar on community service

ExxonMobil attorneys carry forward tradition of giving back.

Susan Barrington Sanchez and Rob Johnson

Story by Tracy Torma  Photography by Robert Seale
A sense of duty

Involved in pro bono work since graduating from the University of Texas School of Law in 2005, Audrey Hendricks, litigation counsel for ExxonMobil’s upstream commercial business, says one particular case solidified her commitment to always have a volunteer case in her legal portfolio.

“A young woman from Pakistan was sold by her brother to a wealthy man in their community to pay off debts. After several years of abuse, she came to America and was living in shelters in Houston,” Hendricks explains.

Upon taking the case through the Tahirih Justice Center, an organization serving immigrant women and girls fleeing gender-based violence, Hendricks helped the woman gain asylum last year.

“My motivation for pro bono work is based on a sense of duty,” Hendricks says. “These individuals come from the most horrendous situations and have demonstrated amazing courage in standing up to their abusers. Without an attorney, in all likelihood, their last flicker of hope would be snuffed out. Thirty hours of my time literally saved a woman’s life.”

Sharing expertise

Senior Tax Attorney Lindsey Aldrich regularly joins other ExxonMobil tax attorneys in counseling low-income taxpayers during Houston Volunteer Lawyers Tax Clinics. But when taxpayers need more than advice, lawyers like Aldrich are there to assist.

Aldrich is currently helping a Houston grandmother prove to the IRS that her 15-year-old grandson, whom she has raised as her son since he was three days old, qualifies as a dependent. “Part of it is just hearing her story. She really appreciates having someone believe in her and knows I’m going to be there,” Aldrich says.

With personal and corporate tax laws sharing similar concepts, Aldrich says volunteering enables her to apply her expertise on a different level.

“We’re helping people who are really grateful for our expertise. It’s great to use the knowledge you learned at school and through work to help people who really need it.”
to provide pro bono services. Her current immigration case is through Kids in Need of Defense (KIND), founded by Angelina Jolie and the Microsoft Corporation to provide quality and compassionate pro bono legal counsel to unaccompanied refugee and immigrant children in the United States.

Currently, company lawyers represent 16 special immigrant juvenile status cases through KIND, which deemed ExxonMobil a unanimous choice for its 2015 Innovation Award for aiding children in deportation proceedings. For the ninth year in a row, the Houston Bar Foundation honored the company for setting the standard for pro bono service in Houston’s corporate legal community.

“When the recognition is certainly nice, we do this because it’s the right thing to do,” says Rob Johnson, assistant general counsel, who’s assisting Sanchez with the KIND case and who volunteers at veterans’ and other clinics. “At ExxonMobil, good corporate citizenship is important to us; it’s how the Law department gives back,” Johnson says. “Sometimes the work is relatively simple for us – listening to our clients’ stories and helping them obtain a protective order from an abusive spouse, for example. Sometimes it’s more complex, like helping someone attain special immigrant status so they can receive protective asylum. A modest contribution of time can potentially change someone’s life.”
Mohammed A. Diwan (above) finds inspiration from clients at the women’s center.

Solving problems
Mohammed A. Diwan believes that domestic violence is a major problem that needs to be addressed using existing and new resources. That’s why he spearheaded a legal clinic at the Houston Area Women’s Center (HAWC), in partnership with Houston Volunteer Lawyers (HVL) and law firm Norton Rose Fulbright.

Each month, a team of ExxonMobil lawyers and other volunteers visit HAWC’s women’s shelter to provide advice and counsel to residents. Since it started more than three-and-a-half years ago, the HAWC Shelter Legal Clinic has served more than 365 clients. In January, HVL set up a second legal clinic for HAWC’s nonshelter clients, modeled after the shelter clinic.

“The strength, courage and determination of our neighbors at the shelter inspire our team of volunteers,” says Diwan, counsel for ExxonMobil Chemical Company.

“I believe everyone can contribute to the development and growth of our community by helping to solve problems one person at a time.”
ExxonMobil and King Ranch: an American success story

One of the most successful business ventures in ExxonMobil history was its leasing of the legendary King Ranch in South Texas.
In 1853, Richard King began capitalizing on his dream of transforming a vast stretch of essentially uninhabited coastal prairie and brush country into a cattle kingdom. After King’s death, his wife, Henrietta King, along with their daughter Alice and son-in-law Robert J. Kleberg Sr., expanded upon that dream. Now, seven generations later, the King Ranch remains one of the most successful ranching operations of all time.

**Ranching leader**

King Ranch early on became identified as a leader in ranch-management innovation, animal husbandry and wildlife conservation. It is best known for the Santa Gertrudis, the first officially recognized breed of beef cattle developed in the United States. It also became a master breeder of quarter horses and thoroughbreds, including Assault, winner of the 1946 Triple Crown.

The ranch entered the oil and gas business in 1919 under a lease with Humble Oil & Refining Company, an ExxonMobil predecessor. Although the effort proved unsuccessful, some continued to believe in the ranch’s potential. The pro-leasing faction, led by Humble’s first geologist, Wallace Pratt, eventually convinced the company to lease the entire ranch. The agreement, signed in 1933, gave Humble sole access to explore and develop more than 1 million acres. It was the largest private oil-lease contract ever negotiated in the United States.

To date, more than 3,800 wells have been drilled and some 2.5 billion oil-equivalent barrels of resources have been developed on King Ranch.

**Shared vision**

The ExxonMobil-King Ranch partnership was founded on a shared vision, mutual respect, dedication to safe operations, a willingness to pursue innovation, and a commitment to caring for and preserving the land and its immense natural resources.

ExxonMobil no longer operates on the ranch, although it retains a production interest through its remaining production joint venture. The company also sold its interest in the King Ranch Gas Plant earlier this year. But ExxonMobil’s special relationship with King Ranch remains a true American success story. 

This Toni Frissell photograph of a King Ranch cattle roundup (at left) is one of a series of photos she shot during ranch visits between 1939 and 1944. Her photo above shows (top row, from left) Dick Kleberg Jr.; Lauro Cavazos, foreman of the ranch’s Santa Gertrudis division; Bob Kleberg; and his wife, Helen. Also pictured are King Ranch Kineños (King’s Men), descendants of families who at the urging of Richard King moved from their village in Mexico in the 1860s to live and work on the ranch.
MAP OF SOUTH TEXAS SHOWING KING RANCH
EST. 1853

Current Ranch Divisions
- Santa Gertrudis
- LaReina
- Kenedy
- Norias

Historic Divisions
- San Antonio Viejo Ranch
- Santa Fut Ranch
- Sal Del Ray
- Saux Ranch

[Map showing various ranch divisions and counties in South Texas]
The map (left) shows current and former King Ranch lands covered by the 1933 lease agreement with Humble Oil & Refining. Above, Humble’s Seismic Party 6 winds along a King Ranch road in the early 1950s. With few roads to take them back to daily lodging and meals outside the ranch, crews brought their food and lodging in the form of trailers with them. The 1960s inset photo (top) depicts King Ranch cowboys herding cattle near the King Ranch Gas Plant, symbolizing the mutual respect and spirit of cooperation that ExxonMobil and King Ranch have enjoyed for nearly a century. Humble’s Colorado company camp (right) was among 13 it operated in South Texas and on the ranch.
The Mission-style King Ranch Main House (top left) west of Kingsville was completed in 1915. It contains 37,000 square feet with interiors designed by Tiffany Studios. Among its 27 rooms are 17 bedrooms, 18 bathrooms and 26 fireplaces. Seven generations of the King family have called it home.


ExxonMobil’s former King Ranch Gas Plant (left), shown after its 1960 startup, reigned as the world’s largest gas processing plant of its kind for two decades. At peak production, it processed about 2.1 billion cubic feet of gas while recovering more than 75,000 barrels of gas liquids per day.

In the Toni Frissell photo at right, a quarter horse remuda (horses saddle-broken for use as mounts) makes its way across the range during a King Ranch roundup in the early 1940s. The ranch’s quarter horses have been recognized for decades as among the world’s best cow horses. The ranch has registered more than 7,200 of them.
**Oil production begins at Block 15 satellites**

An additional 70,000 barrels of peak oil production a day are expected from the startup of a phased satellite development on Block 15 offshore Angola. The additional production increases Block 15 oil output to an average of 350,000 daily barrels.

The Kizomba satellites phase 2 project is a subsea infrastructure development of the Kakocha, Bavuca and Mondo South fields. Mondo South began production in April, followed by Bavuca in May, with Kakocha scheduled to start up shortly. Esso Angola is operator of the project and of Block 15, with 40 percent interest.

The development optimizes capabilities of existing Block 15 facilities to increase current production levels without the need for additional floating production, storage and offloading vessels (FPSOs). The Mondo South field was developed with a subsea tie-back to the Mondo FPSO, while Kakocha and Bavuca are tied back to the Kizomba B FPSO.

Nearly $740 million in local content has been invested in Angola for the project, including contracts for fabrication, logistics support, and training and development of Angolan personnel.

ExxonMobil was awarded Block 15 in 1994 and, to date, has discovered approximately 5 billion oil-equivalent barrels. Oil production from Block 15 thus far has exceeded 1.8 billion barrels.
Guyana discovery
ExxonMobil has announced a significant oil discovery on the 6.6-million-acre Stabroek block, approximately 120 miles offshore Guyana.

The well encountered more than 295 feet of high-quality oil-bearing sandstone reservoirs. Spudded in March, the well was safely drilled to 17,825 feet in water depths of more than a mile.

“I am encouraged by the results of the first well on the Stabroek block,” said Stephen M. Greenlee, president of ExxonMobil Exploration Company. “Over the coming months we will work to determine the commercial viability of the discovered resource, as well as evaluate other resource potential on the block.”

Esso Exploration and Production Guyana Limited holds 45 percent interest. Hess Guyana Exploration Limited holds 30 percent interest and CNOOC Nexen Petroleum Guyana Limited holds 25 percent interest.

Saudi Arabian clean fuels project starts up
Marking 30 years of joint refining operations, Saudi Aramco Mobil Refinery Company Limited (SAMREF), a joint venture of Saudi Aramco and ExxonMobil, has begun operations of a new clean fuels project.

Attending the anniversary and startup ceremonies were guests from SAMREF, Saudi Aramco, ExxonMobil and other dignitaries from the Kingdom of Saudi Arabia, including Khalid al-Falih, president and CEO of Saudi Aramco; Musaad bin Yahya al-Sulaim, Yanbu regional governor; Dr. Alaa bin Abdulla Naseef, CEO of the Yanbu Royal Commission; Mohammed Naghash, president of SAMREF; and Darren Woods, senior vice president of Exxon Mobil Corporation.

As the largest investment in the refinery’s history, the new clean fuels project reduces the sulfur levels in gasoline and diesel by more than 98 percent, to 10 parts per million.

“We continue to apply advantaged technology that will deliver world-class products that contribute to the fuels value chain,” said Woods. “The successful, recent startup of the clean fuels project illustrates the refinery’s advancements and preparations to meet global energy demands.”
Claire Madden, ExxonMobil manager of lubricants sales process and operations and lady sponsor of the Eagle Bay, is all smiles at the vessel’s christening ceremony earlier this year in Philadelphia.

**Second tanker now in service**
Exxon Mobil Corporation’s marine affiliate, SeaRiver Maritime Inc., has placed the Eagle Bay, the second of its two new U.S.-flag crude oil tankers, into service transporting Alaska North Slope crude oil.
The first-in-class vessel, constructed at the Aker Philadelphia Shipyard and incorporating the latest safety, navigation and engine-room technologies, joins the Liberty Bay in supplying Alaskan crude to refineries along the U.S. West Coast. The double-hull Eagle Bay is 820 feet long and has capacity to carry 800,000 barrels of oil.

**Cold Lake startup**
A $2 billion expansion project at Cold Lake in northeastern Alberta, Canada, is increasing bitumen production by 40,000 barrels a day.
The Nabiye project will access 280 million barrels of recoverable resources during its projected 30-year lifespan, and is contributing to an average daily production of 150,000 barrels at the Cold Lake facility, the largest and longest running in-situ oil sands operation in Canada. ExxonMobil expects to increase production volumes this year by 2 percent, to 4.1 million oil-equivalent barrels a day, driven by 7 percent liquids growth.

**$47 million to U.S. colleges and universities**
ExxonMobil and its employees are donating $47.1 million to institutions of higher education across the country as part of the ExxonMobil Foundation’s 2014 Educational Matching Gift Program, an increase of $3.1 million over the prior year.
ExxonMobil employees, retirees, directors and surviving spouses contributed $15.5 million, which was matched with $31.6 million in unrestricted grants from the ExxonMobil Foundation.
Last year, 4,674 employees and retirees made individual donations through the initiative. Although grants are unrestricted, colleges and universities are encouraged to designate a portion to math and science programs supporting student engagement.
In addition to the Educational Matching Gift Program, ExxonMobil and the ExxonMobil Foundation support and develop programs that encourage students, particularly women and minorities, toward careers in science, technology, engineering and math, as well as initiatives for teacher training.

Nationwide, close to 900 institutions received $47 million through the 2014 Educational Matching Gift Program.
Company marks 15 years of fighting malaria

ExxonMobil has announced $10 million in new grants to mark World Malaria Day, continuing the company’s 15-year commitment to fighting a disease that is preventable and treatable, yet still kills more than half a million people annually.

This year’s grants from ExxonMobil and the ExxonMobil Foundation support a range of research, education, advocacy and treatment programs to reduce the human and economic toll of malaria. Several grants focus on developing leadership and health workforce capacity in countries and communities that lack adequate health systems to combat malaria and other health challenges.

“For 15 years, ExxonMobil has been a proud partner in the effort to create a future free of malaria,” says Suzanne McCarron, general manager of public and government affairs, ExxonMobil, and president of the ExxonMobil Foundation.

“We are committed to investing in the tools, knowledge and human capacity that will allow us to combat and eventually eliminate the disease. Now more than ever, it is clear that strengthening health systems is essential to achieving that goal.”

With more than $140 million in investments and programs funded by ExxonMobil reaching nearly 125 million people since 2000, the corporation is the largest private-sector grant-maker in the fight against malaria.

Lifetime achievement

ExxonMobil’s Joost Van Roost (right), Benelux lead country manager, accepts a lifetime achievement award from Flemish Minister-President Geert Bourgeois recognizing the corporation’s long-standing investment in the region.

ExxonMobil’s assets in Belgium include a world-class refinery in Antwerp, three chemical plants, a number of product terminals, a European R&D technology center for chemicals, and a European downstream and chemicals head office.
100% of U.S. operating rooms use advanced plastics made from oil and natural gas.

Today, almost every material found in hospitals is engineered from oil and natural gas. From products like halobutyl rubber that ExxonMobil invented to advanced plastics that our scientists continue to enhance, medicine wouldn’t be modern without energy.

Energy lives here.