



energy.







opportunity.

energy is opportunity.

We connect people, ideas, and energy to realize the full potential of our resources, maximizing the value inherent in every hydrocarbon molecule we produce to advance human progress and promote prosperity.

About This Review

This 2014 Annual Review is half of a two-volume corporate report; the companion volume is our 2014 Citizenship Report. Together, they represent our continued annual practice of reporting on our operational, organizational, social, and environmental achievements and goals. For past reports, please visit saudiaramco.com.

Disclaimer: Each company affiliated with The Saudi Arabian Oil Company ("Saudi Aramco"), and in particular, each subsidiary company including their associated research centers, is a separate entity that manages and controls its own affairs. The use of terms such as "company," "Saudi Aramco," "organization," "it(s)," "our(s)," "their(s)," "we" and "us" and of abbreviated job titles is only for convenience and is not intended as an accurate description of individual status and corporate relationship, or to indicate that Saudi Aramco is conducting commercial activities outside the Kingdom of Saudi Arabia.

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Our relentless quest to discover additional energy resources underlies our success in enabling opportunities for people in the Kingdom and around the globe.



The Custodian of the Two Holy Mosques
King Salman ibn 'Abd Al-'Aziz Al Sa'ud



His Royal Highness Mohammed bin Naif ibn 'Abd Al-'Aziz Al Sa'ud
The Crown Prince, Deputy Premier, and Minister of the Interior

working to meet future energy challenges at home and around the world

corporate strategy

reinforce our preeminent position in oil and gas exploration and production

12M bpd

maximum sustainable oil production capacity — world's most reliable supplier of oil

5B+ scfd

new nonassociated gas processing capacity by 2019

enhance hydrocarbon discovery and recovery

integrate our business across the hydrocarbon value chain to create impact

8–10M bpd

goal for participatory refining capacity worldwide

34,000+

direct and indirect employment opportunities to be created by Sadara, SATORP, YASREF, and Jazan projects

lead in technology development and innovation

improve production and refining processes to maximize value

enable the sustainable development of the Kingdom

35%

energy savings in company buildings, transportation, and communities by 2020

≈500,000

direct and indirect jobs to be created in domestic energy sector

support the long-term sustainability of oil and promote growth of a knowledge economy

employer of choice

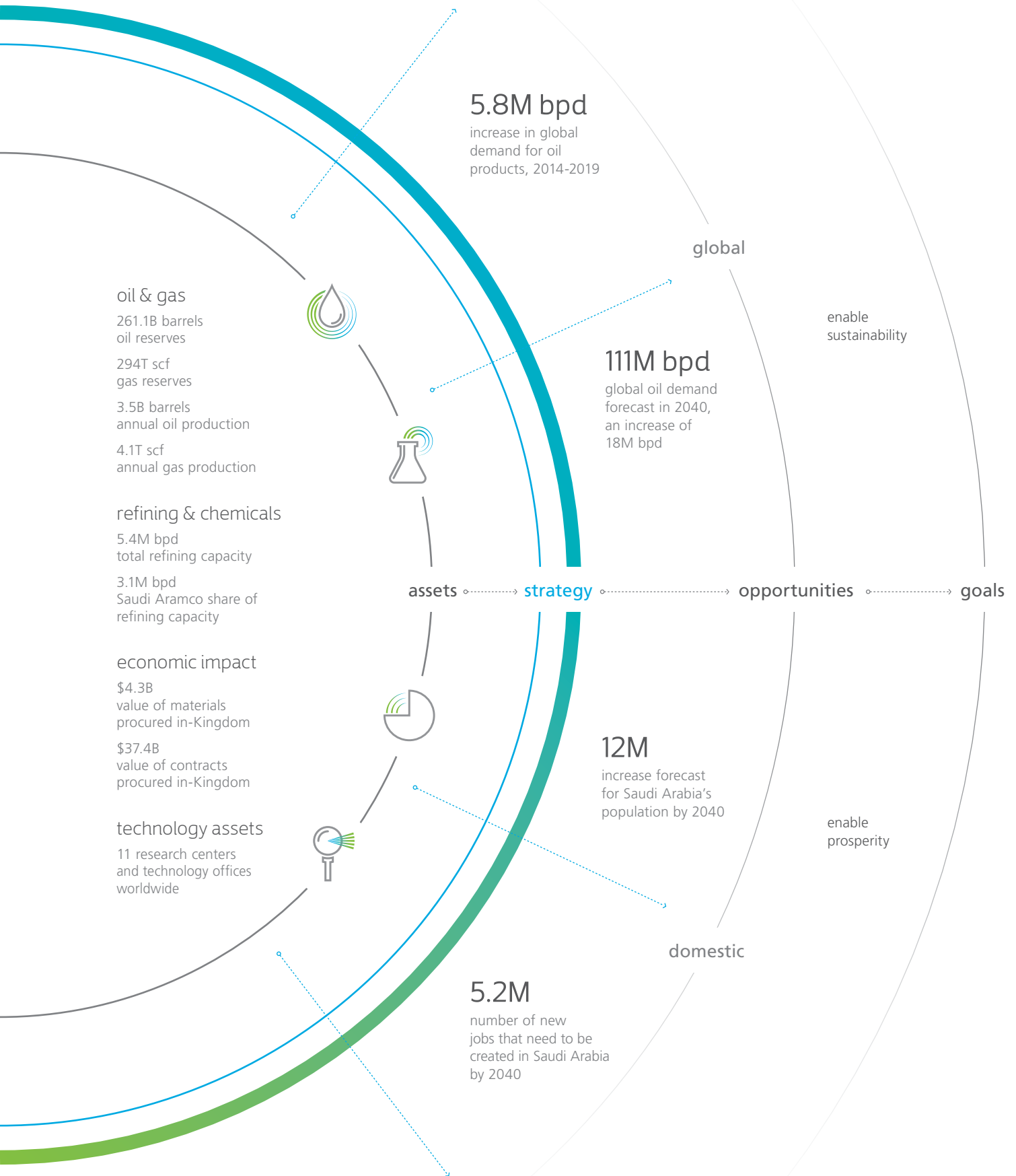
61,907

employees

1,713

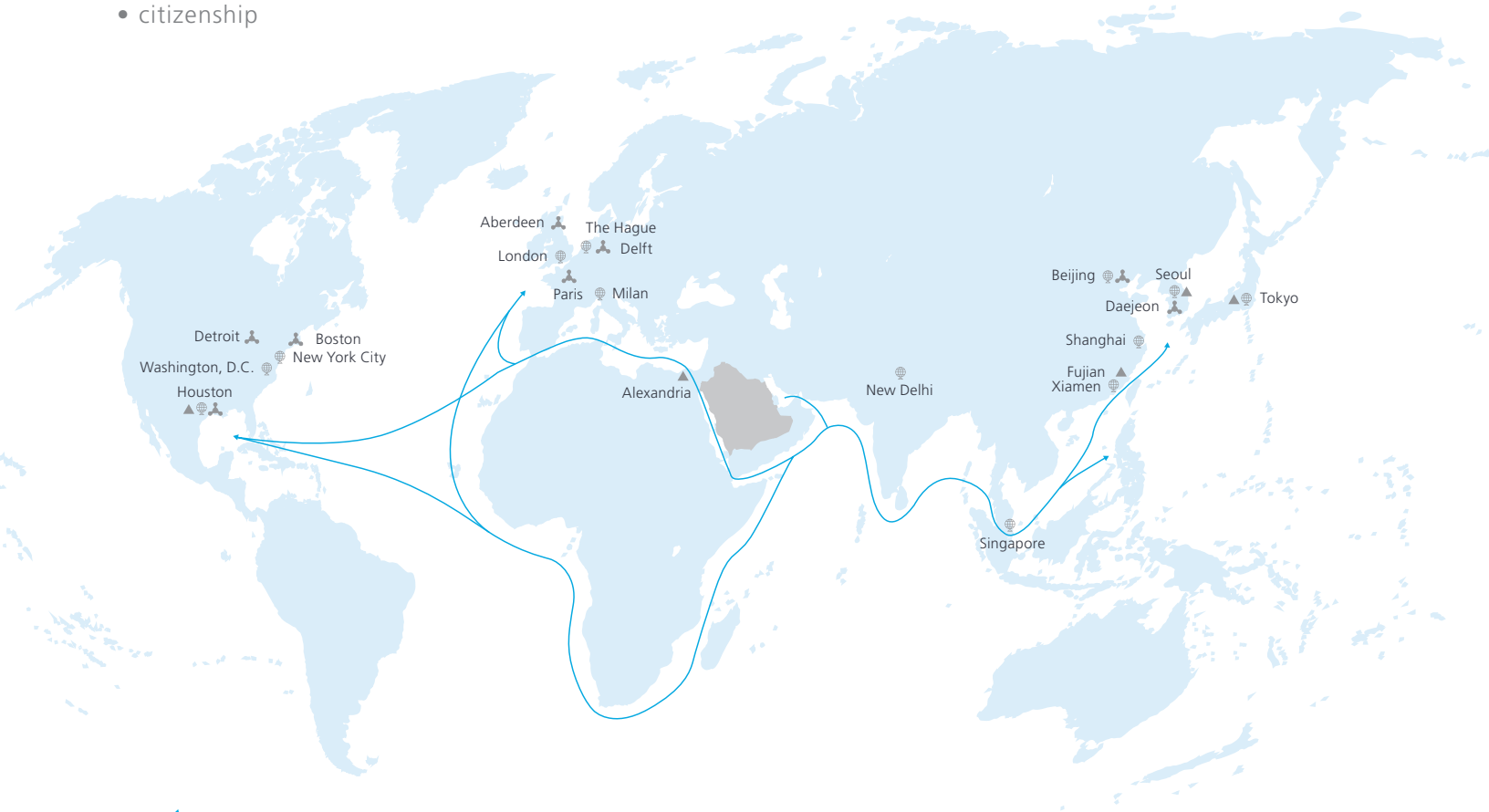
Saudi hires, a 3% increase over 2013

M = million
 B = billion
 T = trillion
 bpd = barrels per day
 scf = standard cubic feet
 scfd = standard cubic feet per day



our values

- integrity
- safety
- accountability
- excellence
- citizenship



 **Export Shipping Routes**

 **R&D Center/Technology Office**

 **Global Office**

 **Joint and Equity Ventures**

- Houston**
Motiva Enterprises LLC
- Alexandria**
The Arab Petroleum Pipeline Co. (SUMED)
- Fujian**
Fujian Refining and Petrochemical Company Ltd.
Sinopec SenMei Petroleum Company Ltd.
- Seoul**
S-OIL
- Tokyo**
Showa Shell

creating mutual value with our partners,
customers, and communities



★ Saudi Aramco Headquarters

👥 R&D Center/Technology Office

🏠 Saudi Aramco Refinery

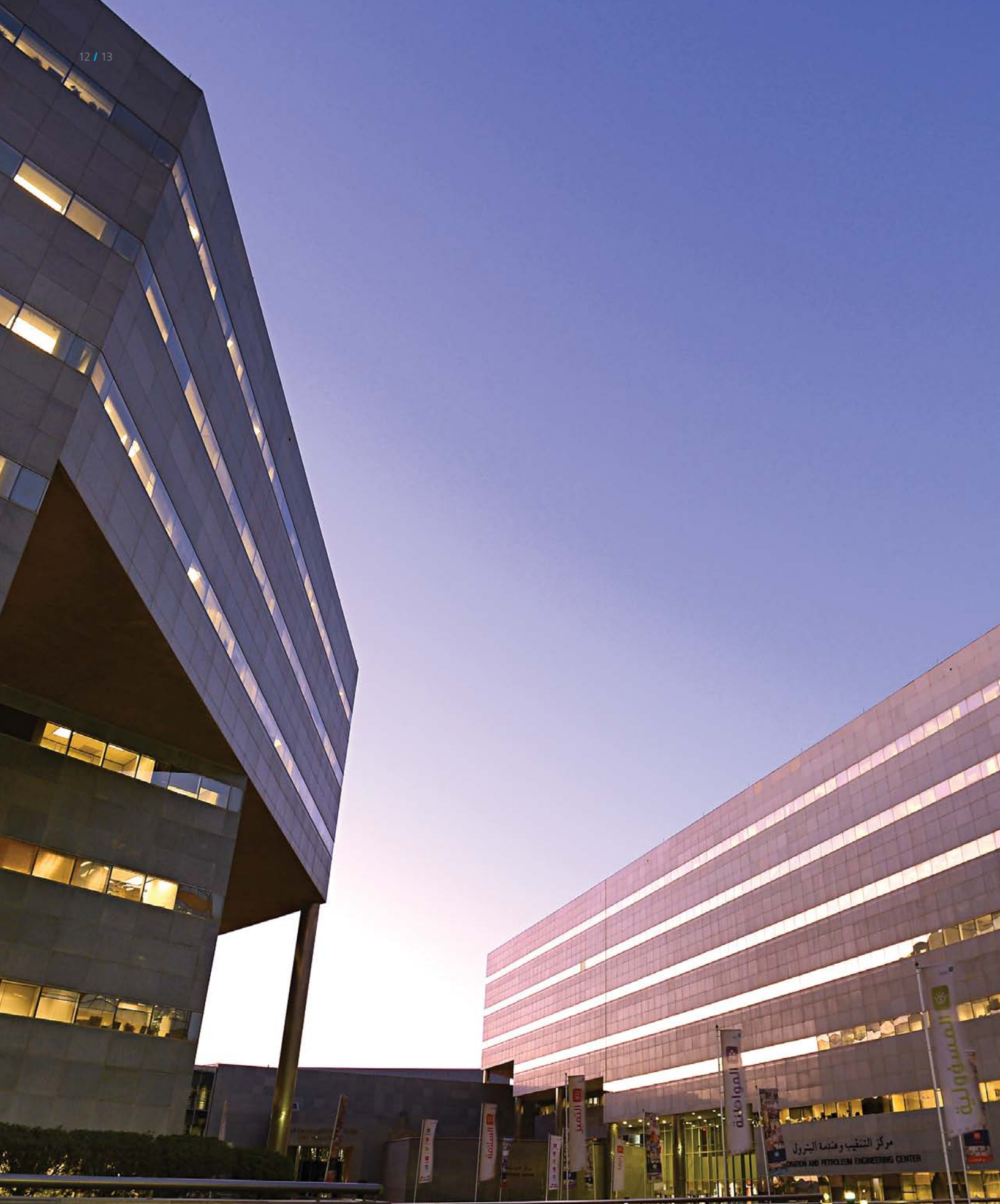
■ Joint Venture Refinery

🚢 Terminal

🧪 Luberef

⚙️ Bulk Plant

💧 Marafiq



At the heart of company headquarters in Dhahran are our exploration, engineering, and petroleum engineering buildings where the energy of our people brings to life the energy of our resources.



Board of Directors

Saudi Aramco's Board of Directors is chaired by His Excellency Ali I. Al-Naimi, Minister of Petroleum and Mineral Resources. The Board of Directors, as steward of the company, steers Saudi Aramco's business affairs, provides management with guidance in determining the company's long-term strategy, and assesses company opportunities, risks, and controls for risk mitigation. The Board includes senior Saudi Government officials, heads of leading Saudi research and academic institutions, senior figures in the international oil, gas, and finance industries, as well as senior members of Saudi Aramco management.

front row (from left):

HE Dr. Majid Al-Moneef is the secretary of the Supreme Council of the Saudi Arabian Oil Company (Saudi Aramco)

HE Dr. Mohammed I. Al-Suwaiyel is the minister of Communications and Information Technology for Saudi Arabia

HE Dr. Ibrahim A. Al-Assaf is the minister of Finance for Saudi Arabia

HE Ali I. Al-Naimi is the minister of Petroleum and Mineral Resources for Saudi Arabia, and chairman of Saudi Aramco's Board of Directors

Khalid A. Al-Falih is the president and chief executive officer of Saudi Aramco

HE Dr. Khaled S. Al-Sultan is the rector of King Fahd University of Petroleum and Minerals

back row (from left):

Peter Woicke is a former managing director of the World Bank and chief executive officer of the International Finance Corporation

Sir Mark Moody-Stuart is a former chairman of Royal Dutch Shell

Andrew F. J. Gould is the chairman, BG Group plc

Amin H. Nasser is the senior vice president of Upstream at Saudi Aramco



Chairman's Message

Saudi Aramco again proved a leader in discovering and capturing greater value from our hydrocarbon resources.

During 2014, Saudi Aramco contributed to global energy security, helped to support global economic stability, and contributed to the prosperity and well-being of the Kingdom of Saudi Arabia. Saudi oil production and global crude oil prices held strong through the first three quarters of the year. When prices began to fluctuate during the fourth quarter, the Kingdom's financial strength, world-leading oil production capacity, and patient, long-term outlook gave confidence to both consumers and producers of energy.

Saudi Aramco also played a vital role in supporting the national strategy for energy efficiency by promoting wiser energy use and by exploring alternative and renewable energy resources to diversify the Kingdom's energy mix.

Gas exploration and production programs, both conventional and unconventional, made major advances during the year. The importance of this progress cannot be overstated, as natural gas is increasingly vital to the Kingdom to provide clean

energy for domestic needs and feedstock for value-added products that help to diversify the national economy.

Saudi Aramco again proved a leader in discovering and capturing greater value from our hydrocarbon resources. Company researchers are generating new ways of making petroleum more accessible, sustainable, and beneficial. Strategic investments in innovative energy technology startup companies around the world will spur development of the Kingdom's energy services sector. More widely, company programs nurture Saudi entrepreneurs and job creators in a wide range of businesses while helping the nation's youth master essential disciplines and better compete in the global knowledge economy.

The late King 'Abd Allah ibn 'Abd Al-'Aziz Al Sa'ud was a steadfast supporter of Saudi Aramco and its efforts to strengthen and diversify the Kingdom's economy and develop its youth. The company's strategy to enable the Kingdom's enduring progress will continue under the leadership of the

Custodian of the Two Holy Mosques, King Salman ibn 'Abd Al-'Aziz Al-Sa'ud, and the Crown Prince, HRH Mohammed ibn Naif ibn 'Abd Al-'Aziz Al Sa'ud.

The Board of Directors and I are confident that, under their prudent leadership and wise guidance, Saudi Arabia will continue to advance in prosperity and human development, supported by Saudi Aramco's efforts to build a sustainable energy economy and deliver the foundation for a prosperous tomorrow.

Ali I. Al-Naimi

Minister of Petroleum and Mineral Resources

Chairman of the Board of Directors



President's Foreword

Our ultimate goal is to safely, sustainably, and reliably deliver the energy on which progress and prosperity depend.

The events of 2014 were truly remarkable, whether they were economic, geopolitical or the significant oil market downturn. The year was equally remarkable for Saudi Aramco in terms of our operational achievements and the progress made in building capability, agility, and resilience. The year highlighted our focus on becoming the world's leading integrated energy and chemicals company by the end of the decade, with developments spanning the spectrum of our businesses and covering the entire value chain.

Upstream, we reliably met domestic and international demand, discovered eight new fields, and booked reserves that significantly exceeded production — despite the fact our combined oil and gas production approached an all-time high. We also made significant progress on major projects that will help us provide feedstock for chemicals production, deliver cleaner fuel for power generation, and support the Kingdom's economic diversification.

Downstream, we increased our level of integration from refining to chemicals,

power generation, and marketing. As in the upstream, we pushed ahead on a number of ventures and projects, many of which we have undertaken in partnership with other leading companies. Once complete, these projects will help us to be the world's top refiner and a world-leading manufacturer of chemicals.

Last year, we also further expanded our corporate capabilities, in part by pursuing research into promising technologies to discover and recover more oil and gas, add value to our products, make our operations more efficient, and enhance the sustainability of our resources and products. As part of our efforts to attract, develop, and retain world-class talent, we welcomed more than 6,700 new employees in 2014. Progress was also evident in the more efficient processes and new businesses we have created. And we set a new record for corporate safety performance and made significant gains in energy efficiency and environmental stewardship.

At a broader level, we continued to enable the sustainable development of the

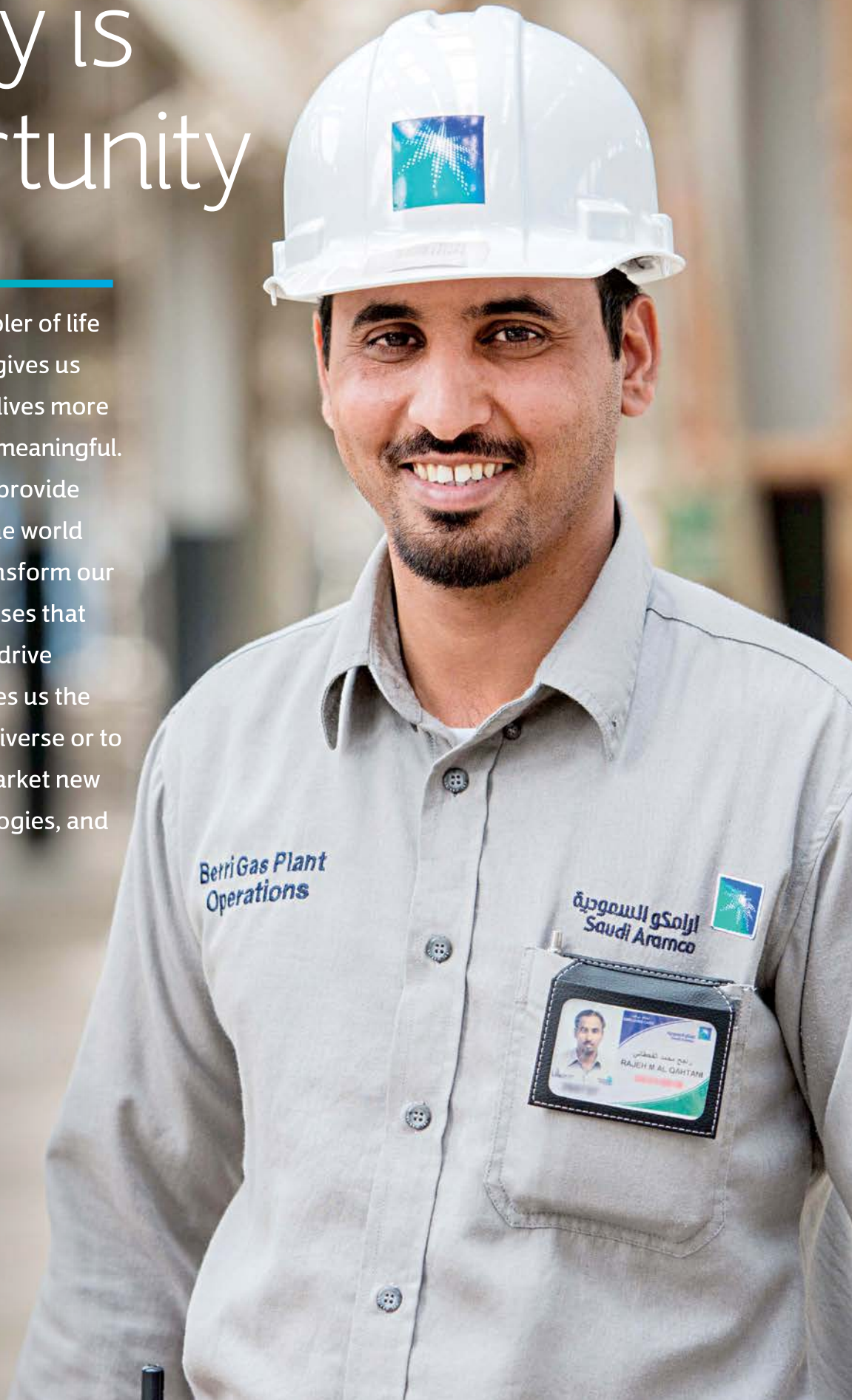
Kingdom. During 2014, we helped address the challenges of managing rapidly rising domestic energy demand and enhancing energy efficiency, made solid progress to develop a significant and competitive domestic energy goods and services sector, and helped prepare the Kingdom's youth for the knowledge economy that holds the key to our future.

At its core, Saudi Aramco firmly believes that "Energy is opportunity" and our ultimate goal is to safely, sustainably, and reliably deliver the energy on which progress and prosperity depend. As this report explains, our efforts over the last year energized people and ideas, created ever more opportunities from our resources, and helped men and women around the globe realize the vast promise of energy.

Khalid A. Al-Falih
President and Chief Executive Officer

energy is opportunity

Energy is the great enabler of life in the modern world. It gives us the means to make our lives more mobile, productive, and meaningful. It gives us the power to provide sustenance to people the world over. With it, we can transform our aspirations into businesses that put people to work and drive global commerce. It gives us the ability to explore our universe or to develop and bring to market new medicines, new technologies, and new materials.



In the coming decades, more and more energy from many different sources will be required to meet the needs of a rapidly advancing world. Global oil demand alone is expected to rise from roughly 93 million barrels per day (bpd) currently to 111 million bpd in 2040.

Making smarter choices about how we produce, use, and capitalize on such an important resource as energy is vital to all of us. On the frontiers of energy and innovation, groundbreaking work is underway to unlock the full potential of our energy resources. This is where Saudi Aramco operates — on the leading edge of science and creativity — helping to bring to life the ideas that make energy more beneficial and sustainable.

Because we invest so much in energy — and because energy makes so much possible — we know how valuable it is. For us, the real value of energy lies in its potential to serve the needs of human development and progress. Doing so with the most impact requires not only the energy of our petroleum resources, but also the energy of our people.

Every day, the people of Saudi Aramco are hard at work applying their expertise and ingenuity to create solutions to some of

society's most pressing challenges. From developing breakthrough technologies that boost oil and gas recovery to helping children acquire the skills they need to participate in the knowledge economy, our people go home at the end of each day knowing they made a real difference.

That's because **we believe energy is opportunity**. Whether it is the energy of our resources or the intellectual and creative energy of our people, we are focused on harnessing their full potential. This belief is at the core of everything we do.

We proudly cherish the values and the successful business practices that have made us one of the world's leading integrated energy and chemicals companies. But we are even prouder of the opportunities we enable for others.

We are engaged in a corporate transformation designed to move our business forward in a way that balances commercial success with the ability to create ever more opportunities for the people whose lives we touch. With that in mind, our business strategy is built upon a basic underlying principle: We amplify the positive effects of our commercial activities for the benefit of the greatest number of people possible.

strategic intent. In 2020, Saudi Aramco is the world's leading integrated energy and chemicals company, focused on maximizing income, facilitating the sustainable and diversified expansion of the Kingdom's economy, and enabling a globally competitive and vibrant Saudi energy sector.



Guided by our Strategic Intent, our business strategy has five key, outward-facing focus areas. Each one is an area where we are determined to improve commercial performance to provide the most opportunity possible for our stakeholders.

Reinforce our preeminent position in oil and gas exploration and production

Our ability to reliably deliver our products to customers enables us to play a leading role in supplying world petroleum markets and in making sure that economies around the world have the energy essential for prosperity. Our legacy of commitment to our customers makes it possible for companies to invest with confidence in projects that grow their businesses, creating countless jobs.

We intend to go beyond leading in size and scale to achieving excellence in every aspect of our upstream operations. This means innovating and applying leading-edge technologies in exploration and reservoir management to discover new fields and increase recovery in our producing fields. Our maximum sustainable oil production capacity will continue to be maintained at 12 million bpd while we also substantially increase our gas

production. Unconventional gas will make a significant contribution in our plans to increase overall gas production.

Our capital investment programs in oil and gas production capacity are powerful indicators of our commitment to enable the sustainable economic growth of the Kingdom, support market stability, and efficiently meet domestic energy demand while also meeting the global call on our products.

Integrate our business across the hydrocarbon value chain to create impact

Our greatest opportunities for growth and diversification will come from the steps we are taking to capture unrealized value and create additional value from every hydrocarbon molecule we produce. Pursuing this strategy will open up new opportunities for organic growth as well as strategic partnerships with other leading global firms at home and abroad, create more business for service and materials

suppliers in local supply chains, and generate new jobs.

Even as other petroleum companies are scaling back, we are moving steadily forward to build additional refining capacity. We are also growing our global chemicals business as well as our trading and marketing businesses.

The expansion of our downstream activities will significantly increase our global presence, creating greater sustainable competitive advantage through increased scale. It will also better position us to take advantage of crude oil placement for an optimal balance of geographic exposure between Asia, Europe, and North America.

Enable the sustainable development of the Kingdom

Though Saudi Aramco is the main driver of the Saudi economy, we have always leveraged the full range of our skills and capabilities to expand the types of opportunities we enable. We continue to take



on important infrastructure and public works projects. We also actively seek out possibilities at the intersection of our business activities and the Kingdom's needs where we can generate even more economic development and diversification. We examine our company's activities for potential reach and impact and then leverage those wherever possible to create opportunities beyond our immediate business objectives.

Whether by enabling private sector job creation and training, acting as a catalyst for the localization of the Kingdom's energy services sector, adding value to our downstream products, or championing energy efficiency, we put the energy of our people, our unique expertise, and our resources to work to create new opportunities for the people of Saudi Arabia.

Lead in technology development and innovation

People's lives will be changed for the better by breakthroughs in research domains such as providing more reliable access to affordable energy, reducing carbon dioxide (CO₂) emissions, innovating to realize more fuel-efficient vehicles, creating next-generation materials that make consumer products

lighter and stronger, and conserving water resources. And we are working to make these ideas reality.

Such technology targets would overstretch even the best research lab or industry contributor. This is why we have adopted an open network innovation model that integrates talent, capabilities, and ideas from around the world through strategic research alliances and global research centers and offices.

When it comes to innovation, we know a good idea can come from anywhere. At Saudi Aramco, we collaborate and partner to transform ideas into sustainable solutions to provide long-term value for the greatest number of stakeholders.

Strengthen our position as an employer of choice

World-class ambitions require world-class talent. We attract people who seek the opportunity to do the best work of their lives. Our ethos of providing the greatest number of opportunities for the greatest number of people ensures that our employees are engaged in meaningful projects with the potential for impact on a global scale.

Our ability to attract, develop, and retain top talent is critical to achieving our aspirations. We foster a culture that empowers individuals, encourages collaboration, manages risks, drives accountability, and rewards high performance. These elements appeal to professionals who are looking for a place where they can work on high-functioning teams and also excel based on their own contributions. Young professionals in particular are drawn to our culture of internal mobility and continuous development, resulting in a significant increase of young talent in our workforce. Today, almost half of our employees are 35 or younger.

As the global population grows, economies expand, and standards of living increase, energy will continue to be an essential enabler of opportunity. We are executing a wide-ranging strategy to ensure that we are at the forefront of providing the needed energy — today and tomorrow. From producing approximately one in every eight barrels of the world's crude oil supply to developing breakthrough energy technologies, we are driven by our core belief that energy is opportunity.

maximizing the impact of our resources

A photograph of an offshore oil rig at sunset. The rig is a complex of metal structures, pipes, and cranes, extending from the right side of the frame towards the center. The sun is low on the horizon, creating a bright, shimmering reflection on the dark blue water. The sky is a clear, pale blue. The overall scene is industrial and serene.

Viewing our extensive hydrocarbon reserves, people — understandably — see oil and gas deposits. We see something different. We see molecules that, with science and imagination, have the potential to power every human endeavor and to create breakthrough materials that improve the quality of our lives.



Our ability to produce roughly one in every eight barrels of the world's oil supply is made possible by the dedication and expertise of our people.

wise stewardship of our resources

For this reason, the wise stewardship of our petroleum resources is our number one priority. We continually seek new ways to find and produce these resources more efficiently, from improving our understanding of subsurface dynamics to deploying cutting-edge well completions.





We combine our substantial knowledge and insight to develop some of the most advanced technology in the world to assist us in finding additional petroleum reserves — and to maximize the recovery of these resources for the benefit of this generation and the generations to come.

Over the years, our expertise in managing our resource base has garnered global trust. To continue earning that trust, we will invest significantly over the next decade across all areas of our business. The bulk of this spending will be in our upstream activities to ensure we maintain adequate spare crude oil production capacity to help stabilize the world oil market whenever disruptions occur. We are committed to making key advances in areas such as reservoir management that will strengthen our ability to reliably meet the needs of our customers while also bolstering the long-term efficiency and sustainability of our operations.

From the Arabian Gulf to the Rub' al-Khali, 2014 saw us maximizing the impact of our resources in a number of ways. Our extensive upstream investments and our expanding production infrastructure helped us maintain our role as the world's largest crude oil exporter. Our average daily crude oil production in 2014 was 9.5 million bpd and we exported a total of 2.5 billion barrels to customers around the world.

We also worked toward our goal of significantly increasing our gas production. In 2014, we processed 11.3 billion standard cubic feet per day (scfd) of raw gas, an increase of nearly 3% compared to 2013. All of the increase in our gas production was from nonassociated gas reservoirs. Our growing gas production capacity will ensure that we efficiently meet the Kingdom's rising energy demand with gas for power and industry while also meeting the global call on our crude oil.

Our exploration program discovered eight new fields, the most in our history: five gas fields, Abu Ali, Faras, Amjad, Badi, and Faris; two oil fields, Sadawi and Naqa; and one oil and gas field, Qadqad. This brings our total number of discovered fields to 129. We completed a number of offshore wells in the Red Sea, giving us a deeper understanding of the hydrocarbon systems and potential resources in this region. Our better appreciation of the Kingdom's resource base is instrumental in enabling us to book new recoverable reserves to replace all of the oil we produce with the long-term goal of growing the Kingdom's resource base. We have made good progress toward meeting this target over the past decade.



Oil and gas fields discovered in 2014

Discovering more hydrocarbon resources and recovering more from these hydrocarbon resources are the key objectives of our upstream technology strategy.

Khaled A. Al-Buraik
Vice President, Petroleum Engineering and Development

At the end of 2014, our crude oil and condensate reserves stood at 261.1 billion barrels while natural gas reserves registered 294 trillion cubic feet, both all-time record highs. The molecules in these resources, and the opportunities they provide us to make lasting positive impacts at home and around the world, are the foundation of everything we do.

Discovery & recovery

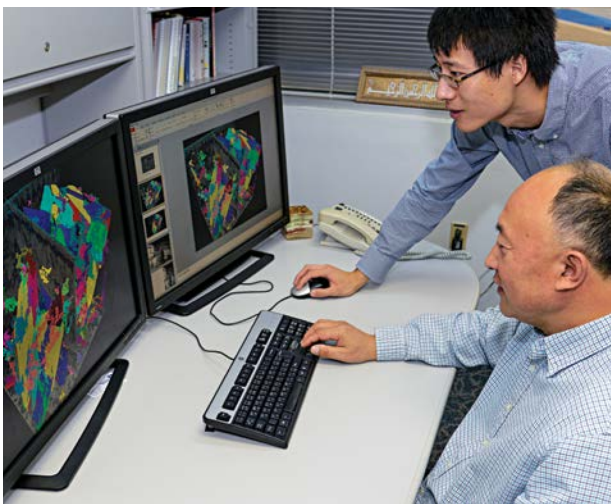
We are explorers at heart, always searching for new frontiers. At Saudi Aramco, a new frontier can be exploring a new geographic area, creating a new technology, entering a new partnership, or enabling new opportunities for the people of the Kingdom. The foundation for all of these endeavors is the exploration for petroleum.

Seismic, and specifically land seismic, is a center of excellence in Saudi Aramco. We have developed and deployed more intelligent acquisition and processing methods to improve the clarity and resolution of **seismic data**. Our seismic acquisition and analysis is being integrated more with electromagnetic and high-resolution gravity sensors, especially for subsalt imaging and in areas of complex geology. We have programs working to meet our long-term target of improving vertical seismic resolution to 5 feet at depths of 15,000 feet within four to five years.

We continued exploring the frontier deep waters of the Red Sea. Known as an extensional rift, the Red Sea represents a new geologic environment for us. We have completed acquisition of essential data onshore and offshore to guide our future exploration.

We continued our research into the usage of **autonomous underwater vehicles** (AUVs) to conduct seismic data gathering in shallow waters. The navigation and positioning software elements were evaluated and tested in Europe using actual sea conditions. Additional work included the design and evaluation of the optimal AUV shape. Deploying AUVs for offshore seismic work offers the prospect of substantially reduced costs and time while also providing enhanced subsurface imagery. Long term, we intend to cut seismic acquisition costs by 50% and acquisition time by a factor of four while improving subsurface image fidelity and accuracy at the same time.

With the growth of our exploration program — and its subsequent activities such as data collection, analysis, storage, and preservation — the need arose to create a computer system to track the decisions in support of drilling wildcat and delineation wells and prioritize them based on their benefits and the value of the information derived.



Reservoir management

Using the most advanced reservoir modeling technology in the world

As stewards of the nation's petroleum resources, we are dedicated to maximizing their value for the long term. To meet this goal, we develop game-changing technologies to give our geoscientists and petroleum engineers a better understanding of the complex geology of hydrocarbon reservoirs to improve the recovery of oil and gas and sustain production for generations to come.

Chief among these technologies is GigaPOWERS, a computer modeling engine that simulates the flow of oil, water, and gas deep underground, helping us predict how a reservoir will behave over decades of production. Developed in-house in 2010, GigaPOWERS is the most advanced reservoir modeling technology in the world, able to process multibillion cell grids. We are working to develop the next generation GigaPOWERS, capable of combining 500 million years of history to simulate oil formation and migration across a 10-billion-cell representation of the entire Arabian Peninsula.



Young geoscientists examine core samples to maximize recovery of oil and gas.

The new **Exploration Explorer System**, launched in 2014, has transformed the way we deal with oil and gas prospects. It provides a state-of-the-art method to track the phases of decision making. The system also displays the prospective resources, their types, volumes, locations, and depths in a manner that gives our exploration teams a unified vision of the project. Use of the system saves time, effort, and resources while allowing geologists, geophysicists, and all other exploration support personnel to carry out their roles in a more timely and accurate manner.

Unconventional gas has transformed the petroleum industry landscape. Our own **unconventional gas program** continued to gain momentum in 2014. A sizeable investment in this alternative resource will help us assess, develop, and produce gas from shale and tight sand formations in three target areas: northern Saudi Arabia, the greater Ghawar area, and the eastern Jafurah Basin. In northern Saudi Arabia,

gas will be delivered to Ma'aden facilities at Wa'ad Al Shamaal by 2016 and by 2018 additional gas will be made available for local power generation. In the greater Ghawar area, work is progressing at the Harmaliyah development pilot to obtain technical and operational knowledge and exploration and appraisal work is also ongoing to extend the reservoir base. Fracture stimulation results in the Jafurah Basin have confirmed the presence of an unconventional hydrocarbon resource.

These unconventional gas resources have the potential to complement future in-Kingdom gas supply, support efforts to displace the use of liquid hydrocarbons for power generation, and increase available feedstock for the growing electric power and chemical industries.

As a desert nation, we are ever mindful of the value of water. We constantly explore opportunities to minimize water use in our operations, including using treated seawater to replace fresh water. We

commissioned the first successful **use of CO₂ to replace hydraulic fracturing** in a gas well in the Middle East. This development could help us meet our objective of conserving the Kingdom's groundwater for future generations by reducing stimulation water and acid volumes by 30%. In addition, we have plans to simulate shale gas at the molecular level, modeling the reservoir and its porosity and permeability. This will lead to more effective fracturing, thus reducing costs and improving recovery rates.

Unconventional gas is a key component of our goals to help meet the Kingdom's energy needs with cleaner burning natural gas and to create jobs for Saudi citizens. Using natural gas for power generation will also enable us to preserve liquid fuels while efficiently meeting the Kingdom's growing electricity demand or for the production of chemical feedstock, thereby capturing additional value.



Car lights create a ribbon of color through the dunes of the Rub' al-Khali near Shaybah, the site of a new NGL recovery plant that will help fuel industries in the Kingdom.

Our upstream expertise is exemplified by facilities such as Khurais.



Shaybah

Sustainable long-term production

- 250,000 bpd of added oil production capacity in 2016
- NGL production in 2015
- Upgraded cogeneration system
- 637-square-km wildlife reserve



Sustainable producer

Saudi Aramco's oil and gas production infrastructure leads the industry in scale of production, operational reliability, and technical advances. Our plants and the people who run them make us the world's largest crude oil exporter, producing roughly one in every eight barrels of the world's oil supply. We maintain the world's largest spare crude oil production capacity, ready to stabilize the global oil market in times of disruption.

Ultimately, all of us here at Saudi Aramco know it is not just about *how much* we produce; it is *how we do it* and *what we do with it* that matter the most. Inherent in our energy resources is the potential to create products and industries to diversify the Kingdom's economy and generate high-quality jobs. In our hands, energy is opportunity.

Successfully put into initial production in April 2013, our **Manifa** crude oil increment was approaching its full production

capacity of 900,000 bpd of Arabian Heavy crude oil at the end of 2014. Manifa will also produce associated gas as feedstock for industrial cities to help fuel economic diversification. In 2014, we brought our first combined cycle power generation system online at Manifa, making the facility self-sufficient in power. The system uses a turbine driven by steam produced from a waste-gas heat recovery steam generator.

A UNESCO Environmental Responsibility Award nominee, the Manifa project's innovative engineering design was created to optimize the field's production capacity while caring for the environment. We constructed 3 km of bridges, spanning the migration paths of various marine species to maintain natural water flow and preserve marine nurseries. We were able to protect the marine environment, and at the same time, recover petroleum energy safely and reliably, thereby sustaining both vital resources for generations to come.

Wasit Gas Plant

Enabling economic growth

- 2.5 billion scfd of gas processing capacity
- 240,000 bpd of NGL fractionation capacity
- To be commissioned in 2015
- Largest nonassociated gas plant in our portfolio



The historic **Dammam** field was the first field we developed, beginning in March 1938 when Dammam Well Number 7 (known as the Prosperity Well) struck commercial quantities of crude oil. The field was subsequently mothballed in the 1980s during a time of low global demand. With current energy forecasts indicating a growing long-term demand for oil, we have drilled three long-reach wells as part of our plan to reactivate the Dammam field in a phased manner.

We continued work on two major projects at the **Shaybah** field in 2014. First, we are raising oil production capacity by 250,000 bpd for the second time, bringing total oil production capacity to 1 million bpd of Arabian Extra Light crude oil by April 2016 — double its original capacity when it came online in 1998. We are optimizing well designs that maximize reservoir contact to 10 km, enhancing production and recovery from deeper and tighter sections of the reservoir.

Second, during 2014, major construction of the new NGL (natural gas liquids) recovery plant was 96% complete. The NGL facilities are expected to help us meet increasing demand for petrochemical feedstock by recovering valuable NGL from produced gas. NGL production is projected to begin in the second quarter of 2015.

The project also includes a major upgrade to increase the plant's power generation capacity to more than 1 gigawatt by installing four cogeneration units, seven simple-cycle units, and a 50-km, 230-kilovolt transmission line. By July 2017, after the introduction of two steam turbine generators, the total power generation capacity at Shaybah will exceed 1.3 gigawatts.

Natural gas is a critical component of our strategies to help reduce the Kingdom's reliance on liquid fuel for power generation and to provide the foundation for further economic growth and diversification. The year 2014 also witnessed major progress in our ability to expand natural

gas production with the construction of our **Wasit Gas Plant**, one of the largest nonassociated gas plants we have ever built. At year-end, construction was 91% complete and the plant is scheduled for start up in 2015.

At full capacity, Wasit's integrated facilities will process 2.5 billion scfd of nonassociated gas from offshore fields. The plant also includes one fractionation module designed to process 240,000 bpd of NGL. The cogeneration facility at the plant, also scheduled to start up in 2015, will have the capacity to generate 750 megawatts of electricity, making the plant self-sufficient in power with the excess delivered to other company facilities.

Most of the Wasit Program required innovative project execution strategies. We deployed our Event Solution Center to accelerate the project development cycle by bringing together multidisciplinary experts. This integrated model drives new work processes and technologies to produce assessments that give our managers increased clarity and the ability to achieve significant cost and schedule savings. One outcome of this approach was the deployment of "big bore" well completions. These high-capacity wells are capable of producing at very high rates. This tactic significantly reduced the production cost and provides greater production flexibility to meet demand.

The **Midyan Gas Plant** in the Tabuk region is our first such project in the Kingdom's northwest. The Midyan field, discovered in the early 1990s during Red Sea coastal plain exploration, was studied to identify ways to optimize economic production. Work on the plant commenced in 2013 and the facility is scheduled to be fully operational by the end of 2016. Midyan is designed to produce and process 75 million scfd of nonassociated gas and 4,500 bpd of condensate. At year-end, engineering for the gas processing facility was 93% complete while procurement and construction activities reached 62% and 8% complete, respectively.



5 billion+

cubic feet per day of new nonassociated gas processing capacity by 2019



Facilities at Ju'aymah are key components of our gas gathering and processing system and helped us set a record for raw gas production in 2014 of 11.3 billion standard cubic feet per day.

The Midyan project will include the establishment of two pipelines stretching 98 km to deliver sales gas and stabilized hydrocarbon liquids to the Saudi Electricity Company's high-efficiency solar thermal power plant near Duba to generate electricity. The feed from Midyan to the plant will displace the use of high-value diesel.

In its early phase, the **Fadhili Gas Plant** will process 2.5 billion scfd from onshore and offshore fields and is on track to come on-stream by 2019. Drilling for nonassociated gas to supply the plant commenced

in 2014 and we issued the final project proposal in preparation for the detailed design phase during 2015.

Together, our Wasit, Midyan, and Fadhili gas plants will add more than 5 billion scfd of nonassociated gas processing capacity, further enabling opportunities in Saudi industries such as steel, aluminum, and petrochemicals; water desalination plants; electricity production; and downstream value-added industries to produce antifreeze, solvent, fuels, and other advanced materials.

Our operations take place across a range of operating environments and span great distances. To help us manage our resources from the wellhead to the customer, we rely on a wide variety of **support services** from organizations throughout the company. For example, our new marine logistics operational model reduced rig turnaround time by 65%, driving down costs and raising efficiency. Our Marine organization also procured 16 new platform support vessels, improving the flow of materials and supplies to drilling platforms in the offshore Manifa field.

from production to performance

In nature, there is wisdom in following the herd. But in business, those with clarity of vision who smartly go where others do not are oftentimes rewarded. Conventional wisdom dictates that in today's environment, there are limited growth opportunities to companies available in the downstream sector. Some also believe that size can hinder a company's ability to perform well and achieve sought-after financial returns in these markets. We disagree. We believe that large, integrated energy and chemicals companies can build and sustain a dynamic and profitable downstream business that yields returns across the entire hydrocarbon value chain. In 2014, we made significant strides toward accomplishing this goal.

A joint venture with France's Total, SATORP is symbolic of our intent to maximize the value of the Kingdom's hydrocarbon resources and generate job opportunities.



ساتورب
satorp

OPERATIONS

ERT

our relentless desire to succeed

Our advantages are our relentless drive to succeed by maximizing the long-term, positive impacts we enable, our hydrocarbon resources, and the infrastructure required to take those hydrocarbons from production to performance.





Refining capacity (in thousands of barrels per day)

Wholly owned domestic	Domestic joint ventures	International joint ventures	Worldwide	Saudi Aramco share
1,006	1,905	2,464	5,375	3,104

This gives us the ability to effectively participate in every aspect of our business from exploration, production, and refining to the production and marketing of chemicals and base lubes — even electric power generation. The difference is how we leverage our resources, our strategic partnerships, and our assets.

Due to global demographic growth and rising standards of living in the developing world, total oil demand is forecast to increase by about a quarter over the next 25 years. During the same period, crude oil is expected to constitute a full third of all energy consumption — with most of it going downstream to the transportation sectors and petrochemicals. This reinforces the important role petroleum products will play in meeting the needs of people around the world for the foreseeable future. Based on our belief in the long-term sustainability of oil demand, we are determined to maintain our capital investment plans in our global downstream system.

Raw hydrocarbons are of little use until they are refined and converted into useable products for consumers. Along every step in this process, our priority is to identify and leverage opportunities to realize

additional value. To create that value and grow our business, 2014 saw us make substantial progress in:

- Backward integrating to become more reliable, self-sufficient, and efficient in generating power to run our operations
- Forward integrating from refining into chemicals, product marketing, and distribution, creating additional value through improved industrial site, product stream, and business integration
- Shifting our business model to enhance our influence and participation in all of our downstream operations while remaining focused on performance, profitability, and technical innovation
- Expanding globally, targeting high-value, high-growth markets and segments
- Supporting the development of mega-manufacturing hubs and conversion parks connected to our chemicals plants
- Establishing the Kingdom as our core industrial and refining base while meeting domestic requirements for refined products and exporting to other global demand centers

I believe the real value of our region's downstream activities is best captured through the economic ripple effect of industrial clusters, value parks, and the development of the knowledge-based R&D, engineering, and service firms to support them. This will help satisfy three critical regional development objectives: greater diversification of the industrial base; stronger economic growth; and sustainable creation of high quality jobs.

Khalid A. Al-Falih
President and CEO

The cumulative effect of our efforts will be a world-leading, fully integrated downstream system that maximizes the value of every hydrocarbon molecule we produce and a portfolio that is more robust and resilient to market turbulence. Successful implementation of our strategy will also help us achieve greater balance between our upstream and downstream businesses.

Because we believe energy is opportunity, we choose to conduct our business in ways that produce the most benefit for the greatest number of people. Our strategy to more tightly integrate our operations across the hydrocarbon value chain has enabled — and will continue to enable — myriad opportunities for people here at home and abroad. What follows are the 2014 highlights of our downstream strategy in action.

Integrating to add value

A core element of our downstream strategy is integrating chemicals production with our refining assets at home and across key international geographies. This requires long-term vision, precise planning, project management expertise, and a significant investment of resources. We may choose to partner with world-class companies to create world-scale businesses, as we have done in the past and continue to do. Other times we choose to rely fully on our own expertise when the business case calls for it.

However we execute our strategy, successfully expanding our refining and chemicals businesses will have impact beyond generating additional revenue. It will also set the stage for increased economic diversification and job creation in the Kingdom as well as help us to meet domestic demand for refined products. We are also taking integration to a new level: Our researchers are investigating the possibility of creating chemicals directly from crude oil, creating efficiencies that could eliminate the need for intensive traditional refining steps to perform that process.

By the end of 2013, we had **integrated chemicals production** in six of our refineries, creating world-scale integrated chemicals complexes. In addition, we are currently expanding Petro Rabigh, with partner Sumitomo Chemical of Japan, and building the Sadara Chemical Company with partner The Dow Chemical Company, boosting our total participated chemicals

production capacity to more than 15 million tons per year.

Our commitment to grow our downstream business is reflected in the fact that within a short period, we will have built 1.2 million bpd of refining capacity in Saudi Arabia: the SATORP joint venture (2014), the YASREF joint venture (2014) and Jazan (2017). These are major milestone projects in our goal to increase our participated refining capacity worldwide to 8–10 million bpd, primarily in the Far East and Middle East and in other high demand-growth markets.

The **Saudi Aramco Total Refining and Petrochemical Company (SATORP)**, our joint venture with France's Total in Jubail on the east coast of Saudi Arabia, is one of the largest, most complex refineries in the world. It is capable of fully converting 400,000 bpd of Arabian Heavy crude oil into low-sulfur gasoline, diesel, and jet fuel that meet the highest standards and specifications in the United States, Europe, and Japan. In addition to producing some of the world's cleanest naphtha and gasoline, the complex also produces more than 1 million tons per year of paraxylene, benzene, and high-purity propylene. Other products include petroleum coke — a source of fuel for cement and power plants — and sulfur.

In August of 2014, SATORP's crude oil throughput reached the facility's full design capacity of 400,000 bpd. This new venture will generate approximately 5,700 direct and indirect jobs and represents a major step in achieving our vision of being among the world's top three refiners and a world-leading manufacturer of chemicals.

We are implementing our integration strategy on several fronts in the Kingdom. This is manifest by our latest 400,000 bpd refinery, the **Yanbu Aramco Sinopec Refining Company (YASREF)**, which began commissioning in late 2014 and delivered its first shipment of clean diesel fuel in mid-January 2015. YASREF is a full-conversion refinery located in the Yanbu' Industrial City on the west coast of Saudi Arabia. A joint venture with Asia's largest refiner, Sinopec, YASREF is designed to process Arabian Heavy crude oil from the Manifa field.

The refinery uses proprietary technologies to ensure the quality and quantity of the production of premium transportation fuels such as gasoline and ultra-low-sulfur diesel. The plant also produces liquefied



The vision of our Sadara chemicals joint venture is to create opportunities for economic growth.

SATORP

Meeting demand for fuels

- 400,000-bpd full-conversion, joint venture refinery
- Integrated chemicals production
- ≈5,700 direct and indirect jobs
- Full capacity reached in 2014

petroleum gases (LPG) as well as other products including benzene, sulfur, and petroleum coke for export. Africa and Europe are its target markets.

Within a few years of operation, YASREF, like SATORP, is expected to generate about 6,000 direct and indirect jobs for the community. The joint venture also enrolled approximately 700 Saudi employees in its apprentice program to prepare them to assume full jobs in operations, maintenance, industrial relations, and engineering positions. YASREF, like all of our domestic downstream projects, provides multiple benefits to Saudi Arabia and key markets. It will process Arabian Heavy crude oil; help meet domestic demand for refined products and export high-value products; provide feedstock for industry; generate direct and indirect jobs; and create opportunities for material and service providers.

In 2014, we began construction on a project to build a refinery and terminal in Jazan in the Kingdom's southwest. The **Jazan Refinery and Terminal**, wholly owned and operated by Saudi Aramco, will become an integral part of our refining and distribution network. The complex, which also includes an industrial city, will help meet the Kingdom's energy demand and also export high-value fuels to international markets.

The Jazan refinery, scheduled to begin commissioning in 2017, will have the capacity to process more than 400,000 bpd of crude oil to produce gasoline, ultra-low-sulfur diesel, benzene, and paraxylene.

We are creating more than 1,000 direct and 4,000 indirect jobs for Saudis through this project. An added benefit to the entire southwestern region is that the refinery will be incorporated with the world's largest integrated gasification combined cycle complex. This will allow the refinery's own operations to economically and efficiently generate 4,000 megawatts of electricity — enough to cover the refinery's needs, enable the development of industries within the Jazan Economic City, and provide power for area communities.

Our **Sadara** joint venture with The Dow Chemical Company is on schedule for an initial start up in the third quarter of 2015 and all process units will be on-stream within one year of start up. Sadara is on track to be the first chemical complex in the countries of the Gulf Cooperation Council (GCC) to use naphtha as part of its feedstock. This advance will lead to new specialty chemicals plants and businesses in the Kingdom and open up a new range of downstream opportunities, which in turn will help create high-quality jobs for Saudis.





YASREF

Adding value to hydrocarbons

- 400,000-bpd full-conversion, joint venture refinery
- Ultra-low-sulfur clean fuels
- ≈6,000 direct and indirect jobs
- Commissioning started in 2014



Currently being constructed in Jubail Industrial City, Sadara will be the world's largest integrated chemicals complex ever built in a single phase, with the production capacity to produce more than 3 million tons of diversified chemicals and plastics per year. Fourteen of Sadara's 26 world-scale manufacturing plants are new to the Kingdom. Their differentiated product slates are the building blocks used in high performance flexible packaging, hygiene and medical applications, chemicals and additives for the oil and gas industry, chemicals and membranes for water treatment, soaps, detergents, cosmetics and other personal care products, as well as adhesives, brake fluids, and car seats for the automotive industry.

The highly specialized science and proprietary technologies used to create these products will allow us to extract ever greater value from our hydrocarbon molecules.

The impact of this on the Kingdom's economy will be further industrial diversification built on the growth of businesses capable of manufacturing consumer products from these new chemical streams. Sadara will also generate thousands of employment

opportunities, both through the complex itself and through PlasChem, the integrated conversion industry park.

Though not yet complete, Sadara is already generating substantial income for the region and skilled employment opportunities. Having experienced significant growth in manpower over the last year, Sadara currently employs roughly 2,500 staff (up from 1,500 in 2013). Over 250 apprentices and 700 on-the-job trainees are undergoing comprehensive manufacturing and engineering training programs in state-of-the-art centers inside and outside of Saudi Arabia. Ultimately, Sadara plans to employ more than 3,500 people while contributing to an additional 15,000 non-direct employment opportunities.

Rabigh Refining and Petrochemical Company (Petro Rabigh)

is another concrete demonstration of our strategy to increase the value of every hydrocarbon molecule by integrating chemicals production with refining. Rabigh Phase II will add specialty ethylene- and propylene-based products by de-bottlenecking the existing steam cracker.

left: Petro Rabigh integrates chemicals production with refining, realizing additional value from our resource base.

below: The purchase of a majority stake in South Korea's S-OIL achieves stronger integration of our global downstream assets.



In addition, the project will enable the conversion of 4,000 kilotons per year of naphtha into higher value aromatic products. This naphtha, which otherwise would have been exported, will be processed by the new Rabigh Phase II facilities to provide feedstock for downstream units that manufacture specialty petrochemicals or delivered as feedstock for third-party projects. Work on the Rabigh Phase II project was roughly 68% complete by year-end, with construction scheduled to be completed in 2015 and start up forecast for the first half of 2016.

Integrated with Petro Rabigh is the **Rabigh PlusTech Park** where manufacturers will convert chemicals into consumer products, generating new industries and helping drive job creation.

In April 2014, we began marketing Petro Rabigh products through our fully owned trading subsidiary, Aramco Trading Company. This development underscores our resolve to capture as much value from our resources as possible to generate opportunities for people and businesses in the Kingdom and internationally.

Powering our partners

To strengthen our cooperation with business partners in the Asia and Pacific regions, we established our regional headquarters in Beijing, China, and operate integrated country offices in Japan, South Korea, and Singapore. Under an aligned regional strategy, each country office provides marketing and portfolio management services and other business support to us and our partners. China is our hub for chemical products sales and plays an important role in driving new business in the region and in Saudi Arabia. Japan is a center for supplies and inspection while South Korea focuses on supporting the Korean market and our engineering, procurement, and construction projects. Southeast Asia, a key market and potential investment destination, is covered by the Singapore office.

Saudi Aramco, through an affiliate, has a 14.96% interest in **Showa Shell**, one of the largest refiners in Japan. We are the leading supplier of oil to Japan but our relationship goes beyond providing a dependable supply of petroleum energy. We work with leading Japanese companies in a

Motiva, a joint venture with Shell, supplies fuel to millions of customers in the United States.



34,000+

direct and indirect jobs to be created by Sadara, SATORP, YASREF, and Jazan projects

variety of sectors, contributing to economic growth in the country and also enabling expansion opportunities for businesses in Saudi Arabia, including the development of a vibrant energy sector in the Kingdom.

As the single largest supplier of crude oil to South Korea, we are committed to long-term relationships with our customers there. We also have developed mutually beneficial partnerships with leading Korean companies in areas such as engineering, construction, and energy research.

On July 2, 2014, our Aramco Overseas Company (AOC) subsidiary announced its largest overseas investment to date, agreeing to purchase the Hanjin Group's entire stake in **S-OIL**, comprising 31.9 million shares. S-OIL is South Korea's third largest refiner. This share purchase increased AOC's ownership interest in S-OIL from 34.99% to 63.4%. The transaction has been completed after receiving all necessary regulatory approvals.

The S-OIL share purchase is a clear demonstration of the evolution of our downstream strategy to build our overseas

assets into a unified global network that achieves closer integration between our refining, chemicals, lubes, distribution, and retail systems.

Long recognized for its outstanding environmental performance by the local community and government, the **Fujian Refining & Petrochemical Company (FREP)**, is our joint venture with Fujian Petrochemical Company Limited, ExxonMobil, China Petroleum and Petrochemical Company Limited (Sinopec), and the Fujian provincial government. FREP is a key element in our Asia chemicals strategy.

In 2014, FREP increased its existing steam cracker capacity from 800 to 1,100 metric tons per annum and the refinery capacity from 240,000 bpd to 280,000 bpd. This also raised production of polyethylene, polypropylene, and butadiene. New ethylene oxide and ethylene glycol units were mechanically completed in 2014 and on-stream in February 2015.

A project to recover up to 80% of hydrocarbons in refinery waste gas streams was also completed and FREP is currently

building an asphalt marine export facility to develop asphalt sales channels outside the Fujian market. This could significantly increase asphalt sales in the region by capturing China's high-growth asphalt market and contribute to an improved road and highway network.

The Asian region represents an important future growth area for our investments. On December 10, 2014, we signed a Memorandum of Understanding with **PT Pertamina**, the state-owned oil and gas company of Indonesia, to study the feasibility of upgrading three refineries in Indonesia: Cilacap in Central Java, Balongan in West Java, and Dumai in Sumatra, which will be studied at a later stage. The upgrades will increase capacity, allow the processing of Saudi Arabian crude oil, improve fuel quality to Euro 4 specifications, and produce chemicals and base oils. The memorandum also includes studying the marketing of fuels, chemicals, and base oils.

In 2014, we continued our efforts to turn around the performance of **Motiva Enterprises**, a Houston-based refining and marketing joint venture between Saudi Refining, Inc. (a Saudi Aramco subsidiary), and a Shell Oil affiliate. This effort was carried out in collaboration with our Shell Oil partner to enhance refinery processes to upgrade performance and better position the company to capture market opportunities. As a result, in 2014 Motiva significantly improved its profitability.

Trusted to deliver

Being responsive to the needs of our customers depends on our ability to move our products to wherever they are needed — 100% of the time — and on our commitment to customer service. In 2014, we completed several projects that increased the capacity and effectiveness of our distribution network to ensure that our customers, both domestic and international, have the products they need when they need them.

After four months of work, berthing platform No. 4 of our **Ras Tanura Sea Island Terminal** was completely upgraded. About a third of the project team was comprised of young Saudi employees. The team successfully completed the project to improve the integrity of the piping, structures, and equipment, totaling 750,000 safe man-hours. With the upgrade complete, Sea Island No. 4 has returned to service as an

enhanced and important link between our products and our customers.

All of our major engineering and construction initiatives, whether in distribution, oil, gas, or chemicals, include a sizable proportion of young Saudi talent to ensure our workforce has the necessary skills to meet the challenge of future mega-projects.

We completed 90% of the design package to de-mothball and integrate the **Al-Mu'ajjiz Terminal** with the Yanbu' Crude Oil Terminal. The added capacity will accommodate the increased volumes of fuel oil and supplies of Arabian Heavy crude oil to YASREF, Jazan, and Jiddah refineries. This development will boost our ability to meet our commitments to our customers and maintain our export capability from the Kingdom's west coast.

On the logistical front, our extensive distribution network is continuously upgraded to serve customers. From a cost, reliability, and efficiency standpoint, pipelines are a preferred method of transporting our energy to our processing plants, refineries, and major distribution points. We take great care to maintain our pipeline network and to safely add the required capacity to meet the expanding needs of our customers. And that need has been growing over the decades. Based on future estimated demand, we anticipate a system of 28,610 km of pipelines by 2020, an increase of 31% compared to the current network.

Two major pipeline projects were completed in 2014 that will help us meet the Kingdom's demand for refined products. First, we commissioned a new 30-inch, 400-km pipeline with a capacity of 310,000 bpd, linking the Dhahran Bulk Plant with the North Riyadh Bulk Plant. The pipeline will help meet the Central region's demand for diesel and kerosene.

Second, to meet demand in the Qassim area, we increased the capacity of our RQ-1 pipeline by 15,000 bpd to 125,000 bpd. This increased capacity reduces the volume of refined products trucked from the Western region, resulting in annual cost avoidance estimated at roughly \$20 million.

We also launched a project to increase the capacity of our East-West Crude Oil Pipeline to 7 million bpd. Detailed engineering was 90% complete at year-end.

In support of our growing pipeline network, research in robotics and nanotechnology

Sadara

Maximizing the value of every molecule

- Joint venture chemicals facility with Dow
- 3.2 million tons per year of diversified chemicals, associated value park
- ≈18,500 direct and indirect jobs
- First phase start up in 2015





Our Ras Tanura Sea Island Terminal is a key link in our distribution network, delivering billions of barrels of oil to customers from around the world.

for coatings has the potential to significantly improve the safety and longevity of our pipeline assets. The expansion and upgrading of our domestic pipeline network creates benefits beyond economic ones: Fewer trucks on the road mean safer highways and lower emissions.

Enabling opportunities downstream

Aramco Trading Company, our wholly owned subsidiary, was specifically established to maximize downstream integration and generate further value by optimizing our growing global downstream presence. The organization is entirely focused on importing and exporting refined petroleum products and representing our interest in sales and purchases of refined petroleum products such as condensates, naphtha, gasoline, middle distillate fuels, fuel oil, residual petroleum products, and sulfur.

In 2014, Aramco Trading expanded its market presence by marketing directly to third parties for product sales and purchases, optimizing operations of its storage and blending facility, introducing chemical products sales and marketing, and increasing chartering activities in response to growing trade volumes.

Aramco Trading achieved a new milestone in 2014 when it began officially marketing paraxylene from SATORP and polyolefins, polymers, and monoethylene glycol from Petro Rabigh. The growth of Aramco Trading is a key component in our strategy to build a truly integrated downstream business.

One area where we have integrated our operations from production to customer is in China's Fujian Province and the eastern part of Guangdong Province. This is home to our marketing venture, **Sinopec Sen Mei (Fujian) Petroleum Co. Ltd. (SSPC)**.

Through its network of 942 retail sites and 14 distribution terminals, SSPC sells wholesale and retail motor gasoline, diesel, and illuminating kerosene.

In 2014, SSPC established 15 new gasoline stations as it moved forward with its plan to develop an additional 30 retail sites. It also developed 12 new liquefied natural gas and compressed natural gas sites. Since 2013, SSPC has been recognized by Sinopec for outperforming all of its other provincial companies as well as its other foreign retail ventures in China.

By investing the energy of our people, our unique expertise, and our resources to integrate all along the hydrocarbon value chain, we enable new opportunities in the Kingdom and across the world.

Distribution network

Safe, reliable delivery to our customers

We operate a world-scale logistical network in Saudi Arabia, providing crude oil, natural gas, and refined products to customers in the Kingdom. Our crude oil and natural gas liquids (NGL) export terminals supply energy to consumers around the world. This interconnected network of oil and gas processing plants, refineries, pipelines, bulk plants, air refueling sites, and terminals is monitored and controlled from the Operations Coordination Center in Dhahran, ensuring responsiveness and reliability.

The "Big Board" in the center is the largest video display screen in the industry. At a glance, operators can see the entire hydrocarbon production and distribution system. With the click of a mouse, operators can check the status of individual pipeline valves, the feed rate of a refinery, the volume of a storage tank, or the loading status of a supertanker.

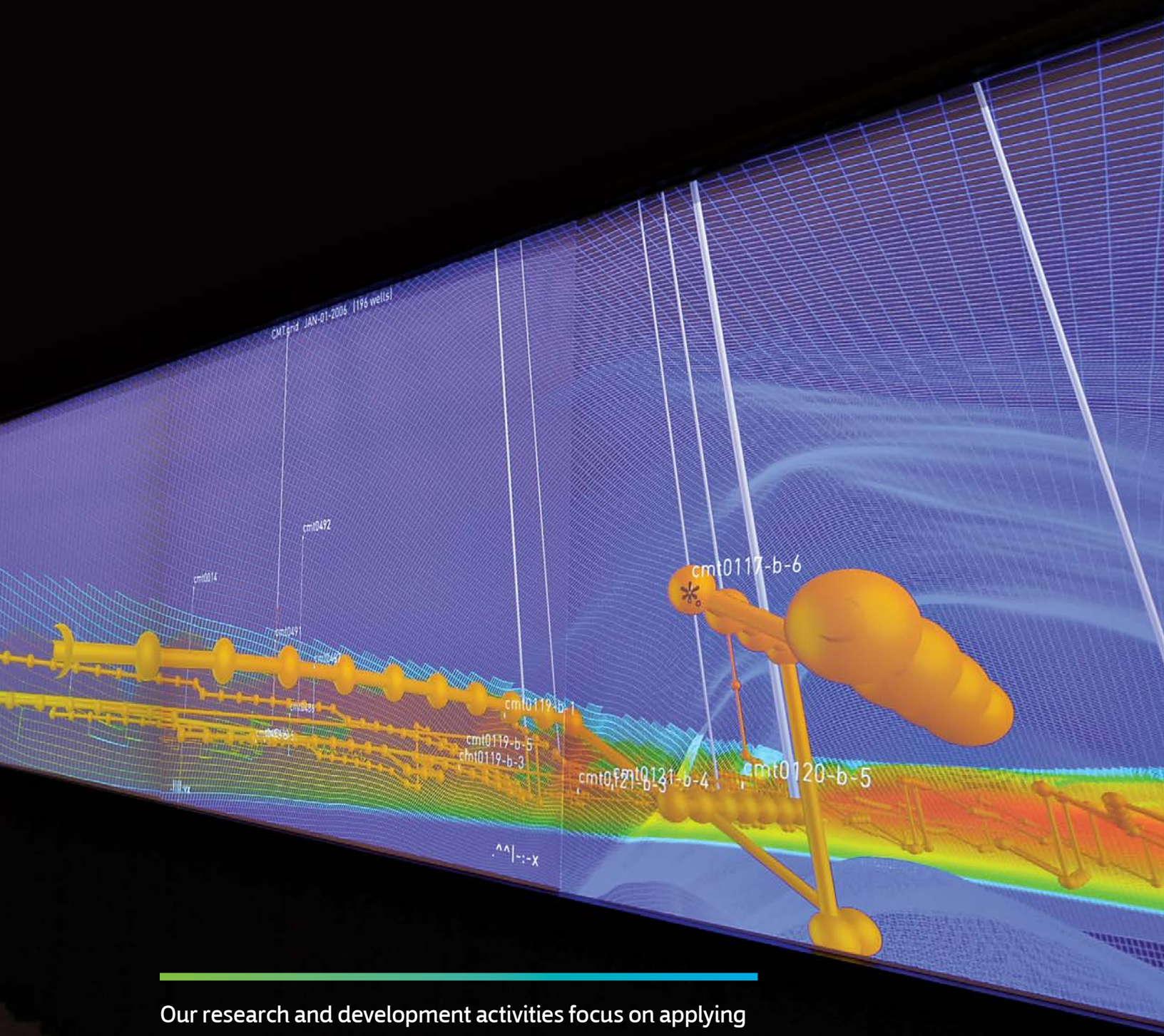
In 1990, the total length of our pipeline system in the Kingdom measured 12,100 km. The network now extends nearly 20,000 km, roughly equal to traveling from Riyadh to New York City and back again. Five marine ports load millions of barrels of oil and refined products each day onto ships destined for terminals in the world's three major energy markets: Asia, North America, and Europe.



generating breakthroughs across the value chain



*By focusing on technology to improve the discovery and recovery of our resources,
we promote energy sustainability and economic opportunity.*



Our research and development activities focus on applying our expertise and ingenuity to generate innovative ideas that will make our resources more accessible, useful, sustainable, and competitive. To achieve this goal, we foster a culture of innovation and exploration.

we foster a culture of innovation

At Saudi Aramco, we believe technology leadership drives continued and future success in the energy sector and is essential to achieving our aspirations to help solve global energy challenges and stimulate the local knowledge economy.





We have laid the groundwork to create sustainable competitive advantage through the introduction of a balanced portfolio of technically feasible and commercially viable technology options. Upstream, we are actively working on technologies that enable greater efficiency in resource discovery and recovery. Downstream research domains seek to develop and implement process improvements and production efficiencies that support our growing petrochemicals business as well as new production and refining efficiencies to reduce costs and support higher value product yields. In addition, our strategic research domains of carbon management and fuel/engine technology pursue the long-term sustainability of crude oil as the preferred energy source in the global marketplace.

Achieving breakthroughs that truly move our company and the energy industry forward requires access to the best ideas, people, and partners from around the world. Over the past few years, we have created a global research network with the establishment of research facilities in targeted innovation hubs in the United States, Europe, and Asia. These facilities are fully aligned and integrated with our central research and development organizations and our core businesses. With a global network that spans the world, our scientific research continues literally around the clock.

We continuously strive to leverage our intellectual property (IP) portfolio, practices, and processes to position Saudi Aramco as a global technology leader. We pursue patents in areas where IP protection provides a competitive advantage, global recognition, strategic positioning, and product differentiation. In 2014, our IP strategy yielded significant results. We were granted 99 patents by the United States Patent and Trademark Office, the most in a single year in our history, and 154 new patent applications were filed.



99
patents awarded
in 2014

R&D and innovation underpin our intent to emerge as a truly global, integrated energy and chemicals company by the end of this decade.

Amin H. Nasser

Senior Vice President, Upstream
Saudi Aramco

Beyond helping solve global energy challenges and stimulating the development of the local knowledge economy, our R&D efforts are also aiding the development of the leading Saudi engineers and scientists of tomorrow and fostering the development of the Kingdom's innovation ecosystem.

Harnessing the best in technology

We are entrusted with the management of some of the largest petroleum reserves on Earth. Achieving the greatest impact for the people who rely on our resources requires us to plan long term for how we can maximize recovery and sustain these resources for future generations. To do so, we create and employ some of the most innovative and cutting-edge technologies our industry has to offer.

Upstream technology

Here are some **upstream technology highlights** from our work in 2014 to increase recovery rates for oil, part of our strategy to ensure the long-term sustainability of the Kingdom's natural resources.

- Injecting CO₂ into reservoirs for enhanced oil recovery and sequestration could potentially boost recovery rates and reduce emissions. In a large-scale demonstration project scheduled for 2015, we will use CO₂ in injection wells in the 'Uthmaniyah area. Conducting the demonstration in a mature area of the reservoir promises to enhance our knowledge of CO₂ enhanced oil recovery methods.
- The use of surfactant/polymer formulations in injected water can help recover tertiary oil (oil not produced under natural reservoir pressure or through water injection) more efficiently. We conducted extensive studies to finalize surfactant/polymer formulations and designed a pilot program. Single-well tracer tests were conducted and the first well for the pilot was drilled.
- SmartWater Flooding has the potential to optimize water properties in our carbonate reservoirs to increase recovery. In 2014, a SmartWater Flood demonstration project at North 'Uthmaniyah resulted in a successful comprehensive formation evaluation at the first observation well of the field pilot.

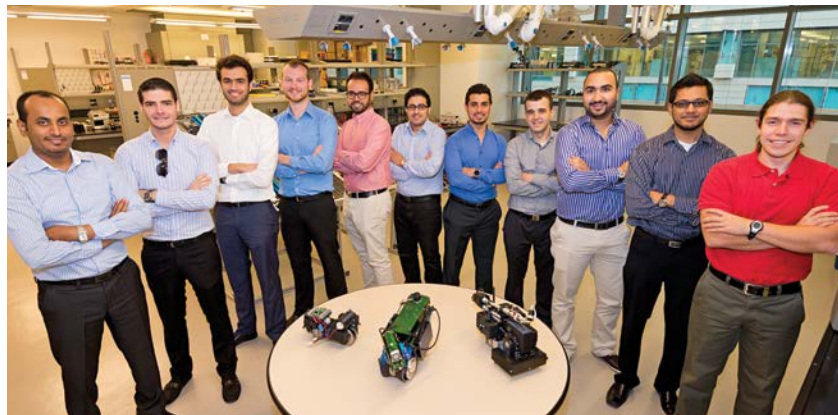
Intelligent Systems Team

Creative solutions for real-world problems

When it comes to operating complex oil and gas plants and refineries, safety is at the forefront of everything we do. When challenged to devise a better way to inspect the integrity of steel operational assets — without the cost and risk of scaffolding — the 11 members of the Intelligent Systems Team in our R&D Center at King Abdullah University of Science and Technology (KAUST) dared to chart new territory.

Pursuing rapid technology development, the diverse team — all of them recent KAUST graduates — took a pencil drawing concept of a robotic crawler capable of visual and ultrasonic inspection and gas sensing and developed it to a fully working prototype in just 14 months. Compact, self-contained, capable of maneuvering on curved surfaces, and operated wirelessly, the Robotic Inspection Crawler they created was an industry first: An intelligent system that can detect steel thinning due to corrosion in pipes, tanks, vessels, and other hard-to-reach steel structural assets.

Their invention won the Industry Glory Medal of the International Federation of Inventors Association, and the potential for in-Kingdom commercialization of the technology is being pursued.





Boosting recovery rates to ensure energy sustainability is a central focus of our Advanced Research Center in Dhahran.

- A next-generation drilling microchip may present a low-cost and low-risk downhole data acquisition system that will help optimize drilling operations. At year-end, we were investigating the manufacture of thousands of these microchips for deployment in the field.
- In-situ exothermic chemical reactions could be used to generate pressure pulses sufficient to create fractures around well-bores, enhancing fracture propagation. Lab-scale experiments were successful in proving this new method of fracture initiation and will be applied in unconventional formations in 2015.
- Intelligent nano-agents, 1/1,000 the size of a human hair, are designed to be injected into the reservoir for sensing or intervention. In 2014, we injected passive building block nano-agents (A-Dots), along with a small-molecule fluorescent tracer, into a well. A-Dots were detected at two neighboring producing wells nearly 500 meters from the injection point.
- Magnetic nano-mappers are magnetic nano-agents that could be used to map the movements of injected fluids inside hydrocarbon reservoirs. A shallow well array was designed, modeled, and planned in 2014 and drilling and initial field testing are expected to commence in 2015.

- A new class of chemicals is being investigated to reduce the viscosity of heavy oil with the potential to increase recovery compared to water injection alone.
- The front-end engineering and design of cable-deployed electric submersible pumps was completed, with field prototype design, manufacturing, and testing slated for 2015. These pumps are used to boost production rates in offshore fields such as Safaniya.

Every percentage increase in recovery rates adds millions of barrels of recoverable oil to our reserves base. Every gain in operating efficiency expands our ability to provide more energy at lower cost. More reserves and longer-lived production mean more energy for opportunities, in Saudi Arabia and for our customers around the globe.

Our relentless focus on technology to improve our production value chain, from discovery and recovery to processing and delivery, helps ensure energy stability and economic opportunity.

Downstream technology

Downstream research domains include oil and gas treatment, oil upgrading, network integrity, advanced materials and

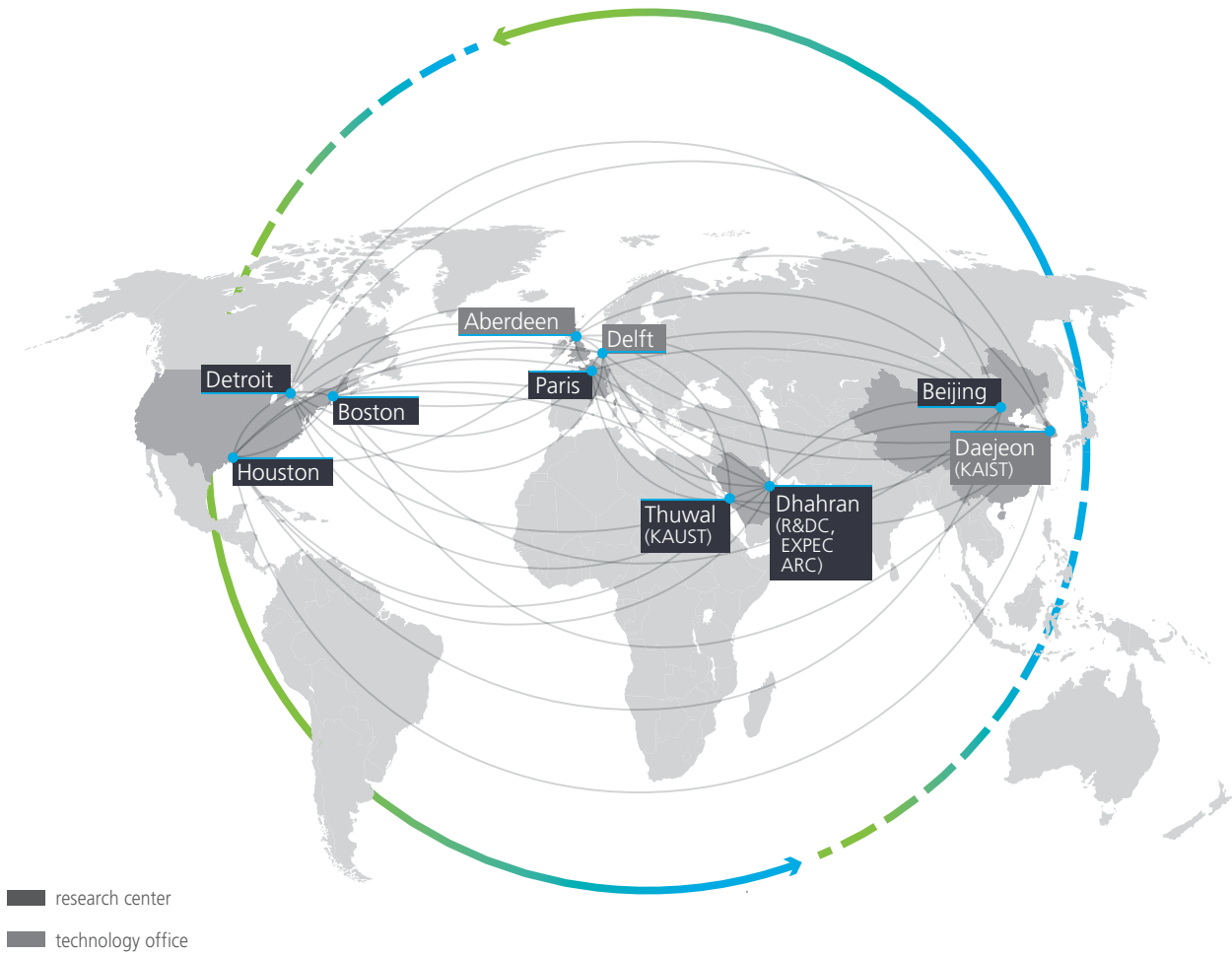


7.6 billion

cubic feet of gas and more than 415,000 barrels of oil recovered via zero discharge technology at well sites, 2013–2014

global research network

achieving global leadership in energy-related technologies and supporting the creation of a knowledge economy in the Kingdom



research strategy

business segments	focus areas	goals
upstream	<ul style="list-style-type: none"> • reservoir engineering • computational modeling • production • drilling • geophysics • geology 	Increase discovery and recovery of oil
downstream	<ul style="list-style-type: none"> • oil and gas treatment • oil upgrading • advanced materials • chemicals • network integrity 	Develop processes and improve production and refining efficiencies to maximize the value of hydrocarbon resources
strategic	<ul style="list-style-type: none"> • fuels/engine technology • carbon management 	Support the long-term sustainability of oil



We seek to become a global leader in energy technology development and our efforts in 2014 resulted in 99 patents, the most in a single year in our history.

chemicals. Activities are geared toward developing and implementing process improvements and production efficiencies in support of the growing petrochemicals business, as well as new production and refining efficiencies to reduce costs and support higher value product yields.

Downstream technology highlights from our work in 2014 include:

- Driven by the opportunity to develop technologies that valorize undervalued product streams and capture benefits from refinery-petrochemical integration, researchers from our R&D Center developed a distinctive one-step process (SuperButol™) to **convert a mixture of butenes into mixed butanols liquid**. The mixed butanols product has been demonstrated to be excellent gasoline blending oxygenate and octane improver. SuperButol technology can play an important role in contributing to Saudi Aramco's Clean Fuels initiative.
- A forward-looking "**crude oil to chemicals**" technology under development by our R&D Center has progressed to the demonstration stage. An integrated pilot plant will be built in the United States in 2015 to demonstrate the feasibility of the technology. The objective of

the project is to investigate the feasibility of producing olefins and aromatics directly from crude oil. This technology affords a route to leverage crude oil directly into the petrochemicals market.

- We continuously look for ways to make our operations more efficient. In this spirit, we have developed a new hydrocracking catalyst that enhances performance in the processing of heavy, de-metallized oil (oil that has had heavy metals such as vanadium removed). The new catalyst, CAN-15, exhibits higher activity than currently available catalysts and still maintains all the desired properties of previous catalysts. The new catalyst began testing in 2014 at our Riyadh Refinery. As current supplies of crude oil entering the market are trending toward heavier grades, this new catalyst could potentially benefit refiners around the world.
- In 2014, after two years of successful field trials, a new membrane technology to increase NGL production was readied for deployment at our gas plants. Due to their permeability properties, these membranes can block nitrogen and concentrate heavy hydrocarbons in the feed of the cryogenic NGL Recovery Unit, resulting in additional product with competitive economics.

Strategic technology

Our strategic research domains in carbon management and fuel/engine technology seek to ensure the long-term sustainability of crude oil as the preferred energy source in the global marketplace. **Highlights** from our work in 2014 include the following:

- We significantly expanded our global investment in fuels and engine research to improve the efficiency of internal combustion engines. Our researchers in Paris continued to develop innovative fuel/engine systems while our center in Detroit addressed technology integration and strategic transport studies. Both centers have established collaborative projects with major auto manufacturers, technology developers, and Tier 1 automotive suppliers.
- We completed a major study investigating the impact of fuel detergents in Saudi Arabia. Detergent fuel additives are recognized by the fuel and automotive industries as a means to gain fuel efficiency. We conducted two major road vehicle fleet trials and results forecast an average reduction in fuel consumption of 1.6% for gasoline and more than 3% for diesel. These outcomes project an annual Kingdom-wide fuel savings of more than 5.6 million barrels of diesel



above: Innovation is essential to realizing the benefits inherent in energy resources.

right: One of our global research centers is located on the campus of KAUST, helping foster the domestic innovation ecosystem.



and more than 3 million barrels of gasoline. The findings from the study will be used to support the rollout of gasoline and diesel detergents across the Kingdom in support of the company's clean fuel efforts.

- Our carbon management research team completed a demonstration of oxy-combustion of heavy residue with pure oxygen and with enriched air. The technology shows promising results for further scale-up as a means to utilize difficult to burn heavy residues for efficient power generation with the potential for 90% CO₂ capture.

Global research network

Establishing and sustaining a global research and technology presence is a key enabler of our drive to achieve leadership across our technology portfolio. Collaborating on a global scale with world-class partners in research domains of strategic importance to us significantly enhances the quality and scope of our research and validates our research directions. This approach provides access to the diverse pools of research talent around the world and allows us to build upon the experience and knowledge of others. Harnessing such intellectual and professional diversity is

one of the key sources of innovation and competitiveness.

Our global research centers and technology offices represent strategic hubs of innovation and research talent in targeted locations worldwide. In addition to our in-Kingdom research center at the King Abdullah University of Science and Technology (KAUST), five international research centers and three technology offices continued to grow in scale and scope during 2014, providing support and services to research and technology projects, and enabling innovative research in high-impact, long-term, value-creating domains — all designed to provide us with a substantial competitive advantage.

At our **Saudi Aramco Research and Development Center at KAUST**, our research complements the strong capabilities provided by the university in downstream areas such as fuel technology. This collaborative relationship is strengthened by our 10-year collaboration (FUELCOM) with the KAUST Clean Combustion Research Center. Other research areas include catalyst development, materials science, nanotechnology, robotics, and solar energy materials. Development of a standalone research facility began in 2014. The new center will provide space

for 150 Saudi Aramco researchers from both the upstream and downstream research domains.

Our **Aramco Research Center-Boston** is located adjacent to the Massachusetts Institute of Technology (MIT) and was inaugurated in December 2013. Work in Boston supports both the upstream and downstream businesses in the areas of computational modeling, advanced materials, and nanotechnology. In 2014, the Advanced Materials team engaged with the MIT Energy Initiative (MITEI) to pursue research in membrane technology for gas separation and sweetening, materials for heavy hydrocarbon removal, and mesoporous zeolites for crude oil upgrading.

In September 2014, we inaugurated our largest research center outside Saudi Arabia. Our **Aramco Research Center-Houston** focuses on upstream technologies for conventional and unconventional resources to support discovery and recovery goals. Specific areas of research include advanced seismic imaging, unconventional productivity enhancement, smart fluids to improve well productivity, nano-based polymers, surfactants, cement technologies related to drilling operations, quantitative geology, and advanced downhole sensors.



The R&D team at our **Aramco Research Center-Detroit** focuses on competitive transportation solutions, improving the efficiency of current and future engines, reducing overall environmental impact, cost, and complexity of engine systems. The team engages with original equipment manufacturers and technology providers, matching innovative ideas with real-world production. Areas of research include fuel combustion and emissions, technology integration, and strategic transport studies.

Our **Aramco Fuel Research Center-Paris** is located at IFP Energies nouvelles (IFPen), a technology provider. This strategic placement allows us to capitalize on IFPen's facilities and links to various European automakers to accelerate the innovation cycle of different fuel technologies. Areas of research are focused on the development and optimization of innovative fuel/engine systems.

The Delft University of Technology in the Netherlands is home to our **Delft Global Research Office**. The office focuses mainly on seismic processing and subsurface imaging to help us better understand the nature of our subsurface geology.

Our **Technology Office in Aberdeen**, Scotland, focuses on drilling and production technologies. A recent addition to the office is the newly formed European arm of **Saudi Aramco Energy Ventures (SAEV)** whose mission is to source and develop relationships with strategically significant and innovative energy technology companies.

Our **CO₂ Management Collaboration** at the **Korean Advanced Institute of Science and Technology (KAIST)** in Daejeon, South Korea, is dedicated to addressing issues related to carbon management. The collaboration follows an



5.6 & 3.1 million

barrels of diesel and gasoline, respectively, projected to be saved per year in the Kingdom by detergent fuel additives

One of the key benefits of our R&D efforts is the development of future Saudi scientists and engineers.



interdisciplinary approach to innovative and cost-effective CO₂ capture, storage, and conversion from fixed and mobile sources.

The latest addition to our global research network is the **Beijing Global Research Center**, scheduled to be inaugurated in early 2015. The center will focus initially on three research areas: geology, geophysics, and production chemicals for enhanced oil recovery. The center has already made significant achievements in its research into chemical enhanced oil recovery challenges as well as advanced seismic imaging.

Complementing our in-house research and amplifying the potential benefits generated by our global research network, **SAEV** continued in 2014 to invest globally in startup and high-growth companies with technologies of strategic importance to us. We provided meaningful support to promising companies in the form of strategic guidance, access to our global network, and needed capital to accelerate development and deployment of technologies that are well positioned for growth in the Kingdom.

With a steady influx of new investments, the focus was on managing our growing venture capital portfolio, enhancing our technology strategy, strengthening SAEV's operations, and building the SAEV brand. By year-end, 11 investments in upstream oil and gas, downstream operations, chemicals, and energy efficiency were presented to the SAEV Investment Committee for approval. Since its inception in 2012, SAEV has made 13 capital investments.

We know a good idea can come from anywhere. We are particularly interested in ideas that have the potential to develop into scalable technologies we can leverage to solve the global energy challenges we all face. Through SAEV, we invested in San Francisco-based Siluria Technologies. Siluria uses a bio-technique to create catalysts that convert natural gas to ethylene. Siluria's catalytic process results in competitive ethylene manufacturing costs with reduced emissions compared to conventional technology.

In addition to the head office in Dhahran, SAEV has established corporate venturing teams in the energy hub cities of Houston, Aberdeen, and Oslo with additional representatives in Seoul and Tokyo. SAEV is

maturing into a world-class global corporate venturing organization that brings investment, economic growth, and new opportunities to our communities.

Strategic collaboration

In addition to our in-house network, partnerships and collaborations provide enhanced proficiencies and support our drive to achieve our strategic technology objectives.

Beyond building R&D capabilities, these relationships enable us to:

- Leverage scientific expertise
- Access a qualified talent pool and opportunities for training and development
- Strengthen collaborative efforts domestically and internationally

We have established a wide range of collaborative relationships with leading Saudi and international research universities and continue to cultivate additional partnerships.

We are engaged with the **King Fahd University of Petroleum and Minerals (KFUPM)** in five upstream research areas, including enhanced oil recovery, reservoir

quality prediction, near surface seismology, drilling optimization, and productivity enhancement. Downstream collaboration includes chemicals, sub-quality gas treatment, CO₂ capture and utilization, and oil upgrading. In 2014, our Saudi Aramco-KFUPM Collaboration Board met to review progress on joint research and development, education, training, technology transfer, and community engagements.

KFUPM and Saudi Aramco have a long-standing and multifaceted partnership in education and research. In 2014, the two parties finalized plans to create a new College of Petroleum Engineering and Geosciences at KFUPM, with the mission of providing a world-class, research-intensive education for undergraduate and graduate students, while furthering research in, and the development of, science and technology for the discovery and recovery of petroleum resources.

The College, which will benefit from the intellectual and financial contributions of both Saudi Aramco and KFUPM, will serve as a model for innovative and agile approaches to developing centers of excellence in research and education at KFUPM. It will adopt new educational models that bring faculty, students, and industry together to address business and technical problems of importance to the oil industry in the Kingdom and globally. The College will provide a collaborative and cross-disciplinary environment where education and research are combined in integrated programs of significant scope.

Our **Saudi Aramco-KAUST Collaboration Board** met in 2014 to review ongoing collaborative efforts. We are pursuing upstream and downstream research areas, including geophysics, reservoir engineering, drilling technology, production technology, Red Sea environmental research, fuel combustion, water desalination and reuse, and solar energy.

We are engaged with **MIT** in an ongoing robust research and education partnership spanning both upstream and downstream business sectors. Our research center in Boston was strategically located adjacent to the university to foster this strategic relationship.

Collaborative research projects with MIT faculty focus on modeling, visualization, simulation, and advanced materials. Additionally, our Power Systems organization is leveraging this relationship through sponsorship of a multi-year consortium

project entitled "Utility of the Future," which focuses on technical and economic assessment of distributed versus centralized power generation business models.

We have also established effective and productive collaborations with global industry leaders to enable innovation and to expand our capabilities by:

- Fostering a shared understanding of potential opportunities
- Bringing a team approach to developing solutions to market-driven challenges and common business interests
- Providing alignment on business models that will enable both parties to share risk and realize value from successful developments

One example of how we are encouraging collaboration at the nexus of both academia and industry is through our involvement with **Dhahran Techno Valley Company (DTVC)**, a research and innovation park located adjacent to KFUPM and our headquarters in Dhahran.

At DTVC, we are working with KFUPM and leading energy companies to address a number of shared challenges in areas such as advanced materials, geophysics and petroleum engineering, refining and petrochemical processes, water management, energy efficiency, renewable energy, and advanced computing.

Commercializing IP is the cornerstone of the leading businesses of tomorrow. Ranking first among Arab countries in globally registered patents and holding some 45% of the total, Saudi Arabia is poised to become a hub of excellence in R&D. Our role in forming the **Saudi Arabia Advanced Research Alliance (SAARA)** marks a pivotal turning point in this aspiration. The alliance brings together six entities — Saudi Aramco, KAUST, KFUPM, the Saudi Technology Development and Investment Company (TAQNIA), the King Abdulaziz City for Science and Technology (KACST), and The Research Triangle Institute (RTI) from North Carolina in the United States — to work toward transforming the numerous ideas generated in the Kingdom into technologies, commercial products, and applications that can be adopted by industry. As a result of the alliance, a new company called Technovia is being established to bridge the gap between the discovery of ideas and their practical adoption and commercialization.

Patents

Building a culture of innovation

- 99 patents awarded in 2014
- 57 patents awarded in 2013
- 58 patents awarded in 2012
- 11 international research centers and technology offices operational in 2014





enabling a sustainable future for the Kingdom

In the petroleum and chemicals industries,
we use catalysts to increase the usefulness
and value of our hydrocarbon resources.
A catalyst does not change a substance:
It stimulates, accelerates, and amplifies a
reaction that results in a desirable change.



The King Abdullah Sports City stadium in Jeddah, completed in 2014, is emblematic of our commitment to enabling the development of healthy and vibrant communities in the Kingdom.

catalyst for new opportunities

In much the same way, Saudi Aramco is a catalyst. It is not enough to be one of the world's leading integrated energy and chemicals companies.



With position comes responsibility. We have a duty to leverage our competencies and experience to amplify the positive effects of our business activities wherever possible. By doing so, we act as a catalyst to stimulate new opportunities in the Kingdom and across the world. By bringing people and organizations together, we accelerate the development of new ideas, creating additional value from everything we do.

This is a far-reaching aspiration and one that touches upon nearly every aspect of our business. The growth of our global chemicals business, for example, will introduce new product streams, and from them, the ability to manufacture new products that will generate opportunities for a wide variety of businesses. The Kingdom's economy will become more diverse, triggering new employment and entrepreneurship opportunities for Saudis.

By being a catalyst for the development of a Saudi energy services sector, we are laying the foundation for greater rewards for both our industry and the Kingdom as a whole. We are supporting the local development of businesses that manufacture energy industry materials and provide engineering and oil field services. These initiatives will help establish the Kingdom

as a strategic hub for energy service sector investment, both locally and internationally.

Facilitating a sustainable future also means fostering a healthy domestic energy ecosystem in the Kingdom. Many of our activities — from testing renewable energy options to promoting a culture of conservation and efficiency — are directed to enabling an energy efficient national economy with a more diversified energy mix.

At Saudi Aramco, our mission is twofold: actively advance the commercial sustainability of our company, and through the work we do, seek opportunities to contribute to the growing prosperity of the Kingdom we serve and the world we all inhabit.

In 2014, we enabled a more sustainable future in numerous ways.

We continually look for ways to amplify the benefits of our business activities. In a pioneering collaboration with General Electric (GE) and Tata Consultancy Services, we established a **new Business Process Service Center** designed to create nearly 3,000 jobs for Saudi women within the next three years. Tata Consultancy Services, a world leader in business process services, will operate the center.

Business Process Service Center

Driving job creation

- First all-female business service center in the Kingdom
- Collaboration with General Electric and Tata Consultancy Services
- Provides business support in finance, accounting, supply chain management, and human resources
- Designed to create nearly 3,000 jobs in the next three years



≈ 500,000

LED light bulbs installed in 2014

The center, located in Riyadh, is the first all-female business service center in the Kingdom. The center already has more than 400 full-time female employees providing business support to many of our company departments — and to GE — in the fields of finance and accounting, supply chain management, and human resources. The center is providing business services to GE customers in 39 countries throughout the Middle East, Africa, and Europe. By outsourcing these services, companies are able to focus on their core activities while helping to create quality and sustainable employment opportunities for women in Saudi Arabia.

We partnered with Princess Nourah Bint Abdulrahman University in Riyadh to develop the concept of a **Women's Business Park** located on the university campus. A Memorandum of Understanding was signed to conduct a feasibility study and create a conceptual master plan for the new business park. The university has allocated a number of dormitory buildings for use in early-stage testing of the concept. The business park is envisioned as a bridge between academia and the workplace. Students and graduates of the university will have first choice to train and work in all-female services-based companies located in the business park. The Tata Consultancy Business Process Service Center will be relocated to the business

park as an anchor tenant. The Women's Business Park is anticipated to create 10,000 to 15,000 jobs for Saudi women.

Through our European sales and marketing affiliate, Saudi Petroleum Overseas Ltd. (SPOL), and with our partners the Saudi Arabian General Investment Authority and Euromoney, we sponsored the **first-ever Saudi-UK Investment Forum**. The forum showcased foreign direct investment opportunities that meet the Kingdom's objectives of boosting domestic productivity, creating high-quality jobs, and increasing overall prosperity through a strong, diversified economy. Topics addressed at the forum included investor climate and business opportunities in healthcare, logistics, and technology and innovation.

Enabling economic diversification

Economic diversification is an important success factor for any economy seeking long-term sustainability. We are doing our part to establish businesses that propagate diversification. Several industrial parks and other initiatives associated with our integrated refinery and chemicals facilities offer foreign and local investors opportunities to take advantage of the Kingdom's competitive labor costs, logistics capabilities, lower energy costs, and proximity to the growing markets of the Middle East and North Africa. These

ventures create prime conditions for creating jobs for Saudis in industries that will help diversify the economy.

We made substantial progress in achieving our vision to attract local and foreign investment in businesses that will diversify the Kingdom's economy by manufacturing products from our chemical streams. By the end of 2014, agreements had been reached with tenants for 30 of the 34 sites in our **Petro Rabigh PlusTech Park** and potential tenants have been identified for the remaining sites. About 30% of Petro Rabigh's polymers production is slated for the park's tenants.

By 2015, it is expected that investments of up to \$1.2 billion will have been made in the PlusTech Park and 2,000 new direct jobs will have been created. Promotion, marketing, and construction of the park, for which Saudi Aramco and Sumitomo Chemical are jointly responsible, will continue until all 34 park tenants begin construction of their plastic manufacturing facilities, at which time these activities will be transferred to Petro Rabigh.

Sadara and its adjoining value park, PlasChem Park, will deliver a full range of value-added performance products destined for the markets of the Asia Pacific, the Middle East, Eastern Europe, and Africa. By the second half of 2015, Sadara is expected to begin producing

The power of cogeneration

Adopting innovative technology to improve energy efficiency

Cogeneration, or combined heat and power systems, capture the heat from a plant's exhaust stream and convert it into useful thermal energy. The benefits of cogeneration systems are significant: Less fuel is required to produce energy and because the energy is produced within the plant, energy is not lost in transmission over power lines. And because less fuel is burned, emissions are lower.

Cogeneration systems are a major component of our strategy to achieve 100% self-sufficiency in electrical power generation for our operating plants. Cogeneration enables us to produce electricity as a natural by-product of our operations and reduces our energy consumption from the national utility grid.

New operating facilities include grassroots cogeneration systems and we are retrofitting existing plants. At our Shaybah facility, for example, we are upgrading the plant's power generation capacity to more than 1 gigawatt by installing four cogeneration units.

The adoption of cogeneration technology helps us promote energy efficiency, lower the energy intensity of our operating plants, add value to our hydrocarbon resources, and protect the environment.



Domestic economic impact

Value of material procurement spending (in billions) awarded to local market	Percentage of material procurement spending awarded to local market	Value of contract procurement (in billions) awarded to local companies	Percentage value of contract procurement awarded to local companies
\$4.3	85%	\$37.4	87%
2013: \$6.3	2013: 75%	2013: \$30.4	2013: 92%
2012: \$4.5	2012: 89%	2012: \$21.7	2012: 85%
2011: \$4.0	2011: 87%	2011: \$19.5	2011: 75%
2010: \$2.9	2010: 86%	2010: \$12.0	2010: 77%

Our Competitive Energy Sector Framework envisions a highly competitive domestic energy sector supported by localized supply chains. The various initiatives being pursued under this framework will support the growth of new industries in the Kingdom, diversifying the economy and creating lasting and substantial employment for the Kingdom's residents.

Motassim A. Al-Ma'ashouq
Vice President, New Business Development

plastic and chemical products that companies can use to make plastic products, detergents, and foam materials for domestic and international markets. Sadara's integration with PlasChem Park is a prime example of how we are advancing Saudi Arabia's strategy to become a hub for future downstream industrialization of chemicals and plastics. PlasChem Park on its own will create more than 20,000 high-quality jobs, either directly or indirectly, for Saudi nationals.

We have been entrusted by the government to develop **Jazan Economic City**. Located in a coastal region known for its abundant natural resources and covering an area of 106 square km, the economic city will be a hub for a diverse platform of heavy, medium, and light industries.

Phase 1 of the project, which will be completed in 2017, focuses on building smart infrastructure that meets the energy, utilities, and transportation requirements of a wide array of industries. These infrastructure investments will be complemented by several large-scale national projects including a new Jazan airport and a 660-km Jazan-Jiddah coastal railway. The city's infrastructure development is designed to minimize investors' start up time so they can begin operations as quickly as possible.

The project is expected to substantially augment the economic output of the region and create 15,000 jobs in its first five years and rapidly scale up to generate more than 70,000 new jobs over a 15-year period. The city will boast a high quality of life that attracts and retains competitive companies and a dynamic workforce. This private-public partnership will set the standard for local economic development and serve as a model for building economic cities in the Kingdom.

Enabling the domestic energy sector

Similar to the approaches to increase local content undertaken in global energy hubs such as the United States, Norway, and Brazil, we are working to establish domestic suppliers of all of the goods and services relating to energy sector activity within Saudi Arabia. Our goals address job creation and the growth of local manufacturing and services capabilities. We are putting substantial financial resources toward meeting these goals. We aim to increase Saudi Aramco's proportion of in-Kingdom spending in this sector from 35% to 70% over the next decade. We believe this shift has the potential to create between 400,000 and 500,000 direct and indirect jobs in the Kingdom in the process.



Placing young professionals in the local offices of global engineering firms builds expertise and talent within the Kingdom.

In 2014, we completed the transfer of the entire fleet of 20 tankers from Vela, our former shipping subsidiary, to the **National Shipping Company of Saudi Arabia (Bahri)**. In addition, all vessel-based crews, all shore-based personnel, and Vela's operation systems have been integrated under Bahri's new organizational structure.

The transfer of Vela's fleet resulted in a 20% shareholding interest by Saudi Aramco Development Company (a wholly-owned subsidiary of Saudi Aramco) in Bahri. The transaction resulted in the formation of the third largest Very Large Crude Carrier (VLCC) owner in the world and Bahri is now the exclusive provider of VLCC shipping services for crude oil sold by Saudi Aramco on a delivered basis. By divesting our shipping business, we are strengthening the capability of the Kingdom's domestic energy sector, creating efficiencies of

scale, and enabling new opportunities for growth in the shipping industry.

The **Ras Al-Khair maritime yard** is a prime example of how we plan to energize the localization of energy sector industries through the creation of "anchor projects" around which entire supply chain ecosystems can develop and grow.

Our maritime yard initiative will result in a world-class shipyard and supporting ecosystem in Saudi Arabia. By leveraging our considerable spending on engineering, procurement, and construction, we anticipate attracting qualified partners and their supply chain of vendors and manufacturers.

In 2014, we signed a Memorandum of Understanding between King Abdulaziz University and Saudi Aramco for the purpose of coordinating our efforts to promote the

education of students in disciplines related to the marine industry in Saudi Arabia.

We are evaluating other potential sectors, including drilling and oil field services, to localize production and create domestic supply chains. These new businesses, allied with technology centers to spur innovation and foster development of advanced materials and processes, will contribute to greater economic diversity and drive job creation.

Enabling new business

To meet the employment needs of the Kingdom's growing population, estimates forecast that roughly 5.2 million jobs will need to be created by 2040. The private sector is where the bulk of these new jobs will need to be generated. Our strategy to expand our downstream businesses helps address this challenge by spurring the creation of thousands of direct employment

opportunities. Indirect jobs in support of our downstream activities will number in the tens of thousands.

To further stimulate growth in the private sector, we are enabling entrepreneurship in the Kingdom. Small- to medium-size enterprises create new jobs and generate economic expansion and this sector is a focus for our support, in particular local businesses that support our operations. We are also offering venture capital and technical support to energy and chemical startups aligned with achieving our business objectives.

Our **Aramco Entrepreneurship Center (AEC)** continued to focus on giving Saudi entrepreneurs access to the resources and expertise they need to allow great ideas to flourish.

In 2014, AEC screened 719 applications submitted by entrepreneurs and conducted 230 interviews with the authors of the most solid proposals. Training sessions on entrepreneurship development and business plan formulation were provided to more than 500 trainees in Dhahran, Riyadh, and Jiddah. Eighteen loans and four venture capital equity investments were approved.

Since its inception, AEC has approved 38 loans and 14 venture capital investments and more than 1,200 young men and women have been trained and coached on entrepreneurship development.

By creating opportunities for Saudi entrepreneurs to build the leading companies of tomorrow, we foster healthy economic growth in our communities. Ventures funded by AEC are expected to create hundreds of high-caliber jobs in the Saudi market. Along with job creation and revenue generation, these ventures will provide

lasting socio-economic benefits in the form of a culture with a commercial mindset that appreciates and understands the value of entrepreneurship and risk-taking.

Enabling energy sustainability

We have a vested interest in managing the Kingdom's resources in a sustainable way. Managing these resources wisely for the generations to come and capturing more of their value is at the core of our long-term commitment to building a sustainable energy economy and delivering the foundation for a prosperous tomorrow.

When we talk about enabling energy sustainability, we mean optimizing all of the practices and technologies used in the discovery, recovery, processing, distribution, and end-use of our energy resources. It means actively promoting and supporting a shift to an energy efficiency culture both within our company and Kingdom-wide. We made significant progress in 2014 to achieve higher levels of energy sustainability. There is much more we intend to do. And by doing so, we set the example for others to follow.

The **Power & Water Integrated National Plan** provides for a comprehensive assessment of the Kingdom's water and energy infrastructure and a long-range demand forecast to enhance future utility planning. The plan is guided by an integrated coalition of government ministries and leading Kingdom businesses for whom judicious energy and water use are of the utmost importance. The study will, for the first time in the Kingdom, include a human behavior analysis of domestic water and power consumption.

Per capita energy consumption in Saudi Arabia is roughly double the world average. Left unchecked, rising demand for energy

PlasChem & PlusTech

Building an integrated chemicals business

- Value parks linked to Sadara and Petro Rabigh
- ~20,000 direct and indirect jobs to be created by PlasChem
- \$1.2 billion expected investment in PlusTech by 2015
- 2,000 direct jobs created by PlusTech by 2015



1,200+

men and women trained in entrepreneurship and business plan development



We provide support to Saudi entrepreneurs who, like these university students, need help taking their ideas to the marketplace.



300

megawatts of solar and wind energy projects under study

has the potential to negatively impact domestic economic growth. Saudi Aramco is committed to the **energy efficiency** drive pioneered by the Saudi Energy Efficiency Program, a subcommittee of the Saudi Energy Efficiency Center (SEEC), which has been tasked with the establishment of a comprehensive national program to rationalize energy consumption.

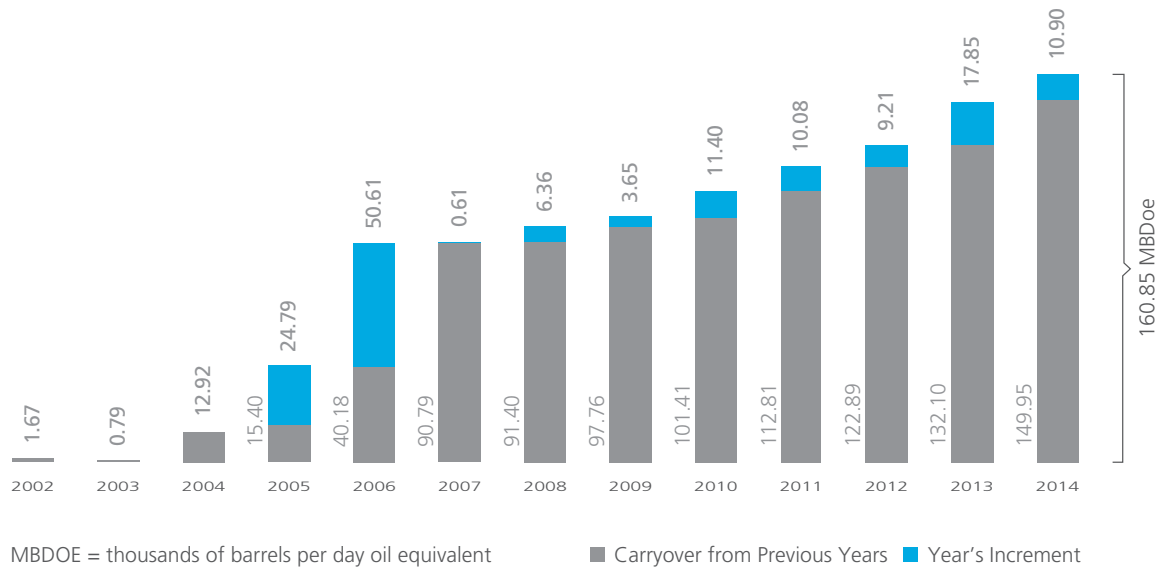
We take a comprehensive approach to promoting change, working with both the public and private sectors to optimize the Kingdom's energy efficiency. Together, we are changing how the Kingdom consumes energy to help ensure continued prosperity for future generations.

At Saudi Aramco, we continuously work to advance energy efficiency. We conduct ongoing measurement and calibration of our own energy usage, implement energy-saving technologies, promote education and awareness, and seek innovative solutions.

The first annual insulation forum, held in Riyadh in October 2014 and hosted by SEEC, was a landmark event in the Kingdom's energy efficiency efforts. The forum marked the activation of new standards related to thermal insulation for residential buildings in 23 major cities in Saudi Arabia. As a lead sponsor of the forum, Saudi Aramco announced its goal of **saving 35% of its total energy use** in buildings, transportation, and communities by 2020.

Our goal is to reduce the energy use per square meter in our existing buildings from 500 to 310 EUI (energy use intensity) and from 425 to 250 EUI in new buildings. For existing community homes, we plan to reduce energy use per square meter from 300 to 160 EUI and from 240 to 120 EUI in new home builds. Our plan to achieve our overall energy efficiency goals includes the replacement of conventional lighting with high-efficiency LED lights, installing "smart" energy meters

ENERGY CONSERVATION SAVINGS ACHIEVED IN COMPANY OPERATIONS (2002–2014) (MBDOE)



in homes, switching to more efficient air conditioning systems, and upgrading external insulation.

Reducing energy demand is a key component in any energy efficiency drive. In Saudi Arabia, air conditioning consumes a high percentage of electricity. Lowering demand in this one area will create significant energy savings. Part of our approach is to encourage change in everyday energy usage by helping citizens realize the positive impact they can make.

For example, in 2014, the **Energy Efficiency Pavilion** — part of our iThra Knowledge program — toured the Kingdom, raising awareness about energy efficiency and wise energy choices. The pavilion is a joint initiative between Saudi Aramco and the SEEC. More than 2 million people visited the iThra Knowledge program in four cities in 2013–2014 and at least 70% of them visited the Energy

Efficiency Pavilion. The effectiveness of the pavilion's impact on behavior change is under study.

By reallocating sales gas from older, inefficient plants to newer, efficient ones, we saw a significant fuel savings in the utility sector. This, combined with the introduction of opportunity fuels into the Kingdom's utility fuel mix (low-Btu gas and petroleum coke, for example), we intend to increase utility sector efficiency from 32% in 2014 to 45% and eliminate the use of diesel for power generation altogether by 2030.

We collaborated with the Kingdom's major utility sector stakeholders to devise and issue a 10-year, integrated utility expansion plan. This **Utility Fuel Mix Optimization Project**, approved by the Ministry of Petroleum and Mineral Resources, calls for the introduction of 30 gigawatts of natural gas combined cycle plants. This action alone will raise the sector's fuel efficiency from 33.5% to 40% by 2023.

In just one example of our efforts to increase energy efficiency in our operations, we reduced our **refining energy intensity** by 3% in 2014, primarily as the result of energy conservation initiatives.

Self-sufficiency in generating electricity to power our operating plants through **cogeneration** is an important component of our energy strategy. Cogeneration allows us to produce electricity as a natural by-product of our operations, enables us to work without drawing on the national grid, and ensures business continuation in the event of utility grid interruptions.

We achieved a significant milestone in our cogeneration aspirations in 2014, reaching roughly 90% self-sufficiency in power generation. We commissioned our 420-megawatt cogeneration plant at Manifa, making the facility self-sufficient in power generation. Through our joint venture with the Power Cogeneration Project Company, pre-construction work



Our iThra Knowledge program promotes a culture of energy conservation and efficiency, helping enable a prosperous future for the Kingdom's citizens.

began on new cogeneration plants at our Abqaiq, Hawiyah, and Ras Tanura facilities.

In pursuit of greater energy efficiency across the Kingdom, we are partnering with the Saudi Electricity Company (SEC) on a number of significant projects.

On July 21, 2014, we signed a Transmission Use of System agreement with the SEC. The agreement is one of the key steps to restructure the Kingdom's electricity sector and promote efficient power generation as envisioned under the Kingdom's electricity law. The agreement allows us to move power from our highly efficient cogeneration facilities to our demand centers on the SEC's electricity transmission network.

We see great value in the potential of **renewable energy sources** to help meet the Kingdom's growing power demand. We are studying and testing several targeted renewable energy technologies to promote a national renewables agenda with a focus on solar and wind. In 2014, we signed a Memorandum of Understanding with the SEC to establish a joint venture for the deployment of these and other renewable energy projects to displace the use of high-value liquids.

We are investigating the possibility of introducing 300 megawatts of solar photovoltaic and wind energy projects at 10 remote locations in the Kingdom to displace 3,300 bpd of diesel power generation.

We are exploring upgrades to our Dhahran solar test field to improve data collection systems. We also plan on conducting accelerated degradation and temperature performance testing in third-party laboratories and collaborating with KAUST on module and electronics testing.

Our feasibility study of wind power development continued to progress in 2014. We plan to install a 3.3 megawatt wind turbine at our Turaif bulk plant. The objectives of this demonstration project are to reduce fuel consumption at the bulk plant and build operational capabilities in preparation for additional wind turbines.

promoting energy efficiency

2020 goal: reduce total energy use in company buildings, transportation, and communities by 35%

energy savings in lighting

LED lighting saves up to 80% of the energy required by conventional lighting.

actions

18,000

homes upgraded with ≈500,000 LED light bulbs in 2014

60,000

fluorescent light fixtures replaced with LED fixtures by 2016

200

office buildings upgraded with ≈25,000 LED light bulbs in 2014

14,500

street lights to be upgraded to LED lights by 2016

energy savings in air conditioning

Cooling and heating systems account for 70% of the total energy consumption in houses and buildings.

actions

250+

homes upgraded per year with exterior insulation finishing systems

8,000

homes fitted with Smart Meters by 2016

600+

homes upgraded per year to high efficiency air conditioning systems

450

offices fitted with Smart Meters by 2016

savings



2,700 barrels of oil equivalent per day — nearly 1 million barrels per year



440 million kilowatt hours — enough to power a city of 4,400 homes for one year



330,000 metric tons of CO₂ per year — equivalent to removing 60,000 cars from the roads for one year

energizing people and ideas

People aspire. People create.
People achieve.

At Saudi Aramco, we value and cultivate these basic human attributes. They underscore our fundamental belief that energy is opportunity and they drive us to continuously do more with our resources for the benefit of people around the world.



A trio of apprentices walking across the campus of our Industrial Training Center in Dhahran is reflective of the youth of our workforce, almost half of whom are under 35.





generating creative and intellectual energy

To deliver on our aspirations for the future, we are developing increasingly sophisticated upstream operations, expanding our downstream business, and pursuing ever more ambitious technological innovations.

This transformation requires an immense amount of creative and intellectual energy — all of which is generated by the more than 61,000 members of the Saudi Aramco family who know that the work they do today will have a positive impact on someone at home or abroad tomorrow.

Turning great aspirations into reality requires great capabilities. In 2014, we funneled significant energy into making sure that our people have the opportunities and support they need to acquire essential new skills and abilities. From educational and developmental programs for our growing ranks of young employees and specialized technical training programs for our seasoned professionals, to experiential courses for our current and future leaders, we build the capacity of our employees to be ready to take on the challenges ahead.

And it is not just our own workforce: Through our expanded business activities and initiatives to advance the Kingdom's economy, we enable thousands of new employment opportunities in the domestic labor market. Many of these jobs require specialized skills. To meet this need, we partner with local training organizations to create training institutes to prepare the Kingdom's young workforce to take advantage of the coming opportunities.

The key to successfully competing in today's dynamic global business environment is the ability to recruit top talent. Today's workers are not just looking for jobs — they are searching for purpose and the opportunity to make a positive difference through their work. In 2014, our workforce grew to an all-time high of 61,907. Our new employees are drawn by the challenging professional opportunities we offer and by the opportunity to work on meaningful projects that drive our actions as a catalyst for a sustainable future.

We further energize our workforce by fostering a culture that values ideas and merit-based performance. These elements, combined with our high ethical standards, have earned us the trust of our employees and the respect of our peers and competitors, making our company a highly sought-after career destination.

With more employees comes the responsibility to provide for their physical and social welfare and that of their families. In 2014, we worked toward creating communities for our employees that are healthier, safer, and more sustainable.

At Saudi Aramco, we are inspired by where we are going and we work hard to ensure our people have the skills to take us there.



61,907 total workforce

51,653 Saudi

10,254 expatriate

Events such as this forum for operators provide our younger employees with opportunities to advance their knowledge.



6 out
of 10

Aramcons will be aged 35 or under by 2018

Enabling the workforce of the future

Our workforce of the future is trending younger. In 2009, nearly 70% of our employees were above the age of 35. Today, almost half of our employees are 35 or younger.

By 2018, we will have reversed the ratio of five years ago: Roughly six out of every 10 employees will be aged 35 or under.

We hired 1,713 Saudis in 2014, a 3% increase over 2013 levels — and a figure more than three times greater than the 2010 hiring level.

And while Saudis make up almost 84% of our workforce, our small but valuable expatriate labor force is becoming younger and more diverse as well. To meet the growing human resource needs of our new businesses and ventures, we attended 11 major events and conducted 117 workshops around the world. In 2014, the number of nationalities represented in our 35-and-under expatriate employees rose from 37 to 61.

We support continuous learning and self-development by running the world's largest corporate training program. We also match our younger employees with more experienced mentors to advance their acquisition of technical proficiency.

In support of our performance- and merit-based work culture, in 2014 we instituted an incentive program designed to reward employees for their individual contributions to helping the company achieve its business targets.

The Jazan Refinery and Terminal project is one example of how we are amplifying the benefits of our business activities for the benefit of local communities. We formed a nonprofit organization, the **Jazan Contractors' Consortium for Training and Employment — "Maharat,"** — with our local and international engineering, procurement, and construction contractors to train qualified Jazan-area high school, technical, and industrial college graduates in specialized construction trades. These young people are then employed by the consortium to support the construction of the Jazan facilities, giving them an opportunity to start a career and make a tangible contribution to the economic development of their communities.

The Jazan Contractors' Consortium is a sustainable model that we intend to replicate and institutionalize for all future mega-projects.

As we execute our strategy to become a top-tier global chemicals company, we are

building the world-class workforce essential to successfully accomplish this goal. We launched an aggressive recruitment campaign and have hired a core group of qualified professionals, including chemical engineers, marketers, supply chain experts, industrial engineers, and financial experts. We also hired over 120 male and female Saudi graduates from universities around the world for positions in our Chemicals organization. To enable these young Saudis to effectively take on the mantle of leadership in the years to come, we created programs to further develop their capabilities through assignments and internships inside and outside the company.

Skilled manpower is essential to the success of **Sadara**, our joint venture integrated chemicals complex with Dow. To accelerate the readiness of hundreds of Sadara manufacturing employees, we established on-the-job training programs for them to acquire capabilities alongside Dow's experienced workforce.

At the program's peak, around 50 trainees were embedded in Dow facilities in the Netherlands while similar numbers were working at other Dow sites in Germany, Portugal, and Thailand. At year-end, over 200 trainees had successfully completed their assignments and returned to Saudi Arabia. During their international training assignments, the Sadara trainees also participated in citizenship projects in their local communities.

By optimizing our maintenance training curriculum, we accelerated the training time of the participants in our **Apprenticeship Program for Non-Employees** and improved success rates.

The enhanced maintenance training programs now utilize a performance-based smart curriculum and learner-centered instructions, significantly reducing time to achieve competency. In all, more than 600 apprentices in the various maintenance disciplines were trained in 2014 using the new curriculum, resulting in a 10% to 20% reduction in contact hours. Redesigning our maintenance curriculum assures strategic alignment between job task competency for our apprentice graduates and business line requirements for entry-level skills.

In a first for the region, we added a fully immersive and state-of-the-art **maritime vessel navigation simulator** to bolster our marine training. The simulator uses an exact replica of the bridge of a

Saudi Aramco vessel and has a 360-degree virtual display. Trainees are immersed in precise simulations of operational scenarios, including terminal berthing and approaching jack-up barges, rigs, and gas-oil separation plants. Weather conditions and environmental factors are faithfully recreated, enabling the development of customized training programs that help enhance safety and efficiency.

Housed in our Marine Academy in Ras Tanura, the simulator provides realistic, real-time simulations that help prepare our trainee captains and engineers for real-life situations before they ever set to sea. It is also used to provide procedural and emergency training for our offshore and shore-based employees.

Building our professionals

Improving our company's capabilities dictates that we must raise the capabilities of our professionals as well. In 2014, we instituted innovative programs to prepare our professionals to contribute to our business objectives at a higher level. We also entered strategic partnerships with domestic and international businesses, agencies, and universities to extend the benefits of our training programs to Saudi men and women who are not employees.

All newly hired Saudi university graduates spend their first three years with the company in our Professional Development Program. In 2010, we piloted the **Saudi Aramco Professional Development Academy**, a new on-boarding program designed to build individual and team-based competencies. The six-week interactive program focuses on health and safety, leadership, communications, and community service and features workshops, guest speakers, site visits, and collaborative experiences. From the first pilot group of 29 participants, the program has evolved to become a permanent offering in the Professional Development Program. By the end of 2014, more than 1,600 young Saudi professionals, including 180 women, had participated in 22 sessions of the academy.

Our **Youth Leadership Advisory Board**, or **YLAB**, is a group of 16 young employees who serve 18-month terms and conduct studies on topics of significant importance both to the company and to young people. The group provides advice, ideas, and insights to senior management and engages other young employees in the changes taking place throughout the corporation. We are now on our third YLAB cycle and

We run the world's largest corporate training program. More than 28,000 apprentices and 5,000 college students have graduated from our programs since their inception. This has helped us through the years to grow the required leadership and professional talent from within and thus weather the fluctuation and shortages of skills in the industry.

Huda M. Al-Ghosen
Executive Director, Human Resources



We sponsor nearly 2,000 Saudi students at universities around the world, an investment in the future leaders of our company.



63,000+

new homes financed since inception
of our home ownership program

the program has influenced other young employees to create their own self-directed “youth-only” groups to tackle issues of importance to them.

We boosted the marketable skills of over 500 Saudi women by partnering with local entities to create the **Mahara** program. The three-year program will train a total of 750 women, with each participant receiving 724 hours of training. The curriculum focuses mainly on highly sought-after information technology, English language, and business communication skills. The goal of the program is to increase employment opportunities for Saudi women. Of the class of 2012–2014 graduates, approximately 250 were hired by various local companies, including 32 who found employment with Saudi Aramco.

After noticing a mismatch between the skills possessed by female **information technology graduates** and those needed in the marketplace, we saw an opportunity to bridge that gap. We collaborated with 14 universities, conducted seminars for over 1,175 attendees, and created specialized training plans for Saudi female graduates focusing on information security, engineering design, and network operations to enhance their employability.

As a company that values and prioritizes continuous learning and self-development, we regularly partner with leading educational institutions to bring the latest knowledge and technologies to the Kingdom. In 2014, we collaborated with three prestigious international universities to offer part-time targeted and specialized custom **hosted master’s degree programs** for our professionals, bringing our total number of hosted university degree programs to 11.

The Graduate Institute Geneva offered a master’s degree program in advanced investment analysis while the Georgia

Institute of Technology from the United States was selected as our strategic partner to deliver a professional master’s degree program in information security. Through this program, our employees are developing the skills that will help keep our cyber infrastructure — and the Kingdom’s — secure while acquiring effective mitigation and containment strategies in this critical area. Thirty-five students are participating in this hosted program.

Our corporate hosted university program also includes a Master of Science program in human resources management. The program is intended to increase competency in fields such as recruiting, selection, retention, organizational behavior, staffing, compensation, research methods, and information systems, among many others. Texas A&M University from the United States was selected to deliver this in-Kingdom program. At year-end, 27 employees from across the company were participating.

We also collaborate with world-class universities to provide advanced skill-building programs. Beginning in 2012, we launched a program with Michigan State University’s School of Communication to provide advanced public relations and communications training in Saudi Arabia. To date, nearly 200 of our professional staff have completed the 22-week program.

We continued our partnership with MIT to nurture the research skills of Saudi female university faculty members majoring in science or engineering. Our prestigious **Ibn Khaldun Fellowship for Saudi Women** is a merit-based, one-year research program at the MIT campus. It gives Saudi female doctorate degree holders the opportunity to conduct advanced research under the supervision of an MIT senior faculty member. In 2014, a total of 10 fellows from domestic universities were participating in the program.

South Dhahran

(increments I and II)

Enabling sustainable communities

- Master-planned mixed-use community with ≈8,500 housing units
- High energy-efficiency standards
- Features mosques, schools, health clinic, open green space, bicycle and walking paths, recreation centers



This program is just one example of our strategic investments in not just the employees of Saudi Aramco, but in the people of Saudi Arabia. We enable opportunities for ambitious talent to do the best work of their lives, part of our greater goal of building a knowledge economy in the Kingdom to help ensure the prosperity of future Saudi generations.

Not all of our human resource development programs are driven by our training organization: Some of our most innovative approaches come from within — **Qudwa** is a case in point. Qudwa, which means “role model” in Arabic, is a volunteer organization dedicated to encouraging dialog through networking, knowledge sharing, and skill building, with special consideration to gender differences in the workplace. The group’s events, which include guest speakers and Q&A sessions, highlight the need for self-awareness and self-development. A company-wide mentorship program has been particularly successful in helping our newer Saudi female employees achieve more. Membership in Qudwa is roughly 2,800 and more than 4,300 employees have been reached through the group’s activities.

In 2014, we expanded the team responsible for coordinating the activities of the company entities involved in promoting gender diversity. This resulted in a new organization called the **Women Development Program (WDP)**.

The program supports the development of our female employees and also delivers diversity training for teams across Saudi Aramco.

In addition, the WDP arranges outreach programs at female universities and works with local businesses and government agencies to prepare female students for successful careers, bridging the gap between education and the skills needed in the domestic labor market.

In 2014, the WDP conducted over 100 workshops, seminars, and forums, reaching more than 2,500 female employees, students, and other professionals. The workshops were offered on topics such as transitioning to the workforce, conversational styles, personal branding, and character building. The program encourages, empowers, and increases the competencies of women in the workforce within Saudi Aramco and in local communities, part of our long-term vision to create opportunities and inspire ambitious young Saudis.

Pioneering leadership

At Saudi Aramco, it is anything but business as usual. Every day brings new opportunities to capture and new challenges to overcome. Successfully navigating the company’s transformation into an integrated energy and chemicals enterprise requires leaders who inspire, empower, and motivate their teams. It requires leaders who can translate our diversifying business strategy into meaningful and actionable outcomes. It requires pioneering leaders who can find unique solutions that produce exceptional results while upholding our legacy of excellence.

Leadership development is one of the most critical areas for business success. In 2014, we employed a multitude of training regimes to ensure our leaders possess the transformational skills required to achieve our 2020 Strategic Intent.

Our transformation from an oil production powerhouse to a globally integrated energy and chemicals enterprise requires intensive skill building inside and outside of Saudi Arabia. In 2014, more than 100 Saudi Aramco professionals worked as interns at companies in North America, engaged on assignments in manufacturing, oil and gas, and electricity facilities; in offices conducting financial and accounting activities; in security industries; in medical facilities; and in an array of other disciplines. In addition, many of our leaders are assigned multi-year rotational assignments with our offices in the United States, Europe, and Asia, building their global acumen.

Critical advances in technology and innovation are essential to achieving the level of sustainability we are pursuing in our operations. To ensure that our R&D activities support our goals and achieve the necessary impact, we created a comprehensive **development program for our division heads**, or front-line supervisors, in our R&D Center in Dhahran. Through individual coaching sessions and team interventions, our R&D Center leaders found solutions to their particular challenges, improved their leadership skills, and achieved greater alignment with our strategic objectives.

Upstream Professional Development Center

Preparing employees for the challenges ahead

As the company ventures into increasingly complex fields such as tight gas formations and as it integrates the latest technology, our Upstream Professional Development Center (UPDC) ensures that company employees are able to develop the needed competencies.

Using state-of-the-art 3-D imaging facilities, UPDC curricula are the foundation of professional development plans for new hires and senior staff in nine upstream disciplines: drilling, facilities engineering, geology, geophysics, petrophysics, production engineering, reservoir engineering, unconventional resources, and upstream computing. Many of the courses have been developed in-house.

Since the center’s inauguration in 2010, more than 1,000 professionals have been on-boarded and over 450 training sessions delivered to more than 6,000 participants. The UPDC is crucial to our strategic vision to develop and retain talented employees and prepare them for future challenges.





Participants in our Professional Development Academy build their leadership and communications skills.

Another leadership development program targeting this level of our leadership is our **Human Resources Partnership Program for Division Heads**. Now in its second year, program participants learn about the important role human resources plays in driving business results and are exposed to a variety of tools, conceptual models, best practices, and case studies. The division heads benefit from interaction with subject matter experts representing a variety of functions. Our professionals also benefit by gaining a greater understanding of the most pressing human resource issues affecting line leadership. By working together, division heads and human resources personnel find ways to better address these challenges. To date, over 800 of our division heads have participated in the program.

We also piloted the **Leadership Series for Managers**, tailored specifically to prepare division heads for their transition to the role of manager. Designed with the input of our executives and facilitated by experts in the field of leadership development, the program uses experiential learning, project work, and one-to-one coaching to embed new skills and behaviors that can be immediately applied in their current role as well as more complex managerial situations.

The **Saudi Aramco Leadership Forum** is a unique venue for our high-potential supervisors, division heads, and senior professionals to participate in facilitated discussions with senior executives. The forum encourages open dialog on a variety of topics related to leadership, including staff development, strategic thinking, and ethics. While high-potential professionals benefit immensely from these candid discussions, our senior management also receives valuable insights into the current challenges facing our up-and-coming leaders. Since 1999, the forum has been instrumental in preparing 1,360 of our high-potential leaders for greater responsibilities.

With more than 60% of our crude oil and nearly half of our refined products exported to the countries of the Far East — and with our growing chemicals business in this region — our **Asia Business & Culture Program** fulfills a strategic need in our leadership development regime. This program builds cross-cultural and geopolitical understanding and helps prepare our leaders to be effective communicators, managers, and negotiators in these vital business environments. The central goal is to produce highly motivated leaders who are familiar with Asian cultures and business practices and who are well-positioned to make significant contributions to our joint and

equity ventures and new business developments in Japan, South Korea, and China. The program, held biennially, has included 85 of the company's top leaders since its inception in 2001.

Creating sustainable communities

One way we energize the people and ideas that make us a catalyst of innovation and opportunity is by creating communities our employees are proud to call home. Healthy, vibrant communities contribute to the well-being of our employees. By developing sustainable communities for our people, we also lead by example to stimulate energy-efficient residential development in Saudi Arabia.

In 2014, we broke ground on the most significant expansion of our Dhahran community in three decades and also moved forward with our plans to build an entirely new, sustainable model community near Dhahran. We also continued an important legacy program that helps make it possible for Saudi employees to fulfill the dream of owning their own home.

A unique benefit we have long provided to our Saudi employees is assistance in securing loans to build a home in Saudi Aramco-prepared communities. Several



We provide safe and stimulating office space that also lightens our environmental footprint. Our Al-Midra office tower received platinum certification from the Leadership in Energy and Environmental Design organization.

land development and infrastructure projects are ongoing in various locations, including Dammam, Jubail, and Al-Hasa. Other infrastructure projects in Abqaiq, Yanbu', Dammam, and Dhahran are ready for awarding.

In 2014, 1,037 new home loans were granted. Over the life of the program, more than 63,000 new homes have been financed through our **Home Ownership Program**, enabling generations of employees to improve their quality of life and contributing to the growth of dynamic communities.

Our Communities of Excellence initiative aims to implement best-in-class social, environmental, and economic practices in the communities hosting Saudi Aramco's Home Ownership programs. The first development aligned with this initiative is the **South Dhahran** project. In May 2014, we completed the commercial master plan and financial evaluation for the project. South Dhahran is a planned, mixed-use community that includes homes, parks, schools, mosques, recreation centers, a health clinic, and commercial districts.

Located close to Dhahran, the South Dhahran home ownership community is intended to enhance the work-life balance of our employees. Built in phases, it will contain approximately 8,500 ready-built villas and apartments and will also feature a full range of commercial services.

This project is unique for its size and its comprehensive and cohesive modern features and services. Once proven in South Dhahran, this business model can be a Kingdom-wide benchmark for future housing initiatives.

Health and safety

At Saudi Aramco, health and safety are two sides of the same coin; each promotes the other and we actively promote them both for the long-term benefits of the company and the Kingdom.

Safety is one of our core values. Every year for over 80 years, we have worked to instill a culture of health and safety within our company and in our communities. This year was no different. We launched several new initiatives in 2014 to strengthen our safety culture and improve the health of our employees and their families.

We are working to make a positive difference in the world. But taking care of the

health and safety of our people is the most important work of all.

In 2014, we inaugurated a first-of-its-kind health care joint venture in Dhahran with our partner, Johns Hopkins Medicine. The formation of this new company, **Johns Hopkins Aramco Healthcare (JHAH)**, represents a significant milestone in the transformation of medicine and health care in the Kingdom. Under the terms of the initial 10-year agreement, Saudi Aramco and Johns Hopkins Medicine will each hold an indirect ownership stake in the new Saudi-registered company.

JHAH brings together our long-established health care delivery system and the world-renowned clinical, education, and research expertise of Johns Hopkins Medicine. JHAH will fuel clinical innovation, serve as a model of health care in the Kingdom, and contribute to the development of the country's health care in alignment with our commitment to enabling growth, opportunities, and diversification within the Kingdom's economy.

Safety is one of our core values and we work to embed a safety-first mindset on and off the job in our employees and their families — and in the wider community through our safety outreach programs and campaigns. In 2014, we conducted a number of **major safety initiatives** to strengthen our culture of safety and to enhance safe practices across our operations.

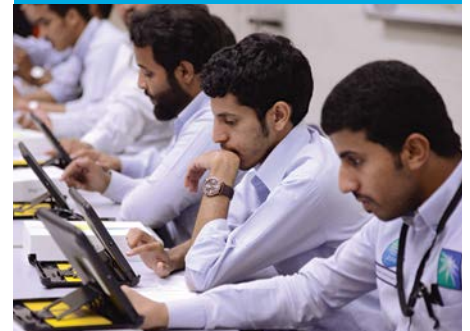
Our Safety Leadership Workshops empower management with the skills to be visible safety leaders. Since the program was first introduced in 2005, a total of 93 workshops have been offered to more than 1,100 managers and division heads. Our Loss Prevention organization conducted 18 major compliance reviews and also participated in two collaborative technical exchange meetings with joint venture partners Dow and Sinopec. The meetings provided a platform to communicate and share best practices for mitigating health, safety, and environmental concerns.

These safety training programs and practices are a significant factor in our success in improving our **overall safety performance**. In 2014, we recorded a lost-time injury rate of 0.05 injuries per 200,000 work hours, a 44% reduction compared to 2013.

Talent development in 2014

Connecting ambition with opportunity

- Total apprentices 8,911
- Total in college degree programs 2,018
- Total in Co-op Program 71





Our Johns Hopkins Aramco Healthcare joint venture contributes to the well-being of our people and communities.

Our safety performance was recognized by the U.S.-based Gas Processors Association. Several of our gas plants achieved significant safety milestones, including our Ju'aymah NGL facility, which reached 6.5 million work hours without a lost-time injury, and our Khursaniyah and Berri plants, each of which achieved 3.5 million work hours without a lost-time injury.

We also recognize and reward exceptional safety records among our employees, helping instill a culture of safety across the company. In 2014, we honored 397 employees who completed 35 years of service without an incident — the largest number of employees who have ever reached this safety milestone in a single year.

Off-the-job disabling injuries — mainly due to traffic accidents — remain a cause of concern for us and for the Kingdom. In 2014, we experienced an off-the-job disabling injury rate of 0.42 per 200,000 hours of exposure, a 29% decrease compared to 2013.

In response to the growing number of incidents involving traffic safety, we increased our efforts to make our roads safer by establishing a traffic safety taskforce comprised of corporate and

manager-level personnel. The taskforce is developing a set of initiatives in five focus areas including cultural factors, engineering, and education.

Traffic safety is a 24/7 concern for us: Every day, thousands of our employees drive company vehicles for work purposes — and often in remote locations. In 2014, we began a campaign to install an **automatic vehicle locator** device in our fleet of work vehicles and to educate employees on how the device will save lives through encouraging safe driving habits. The system uses real time GPS capabilities and other sensors to monitor vehicle location, tire health, seat belt use, speed, and other safety factors.

We successfully installed the system on 47% of our company vehicles, including security vehicles. We are on track to complete the installation program by the end of 2015 and are coordinating with our IT organization for full automation and other system enhancements.

During the course of the year, we held several **safety-related campaigns** and workshops in company locations across the Kingdom. They ranged in subject and emphasis from

traffic, home, and bicycle safety to hydrogen sulfide safety and fire drills.

We contract with many companies to provide services and we expect them to take safety as seriously as we do and to abide by our stringent safety standards at all times. We helped improve our local contractors' safety competency through our 2014 launch of the **Contractor Safety Administrative Requirements Workshop** series.

The workshop is a "train the trainer" engagement focused on giving company organizations that regularly interface with contracting companies the ability to train their personnel in Saudi Aramco safety standards and protocols. We conducted roughly 75 workshops in 2014, amplifying our safety training and helping to raise safety standards in the wider contracting sector.

Ethics and integrity

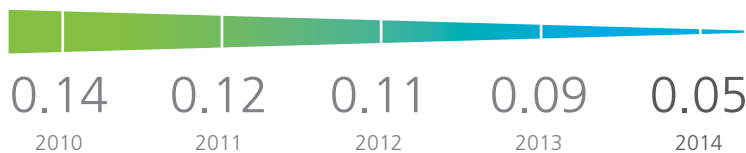
As our business activities and operations grow in scale and complexity, we continue to adhere to the legal and ethical standards that are the bedrock of our reputation for integrity. At Saudi Aramco, we go beyond simple compliance by setting a higher standard of behavior for our employees



More than 25,000 children visited our Traffic Garden safety venues in 2014.

lost-time injury rate

(lost-time injuries per 200,000 work hours)



and our partners that we wish to inspire in our communities. For us, corporate integrity is born out of personal integrity. Our standards and models of integrity flow from our fully engaged Board of Directors whose members possess a wealth of diverse experiences and future-oriented mindsets. Our board challenges management to adhere to the highest personal and professional standards and through the corporate audit process, set in place and monitored by the board, ensures an independent, confidential, and robust review and reporting channel.

Our Business Conduct Handbook summarizes the standards that enable employees to preserve and build on our proud ethical

legacy by outlining the company's policies on conflict of interest, financial integrity, intellectual property management, workplace harassment, fair practices, safety, health, and the environment. It reaffirms the guiding principles by which we have achieved our success.

Every employee reviews our Conflict of Interest and Business Ethics Policies on a regular basis. This ensures our ethics policies are continuously reinforced for use in real-life applications. Any ethics concerns from our employees or third parties can be clarified through our established communication and reporting channels. In addition, a General Auditor Hotline is available to provide a secure and confidential venue

for people inside and outside the company to report suspected fraud, unethical conduct, or irregularities. We hold employees to a high level of ethical conduct and expect the same of our suppliers.

Our Supplier Code of Conduct outlines mandatory policies on environmental, health and safety issues, fair trade practices, ethical sourcing, conflicts of interest, bribery, kickbacks, gifts and fraud, monitoring, and compliance. Saudi Aramco's Supplier Code of Conduct helps promote ethics across the Kingdom's private sector and assures our suppliers that we hold ourselves to those same standards.

citizenship

Saudi Aramco is built on a heritage of citizenship, due in part to our unique role in the Kingdom. From the very beginning, we have sought to undertake activities that add real value for the people of Saudi Arabia.



From building roads, railroads, schools, and hospitals to establishing wildlife sanctuaries and growing a knowledge economy, we have always been engaged in improving the quality of life for the people of Saudi Arabia.

Over the years, we have shifted our citizenship strategy to focus on leveraging our core capabilities to amplify the benefits and opportunities we create.

Everything we do serves the dual purpose of increasing our commercial success while leveraging our business activities to provide the greatest number of benefits and opportunities for the greatest number of people possible. Whether it is here in the Kingdom or around the world, it is our civic duty to help make the communities in which we operate better places to live and work. We strive to improve the environmental health and safety of these communities, enhance educational opportunities, increase economic viability, and promote energy sustainability through conservation and efficiency efforts.

Along with the activities noted below, our international contributions include donations to respected academic and cultural institutions, humanitarian organizations, environmental advocates, and many other highly regarded partners that help us advance the causes that matter most to us.

Economy

In 2014, we invested significant energy and resources into creating an economic ecosystem in the Kingdom that is more diverse, more dynamic, and more sustainable. We capitalized on our core business to advance the evolution of a Saudi energy services sector that will produce energy-related materials and services. Through the development of a chemicals business, a marine yard, and other initiatives, we made progress in diversifying the local economy and creating skilled jobs.

We promoted the creation of industrial clusters and conversion parks where local and foreign manufacturers can create consumer products from our chemicals, adding value to our hydrocarbon resources and further diversifying the economy.

To help prepare the local workforce for the employment opportunities resulting from these efforts, we partnered with domestic and international agencies and institutions to create specialized training programs that help young Saudis transition into jobs in these new businesses.

Community

Safe, healthy, and vibrant communities are the foundation for future progress and development. We contribute to the well-being of our communities in a multitude of

ways. In 2014, we partnered with Johns Hopkins Medicine to improve the quality of health care for hundreds of thousands of people in the Eastern Province. We supported the Ministry of Health by building a Command and Control Center and by equipping medical clinics across the Kingdom to contain and reverse the spread of the MERS coronavirus. We completed numerous projects to make our company-built public schools safer, smarter, and more energy efficient.

The late King Abdullah identified sports and athletic activity as crucial parts of the Saudi social fabric for the future, especially the role sport plays in promoting the welfare and well-being of young Saudis. In 2014, we helped achieve his vision by completing construction of the King Abdullah Sports City stadium in Jiddah and launched a program to build additional stadiums across the Kingdom.

Numerous safety awareness campaigns and outreach programs were conducted throughout the country in schools, training institutes, shopping malls, and cultural festivals, reaching hundreds of thousands of people. We continued our work to improve safe driving habits through instilling knowledge, raising awareness, building emergency response capacity, and implementing technological solutions to discourage unsafe driving.

Our charitable giving in 2014 targeted the people most in need of support. We gave generously to agencies and institutions working with the least fortunate members of our communities.

Knowledge

Many of our citizenship activities in 2014 supported the development of a knowledge economy in the Kingdom. We provided training for science and math teachers on the latest thinking in curriculum and student development. Through the King Abdulaziz Center for World Culture and strategic partners, we ran summer programs for gifted students as well as a host of other programs that promote learning in subjects as varied as art, science, technology, engineering, math, innovation, and entrepreneurship. Through these activities, we helped inspire a love of learning and intellectual curiosity in thousands of young people who will be the next generation of community leaders and contributors to the local economy.

A country's ability to conduct research and development is a determining factor in its economic competitiveness and sustainability. We are helping enable a culture of innovation in the Kingdom by collaborating with universities and research institutions in Saudi Arabia. One of our global research centers is at KAUST and we are a strategic partner

in Dhahran Techno Valley Company, the research park affiliated with KFUPM. Efforts such as these help catalyze the Kingdom's education system and support the development of the next generation of Saudi engineers and scientists.

We also support innovation in the Kingdom through funding and guidance provided by our Aramco Entrepreneurship Center and its business incubator arm, both of which create opportunities for Saudi entrepreneurs to build the leading companies of tomorrow.

Environment

From the Rub' al-Khali to the Arabian Gulf and the Red Sea, the Kingdom of Saudi Arabia is home to our resources, our facilities, and the majority of our employees and their families. Our operations span the breadth of the Kingdom's environmental zones so the protection and preservation of our natural environment for future generations is vital to our success.

We continue to make great strides in protecting biodiversity near our operational areas: We are establishing a wildlife sanctuary in the Rub' al-Khali near our Shaybah facility, planting hundreds of thousands of mangroves along targeted shores of the Arabian Gulf, and establishing artificial reefs, among other actions.

In 2014, we continued to demonstrate our commitment to reducing environmental impacts resulting from our business activities. We made significant progress in reducing the energy intensity of our operations and produced more cleaner-burning natural gas for domestic industry. Millions of Saudis received energy-efficiency tips through our public awareness programs. We also made advances in areas such as the reduction of flaring, water conservation, and recycling. In our residential communities and commercial offices, we replaced half a million incandescent light bulbs with LED bulbs, saving 30 million kilowatt hours of energy per year.

Our strategic investments in studying the commercial-scale adaption of renewable sources of energy — primarily solar and wind power — will help grow a clean energy sector in the Kingdom. We are fully engaged in promoting the reduction of energy intensity across the Kingdom by advocating responsible policies, public education, and energy innovation. Perhaps most importantly, we are working closely with the government on a number of energy efficiency initiatives designed to secure continued prosperity for the people of Saudi Arabia while also ensuring a sustainable supply of energy to our customers around the world.



For a more detailed overview of our citizenship initiatives, please refer to our 2014 Citizenship Report.

2014 in numbers

Recoverable Crude Oil & Condensate (billions of barrels)	
2014	261.1
2013	260.2
2012	260.2
2011	259.7
2010	260.1

Crude Oil Production (annual/billions of barrels)	
2014	3.5
2013	3.4
2012	3.5
2011	3.3
2010	2.9
(daily/millions of barrels)	
2014	9.5
2013	9.4
2012	9.5
2011	9.1
2010	7.9

Raw Gas to Gas Plants (billions of scfd)	
2014	11.3
2013	11.0
2012	10.7
2011	9.9
2010	9.4

Recoverable Gas (associated and nonassociated) (trillions of scf)	
2014	294.0
2013	288.4
2012	284.8
2011	282.6
2010	279.0

Delivered Sales Gas and Ethane Gas (trillions of Btu per day)	
	Sales Gas
2014	8.4
2013	8.1
2012	8.0
2011	7.4
2010	7.2
	Ethane Gas
2014	1.4
2013	1.4
2012	1.5
2011	1.4
2010	1.3

NGL from Hydrocarbon Gases (millions of barrels)	
2014	471.3
2013	455.9
2012	482.0
2011	461.4
2010	445.0

scf = standard cubic feet
 scfd = standard cubic feet per day
 Btu = British thermal unit

Crude Oil & Refined Products (millions of barrels)	2013	2014
Crude Oil Production, Excluding NG Blended	3,433	3,480
Crude Oil Exports	2,677	2,544
Refined Products Production	494	561
Refined Products Exports	121	168

Natural Gas	2013	2014
Feed to Gas Plants (billions of scfd)	11.0	11.3
Sales Gas (Methane) (trillions of Btu daily)	8.1	8.4
Ethane (trillions of Btu daily)	1.4	1.4
Total Delivered Gas (trillions of Btu daily)	9.5	9.8

Natural Gas Liquids — Production	2013	2014
NGL Production from Hydrocarbon Gases (millions of barrels)		
Propane	176.7	181.0
Butane	114.2	119.8
Condensate	86.8	83.5
Natural Gasoline	78.2	86.9
Total NGL Production	455.9	471.3

Natural Gas Liquids — Produced for Sale	2013	2014
NGL Sales from Hydrocarbon Gases (millions of barrels)		
Propane	163.2	167.5
Butane	94.6	97.8
Condensate	5.7	1.8
Natural Gasoline	57.2	62.9
Total NGL Exports (Excludes Sales on Behalf of SAMREF and SASREF)	320.7	329.9

Principal products manufactured at in-Kingdom refineries (millions of barrels)

2014	LPG	Naphtha	Gasoline	Jet Fuel/ Kerosene	Diesel	Fuel Oil	Asphalt & Misc.	Total
Ras Tanura	4.993	14.967	43.884	7.753	76.135	32.486	7.155	187.373
Yanbu'	2.374	3.246	11.537	(0.354)	29.343	30.873	—	77.018
Riyadh	1.784	—	10.926	2.682	19.213	0.032	6.521	41.157
Jiddah	0.940	2.892	3.983	(0.039)	2.398	9.217	6.388	25.780
Total Domestic	10.091	21.105	70.329	10.042	127.089	72.608	20.064	331.328

Saudi Aramco Share (millions of barrels)

2014	LPG	Naphtha	Gasoline	Jet Fuel/ Kerosene	Diesel	Fuel Oil	Asphalt & Misc.	Total
SAMREF	(1.091)	—	25.027	11.109	18.782	14.380	—	68.207
SASREF	1.330	11.693	2.216	9.411	14.221	13.280	—	52.151
Petro Rabigh	1.319	7.303	6.868	4.894	11.709	13.414	—	45.507
SATORP	1.303	3.941	11.130	8.238	31.576	7.485	—	63.673
Total JV	2.861	22.937	45.241	33.652	76.288	48.559	—	229.538
Grand Total	12.952	44.042	115.570	43.694	203.377	121.167	20.064	560.866

*Negative figures primarily indicate products that were reprocessed into other refined products.

Domestic Refining Capacity

(thousands of barrels per day)

550	Ras Tanura
126	Riyadh
90	Jiddah
240	Yanbu'
1,006	Total

International Joint Ventures Refining Capacity

(thousands of barrels per day)

1,070	Motiva Saudi Aramco Affiliate Ownership 50%
669	S-OIL Saudi Aramco Affiliate Ownership 63.4%
445	Showa Shell Sekiyu K.K. (Showa Shell) Saudi Aramco Affiliate Ownership 15%
280	Fujian Refining and Petrochemical Company Ltd. Saudi Aramco Affiliate Ownership 25%

Domestic Joint Ventures Refining Capacity

(thousands of barrels per day)

400	Petro Rabigh Saudi Aramco Ownership 37.5%
400	SAMREF Saudi Aramco Ownership 50%
400	YASREF Saudi Aramco Ownership 62.5%
305	SASREF Saudi Aramco Ownership 50%
400	SATORP Saudi Aramco Ownership 62.5%

Total Refining Capacity

(thousands of barrels per day)

1,006	Wholly Owned Domestic
1,905	Domestic Joint Ventures
2,464	International Joint Ventures
5,375	Worldwide
3,104.25	Saudi Aramco Share

Principal products manufactured at in-Kingdom refineries (millions of barrels)

2013	LPG	Naphtha	Gasoline	Jet Fuel/ Kerosene	Diesel	Fuel Oil	Asphalt & Misc.	Total
Ras Tanura	5.486	14.586	43.187	7.017	76.846	32.857	8.037	188.017
Yanbu'	3.019	(1.834)	17.003	(0.543)	33.729	34.393	—	85.767
Riyadh	1.822	—	11.225	2.932	21.694	0.047	6.703	44.423
Jiddah	0.775	2.843	3.446	(0.02)	4.001	3.681	4.864	19.590
Total Domestic	11.103	15.595	74.861	9.386	136.27	70.977	19.604	337.796

Saudi Aramco Share (millions of barrels)

2013	LPG	Naphtha	Gasoline	Jet Fuel/ Kerosene	Diesel	Fuel Oil	Asphalt & Misc.	Total
SAMREF	(0.755)	—	20.226	9.402	12.922	15.472	—	57.267
SASREF	1.292	10.972	1.777	9.113	10.768	12.294	—	46.216
Petro Rabigh	0.615	7.089	5.593	4.186	11.274	12.278	—	41.035
SATORP	0.029	1.382	0.568	1.173	3.783	4.340	—	11.275
Total JV	1.181	19.443	28.164	23.874	38.747	44.384	—	155.793
Grand Total	12.284	35.038	103.025	33.26	175.017	115.361	19.604	493.589

Domestic product sales by region

(millions of barrels)

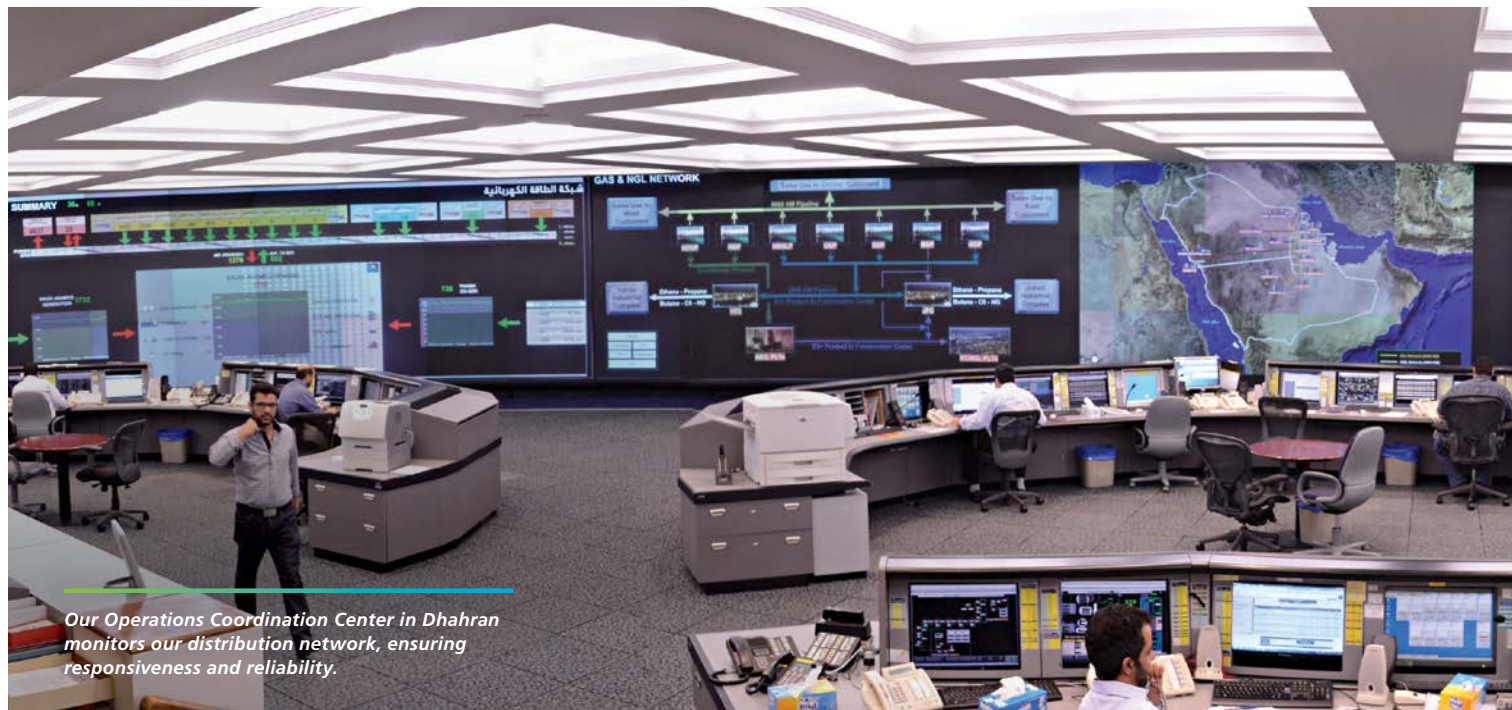
2014	Central	Eastern	Western	Total
LPG	1.785	7.377	5.346	14.509
Gasoline	70.359	38.919	83.018	192.296
Jet Fuel/ Kerosene	8.820	3.141	15.837	27.798
Diesel	83.416	61.588	121.111	266.115
Fuel Oil	0.393	1.614	127.899	129.906
Asphalt & Misc.	6.810	10.422	11.359	28.591
Total	171.584	123.061	364.570	659.215
2013	Central	Eastern	Western	Total
LPG	1.819	6.223	6.138	14.180
Gasoline	67.538	36.785	79.814	184.137
Jet Fuel/ Kerosene	8.185	2.832	14.544	25.561
Diesel	82.079	59.561	117.806	259.446
Fuel Oil	0.851	2.118	110.412	113.381
Asphalt & Misc.	6.681	9.059	7.994	23.734
Total	167.153	116.578	336.708	620.438

Ship Calls by Product Type	2014	2013	2012	2011	2010
Crude Oil	1,959	2,018	2,068	1,959	1,756
Products	567	858	965	967	816
LPG	182	198	232	234	308
Total Ship Calls	2,708	3,074	3,265	3,160	2,880

Sulfur Recovery (millions of metric tons)	2014	2013
	4.4	3.9

Sulfur Exports* (millions of metric tons)	2014	2013
	3.0	2.5

*Excludes sales on behalf of SAMREF and SASREF



Our Operations Coordination Center in Dhahran monitors our distribution network, ensuring responsiveness and reliability.

2014 exports by region (percent)

Far East	
62.3	Crude Oil
46.4	Refined Products
25.5	NGL*

Mediterranean	
7.2	Crude Oil
3.3	Refined Products
3.6	NGL*

Other	
6.0	Crude Oil
39.1	Refined Products
70.9	NGL*

Europe	
7.2	Crude Oil
10.7	Refined Products
0	NGL*

U.S.	
17.3	Crude Oil
0.5	Refined Products
0	NGL*

*Includes sales on behalf of SAMREF and SASREF



2013 exports by region (percent)

Far East	
60.7	Crude Oil
46.6	Refined Products
27.9	NGL*
Mediterranean	
7.6	Crude Oil
2.1	Refined Products
4.9	NGL*
Other	
6.3	Crude Oil
44.5	Refined Products
67.2	NGL*

Europe	
6.1	Crude Oil
6.8	Refined Products
0	NGL*
U.S.	
19.3	Crude Oil
0	Refined Products
0	NGL*

*Includes sales on behalf of SAMREF and SASREF

awards in 2014

Technology & innovation

Our Arab-D Reservoir Dots, or "A-Dots," nanotechnology project won the **Technical Innovation of the Year** award at the Oil & Gas Middle East Awards, announced in October. This project is one component of our program to develop reservoir nano-agents to enhance in-situ sensing. A-Dots are nano-particle fluorescent tracer agents designed to track the flow of water injected into wells. Adnan A. Al-Kanaan, from our Reservoir Management organization, won the **Production Manager of the Year** honor at the same event.

The Intelligent Systems Team in our R&D Center at KAUST received the **Industry Glory Medal** from the International Federation of Inventors Association in December 2013. The award honored the development of a robotic crawler capable of visual and ultrasonic inspection and gas sensing. The Robotic Inspection Crawler is an industry first: An intelligent system that can detect corrosion in pipes, tanks, vessels, and other hard-to-reach steel structural assets.

The Intervention and Coiled Tubing Association named the Advanced Research Center of our Exploration and Petroleum Engineering organization, known as EXPEC ARC, as the recipient of the **Intervention Technology Award** in March. The award was given in recognition of the steerable access sub, a major component of a well lateral intervention tool, jointly developed by EXPEC ARC and a service provider.

Safety & performance

In awards announced in 2014, the U.S.-based Gas Processors Association cited 20 individual Saudi Aramco gas plants for **excellence in safety** for 2013. The safety awards recognized work hours without a lost-time incident and among the plants honored were the following: Ju'aymah (6.5 million work hours), Khursaniyah and Berri (3.5 million each), 'Uthmaniyah (2.5 million), Haradh and Hawiyah NGL (2 million each), Shedgum (1.5 million), and Yanbu' NGL Plant (1 million).

Hydrocarbon Processing, the Houston-based industry trade magazine, named two Saudi Aramco projects in its "**Top Hydrocarbon Processing Industry Projects of 2014.**" The magazine's readers voted in an online poll, with the results announced in January 2015. Our Sadara joint venture chemicals company was named top project and the SATORP joint venture refinery placed first in the refining category.

In July 2014, the Korea Corporate Governance Service (KCGS) selected S-OIL as the **Grand-prix Company**, ranking it No. 1 of 1,790 companies listed on the Korean Exchange in recognition of the company's excellent performance in environmental management, social responsibility, and governance. The KCGS is a nonprofit organization established by the Korea Exchange in 2002 to promote sustainability management of Korean companies.

Leadership & human resources

Saudi Aramco was recognized in February 2014 at the Global Risk Awards by the Institute of Risk Management with its "Commitment to Learning and Development" award, which recognizes companies for their commitment to improve enterprise-wide **risk management** practices.

Hussain M. Al-Otaibi, manager of our Exploration Resource Assessment organization, received the **American Association of Petroleum Geologists' Distinguished Service** award for his long-term service to the organization.

Our Women in Business program and our Saudi Aramco Professional Development Academy received Certificates of Merit under the **Best HRD Practice** category from the globally recognized 43rd World Conference and Exhibition of the International Federation of Training and Development Organizations. The **Women in Business Program**, launched in 2010, accelerates the development of Saudi females in our workforce. The program gives them the tools to excel in the corporate workplace. The **Saudi Aramco Professional Development Academy** is an intensive, six-week interactive on-boarding program for newly hired Saudi professionals that features workshops, guest speakers, site visits, and collaborative experiences.

Our Expatriate Employment Division won the **Best Online Employment Video** in The Web Marketing Association's Internet Advertising Competition 2014 Awards.



Our share of worldwide refining capacity grew to more than 3.1 million bpd, helping us realize additional value from our resources.



The open floor design of the King Abdullah Petroleum Studies and Research Center (KAPSARC) encourages collaboration and the exchange of ideas to advance the understanding of energy challenges and opportunities.

