



the
many
layers of
opportunity

dec 2016
nov 2016
oct 2016
sep 2016
aug 2016
jul 2016
jun 2016
may 2016
apr 2016
mar 2016
feb 2016
jan 2016

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many
layers of
opportunity

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Governance

Our behavior is what defines us— as a company, as employees, and as people. Everything we do is anchored by our Corporate Values: Excellence, Safety, Accountability, Integrity, and Citizenship. We hold ourselves to the highest business and ethical standards, and are dedicated to building and maintaining trusted relationships.

Our corporate governance structure defines our strategic direction and ensures our industry leadership. It also shapes who we are and how we are seen by the world—including our customers, suppliers, and new and existing business partners. Our Board of Directors (the “Board”), which encompasses a wealth of diverse experience and a future-oriented mindset, models standards for integrity and ethical behavior.

The Board oversees our regular reporting and independent auditing practices. The audit process, endorsed and monitored by the Board, is intended to ensure an independent, confidential, and robust review of company operations and provide a clear and transparent reporting channel from the auditors to the Board and the Supreme Council of the Saudi Arabian Oil Company (Saudi Aramco).

key figures

total hydrocarbon
production*

13.5

million boepd

crude oil produced

10.5

million bpd

ethane produced

920

million scfd

crude oil and
condensate reserves

260.8

billion barrels

total raw gas
processed

12.0

billion scfd

worldwide refining
capacity

5.4

million bpd

gas reserves

298.7

trillion scf

sales gas produced

8.3

billion scfd

NGL produced

1.4

million bpd

Saudi Aramco share of
refining capacity

3.1

million bpd

boepd = barrels of oil equivalent per day

scf = standard cubic feet

bpd = barrels per day

scfd = standard cubic feet per day

NGL = natural gas liquids

**crude oil, sales gas, ethane, NGL, and condensate*

- ✳ Saudi Aramco headquarters
- ▣ Saudi Aramco refinery (4)
- 🚰 terminal (9)
- 🏭 bulk plant (24)
- ⚙ joint venture refinery
- 🏢 Saudi Aramco Base Oil Company (LUBEREF)
- 💧 Power and Water Utility Company for Jubail and Yanbu' (MARAFIQ)
- 🔗 R&D center/technology office
- 🌐 global office

📍 international joint ventures and majority held subsidiaries

Houston

Motiva Enterprises LLC

Maastricht

Arlanxeo Holding BV

Alexandria

The Arab Petroleum Pipeline Co. (SUMED)

Fujian

Fujian Refining and Petrochemical Company Ltd.

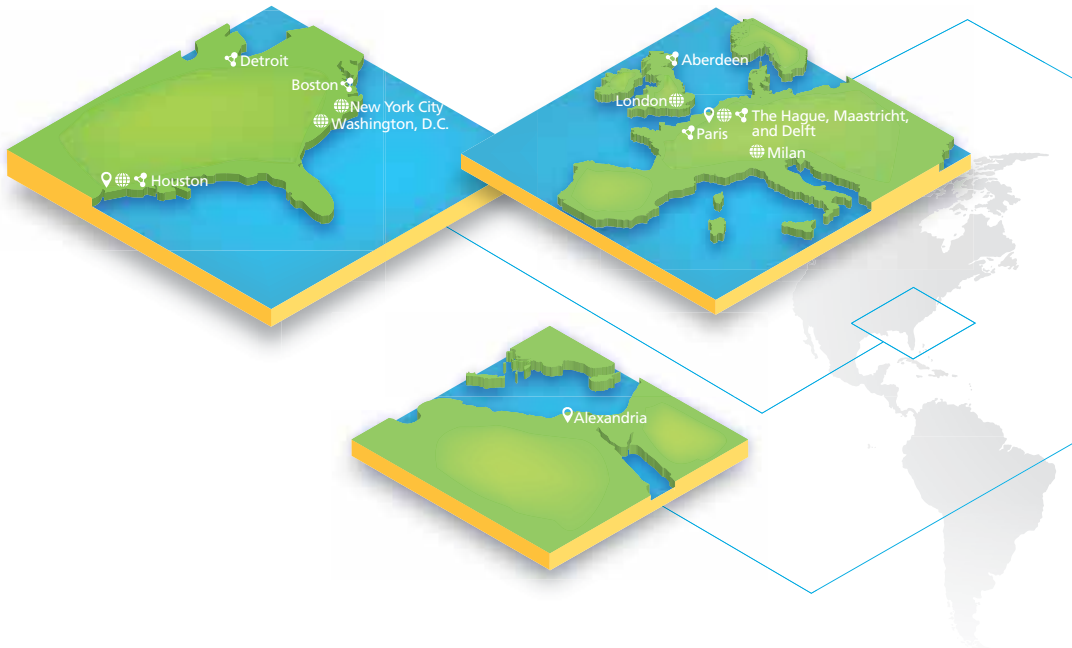
Sinopec SenMei Petroleum Company Ltd.

Seoul

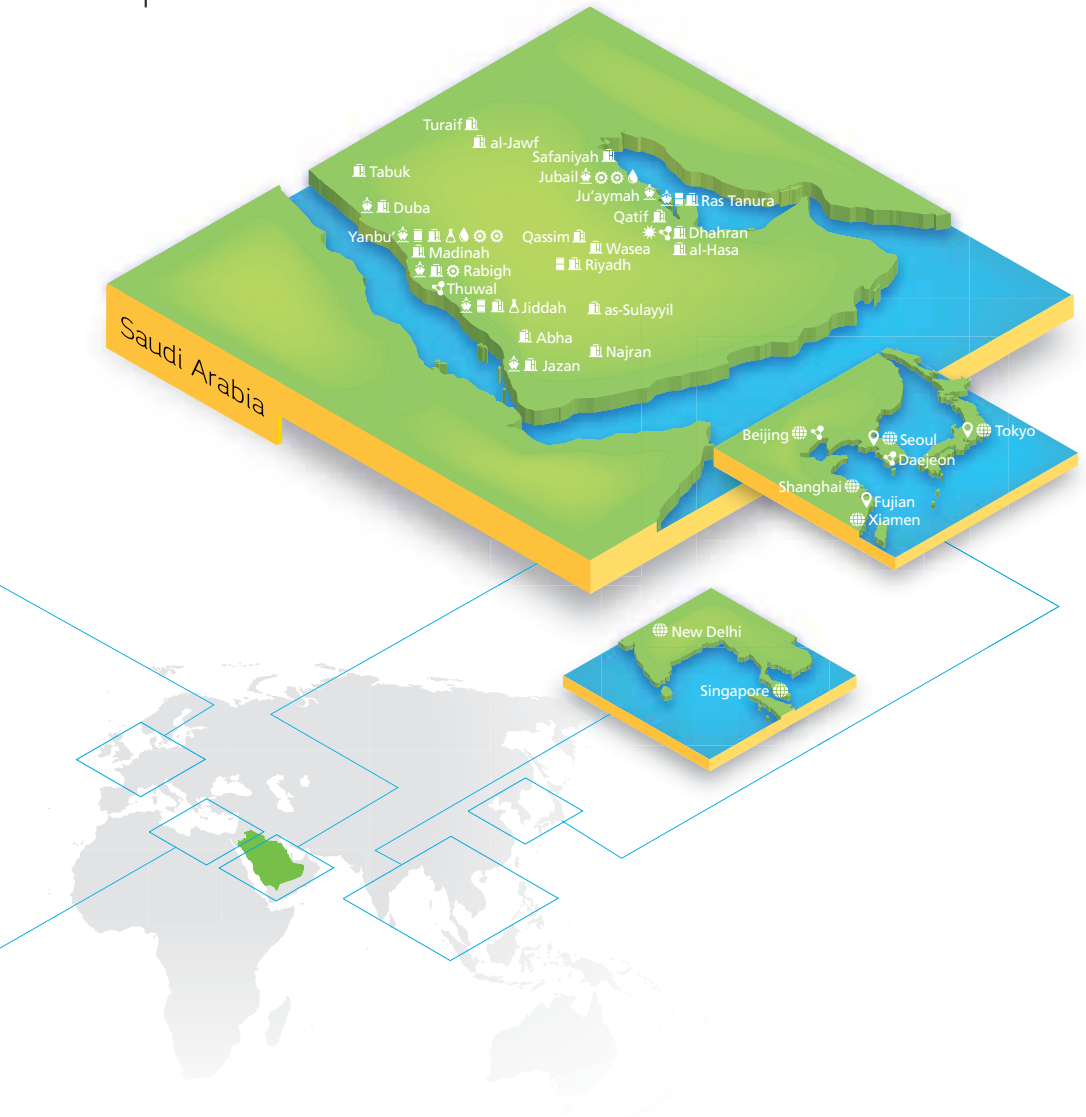
S-Oil Corporation

Tokyo

Showa Shell Sekiyu KK



global and domestic operations





Tapping the Kingdom's vast hydrocarbon resources requires best-in-class technology, such as this drilling rig designed in-house. New onshore and offshore drilling joint ventures will ensure we have the tools and the people to transform the potential energy of petroleum into greater opportunity—for Saudi workers, our business, and energy consumers around the globe.



upstream: transforming potential into opportunity

We create maximum value from the Kingdom's resources by reinforcing our preeminent position in exploration and production, replacing produced oil, increasing gas reserves, and growing oil and gas production while optimizing costs.

In 2016, we achieved a new record for crude oil production, averaging 10.5 million barrels per day (bpd). We also produced a record level of sales gas, averaging 8.3 billion standard cubic feet per day (scfd) and reached an all-time high for total raw gas processing of 12 billion scfd.

Our **exploration program** discovered two new oil fields and one new gas field.

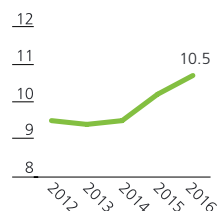
The second 250,000 bpd expansion project at **Shaybah** came onstream in 2016, raising its overall oil production capacity to 1 million bpd. We continued drilling wells to increase the production capacity of our **Khurais** field to raise current capacity from 1.2 million bpd to 1.5 million bpd by mid-2018.

Wasit Gas Plant reached its full operational feed capacity of 2.5 billion scfd and we started up a second NGL processing train at **Shaybah**. The facilities for our grassroots **Midyan Gas Plant** reached 97% completion.

We commenced construction of our grassroots **Fadhili Gas Plant**. Designed to process 2.5 billion scfd and deliver 1.7 billion scfd of sales gas to the Master Gas System, Fadhili will be our first plant to treat nonassociated gas from onshore and offshore fields.

Crude oil production

(million bpd)





Our refining and chemicals facilities in Saudi Arabia—some wholly owned, some ventures with global companies— increase opportunities for domestic conversion industries, manufacturers, and service providers, adding value to the Kingdom’s resource base.



downstream: adding value through integration

Driven by our strategy to integrate across the value chain, our achievements in the downstream sector continued to build strength and resilience into our business model — positioning us for greater growth.

Construction of our wholly owned 400,000 bpd **Jazan Refinery** reached 55% completion. The overall project includes a marine terminal and an integrated gasification combined cycle power plant with the capacity to generate 3.7 gigawatts of electricity.

Sadara, our joint venture with The Dow Chemical Company, marked a historic landmark with the startup of its mixed feed steam cracker, making it the first chemicals facility in the GCC countries to crack naphtha.

Our partnerships in **refining and marketing ventures in China, Japan, South Korea, and the United States** enable us to traverse the length of the value chain from wellhead to consumer, adding value to our resources at every step. In 2016, we continued to pursue and evaluate international opportunities to expand our refining and chemicals capability for greater downstream integration to propel additional value creation.

In **Indonesia**, we have been selected as the strategic partner for the Refinery Development Master Plan Project of Pertamina, the national oil company. We signed a nonbinding Joint Venture Development Agreement to enable further

progress for the joint ownership, upgrade, and operation of Pertamina's Cilacap Refinery in Central Java.

In the **Netherlands**, we officially launched **Arlanxeo**, our joint venture with German specialty chemicals company LANXESS. Arlanxeo is a world leader in the development, production, marketing, sale, and distribution of synthetic rubber and elastomers used in the global tire industry, auto parts manufacturing, construction, and oil and gas industries.

We plan to integrate base oil producing affiliates and establish global base oil product slates under the Saudi Aramco brand. Our sales and marketing subsidiary, Aramco Trading Company, began volume exports of Group I base oil under the new brand name **aramcoDURA®**.

We are committed to raising our global refining capacity.



Personnel at our Houston R&D Center investigate new sealants that can repair broken oil well cement downhole and bring production back from damaged wells. The Houston facility is part of our Global Research Network, which is dedicated to achieving breakthrough innovations to meet energy challenges.



technology: powering innovation

We originate impactful, innovative solutions to make our resources more dependable, sustainable, and valuable — for the benefit of our business, Saudi Arabia, and energy consumers around the world.

Technology and innovation are key drivers of our strategy to maximize the inherent value of the resource base, enable a more diversified and globally competitive domestic market for our products, and create a Saudi workforce with a world-class knowledge base.

We realize these goals by developing and commercializing new technologies, evolving strategic alliances with industry partners, forging relationships with world leading research and academic institutions, and pursuing strategic acquisitions and investments to generate additional value.

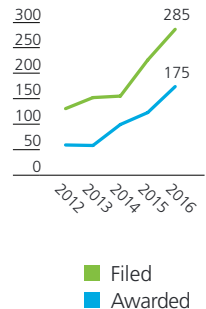
Our research and development efforts focus on the upstream, downstream, and sustainability domains — specifically on high-impact technologies that have the potential to create significant competitive advantage for our operations and help grow new businesses.

Our **Global Research Network**, comprising three in-Kingdom research centers and eight satellite research centers and technology offices, continued to accelerate technology development to address global energy challenges and contribute to the development of a vibrant technology ecosystem in Saudi Arabia.

At our headquarters in Dhahran, we commenced the expansion of our Exploration and Petroleum Engineering Center – **Advanced Research Center** (EXPEC ARC).

We also broke ground on a **new research center** at the King Abdullah University of Science and Technology, in Thuwal. The center will include labs and offices to support research in the areas of chemicals, intelligent systems, solar energy, reservoir engineering, computational modeling, and environmental protection.

New patents filed and awarded





By connecting energy, people, and ideas, we expand the possibilities created by our business to drive sustainable economic growth. Our In Kingdom Total Value Add program seeks to lift our spending for locally produced energy-related goods and services to 70% by 2021.



enhancing our commercial ecosystem

By leveraging the immense promise of the Kingdom's resources, we enable a thriving commercial ecosystem that benefits our business and the country.

We are heading an alliance of leading shipping and industrial companies for the construction of the **King Salman International Complex for Maritime Industries and Services** in Ras Al-Khair that will be the largest maritime industries complex in the Kingdom and a hub for regional maritime engineering, construction, and related expertise.

We facilitated the launch of the **Saudi Arabian Drilling Academy** (SADA). The first project of its kind in the world, and supported and funded by private drilling companies, SADA will help equip Saudis with drilling and workover skills.

Overall, we have helped establish 12 **specialized training academies** across a wide range of disciplines, with a total capacity of more than 11,000 Saudi trainees. Our support for training in specialized fields helps build the capacity essential to our long-term commercial interests.

How do we help meet the world's energy needs while managing greenhouse gas emissions? We plan to answer this question with a comprehensive **carbon management strategy**, based on four pillars: shrinking our carbon footprint; harnessing the power of R&D; transforming emissions into value; and participating in impactful collaborations.

Searching for ways to make petroleum energy more sustainable is embedded in our activities. We continuously work to improve the practices and technologies used in the discovery, recovery, processing, distribution, and end-use of energy resources to ensure energy efficiency.

Our long-term direction is a powerful combination of increased energy efficiency, more gas, ultra-clean oil fuels, advanced technologies, and renewables.



The Saudi Arabian Drilling Academy, funded and supported by private drilling companies, instills safety training and specialized skills in the next generation of drilling professionals, thousands of whom are needed in the coming years.



human resources and safety: realizing potential

We help our people realize their full potential, unlocking the promises of greater value and broader opportunities inherent in the Kingdom's energy resources.

Sustained investment is required to empower the right people with the right skills in an evolving and challenging business landscape. We believe the return on this investment far surpasses the cost, and that our development and training programs position us to navigate challenging times and allow us to seize new opportunities.

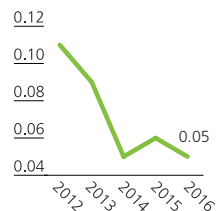
We launched our **Industrial Sponsorship Program**, which supports high-achieving male and female students at intermediate colleges and institutions in disciplines aligned with our skills requirements. We also converted all of the classrooms and workshops in our Industrial Training Centers into smart learning environments.

To equip our people with a strong knowledge foundation, we work to place participants in our **Advanced Degree Program** and **College Degree Program for Non-Employees** in the world's top universities. In 2016, 2,009 company sponsored students were enrolled at colleges and universities in North America, Europe, Asia, and Australia.

Our **Upstream Professional Development Center (UPDC)**, through its broad suite of interactive programs, compresses the time required for new engineers and geoscientists to contribute in their jobs, while capturing the knowledge and experience of more senior professionals. In 2016, UPDC delivered 430 training sessions for more than 6,800 participants.

Lost-time injury rate

(per 200,000 work hours)





Inspired by the geology of Saudi Arabia, the King Abdulaziz Center for World Culture includes components such as the Keystone Idealab and the Knowledge Tower to foster a culture of intellectual curiosity and a love of learning to encourage the innovators of the future.



citizenship: energizing the knowledge economy

The Kingdom is a land rich in natural resources — especially oil and gas. But its real wealth lies in the talents of its people and the potential of its younger generations.

We help unleash this potential by delivering community-based corporate citizenship initiatives that give people the tools they need to seize the opportunities of the future.

We delivered our **STEMania program**, which works to increase the number of women entering STEM fields (science, technology, engineering, and mathematics), to 300 female students in the Eastern Province. We also facilitated 10 seminars at women's universities in Riyadh and Dammam, which attracted 3,000 students.

We inaugurated the **King Abdulaziz Center for World Culture**, our flagship initiative for enabling the knowledge economy through creativity and culture. In addition to commissioning activities, the Center staff continued to offer offsite programs, including the **Bridges to Saudi** international outreach initiative, which featured 27 young Saudi artists, 20 talks, seven films, and four exhibits experienced by more than 18,000 visitors.

The “**Roads of Arabia: Archeological Treasures of Saudi Arabia**” exhibition, a joint initiative of the Center and the Saudi Commission for Tourism and National Heritage, traveled to the National Museum of China in Beijing with shows also planned for Seoul, South Korea, and Tokyo, Japan.

In 2016, we engaged communities throughout the Kingdom with a wide range of programs that build on the country's cultural and social traditions to facilitate greater economic opportunities while instilling sustainable environmental practices. By providing enhanced skills, practices, and tools to a broad spectrum of craft workers, farmers, and micro-enterprises, we seek to make a real difference in the ability of people to achieve a successful future for themselves, their families, and their local communities.

Prototypes produced
at FABLAB-Dhahran

5,900

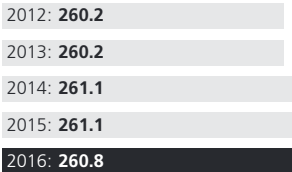
Educational tablets
distributed

19,551

our performance in 2016

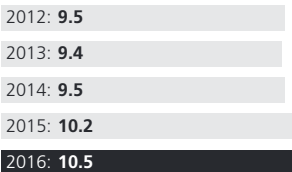
Crude oil and condensate reserves

(billions of barrels)



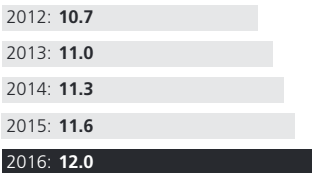
Daily crude oil production

(millions of barrels)



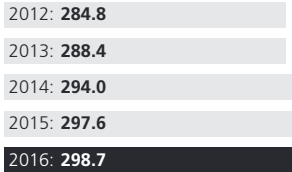
Raw gas processed

(billions of scfd)



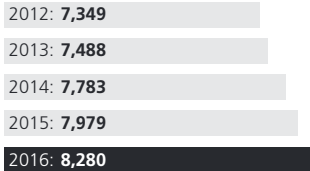
Gas reserves

(associated and nonassociated, trillions of scf)



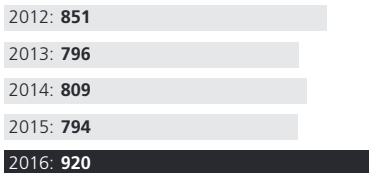
Sales gas produced

(millions of scfd)



Ethane produced

(millions of scfd)



Crude oil production and exports

(millions of barrels)

	2015	2016
Crude oil production, excluding condensate blended	3,708	3,828
Crude oil exports	2,603	2,799

NGL: production from hydrocarbon gases

(millions of barrels)

	2015	2016
Propane	181.3	195.7
Butane	119.5	127.0
Condensate	83.1	83.4
Natural gasoline	90.5	91.4
Total NGL production	474.4	497.5

Sulfur recovery

(millions of metric tons)

2016	6.0
2015	4.9

Refined products production and exports

(millions of barrels)

	2015	2016
Refined products production	641	665
Refined products exports	232	296

NGL: sales

(millions of barrels)

	2015	2016
Propane	165.5	183.3
Butane	96.9	107.9
Condensate	1.3	1.3
Natural gasoline	67.5	73.0
Total NGL sales	331.2	365.5

Sulfur exports

(millions of metric tons)

2016	4.0
2015	3.8

Refining capacity

(thousands of bpd)

	Total capacity	Saudi Aramco or affiliate ownership	Saudi Aramco share of capacity
Saudi Arabia			
Ras Tanura	550	100%	550
Riyadh	126	100%	126
Jiddah	77	100%	77
Yanbu'	243	100%	243
Petro Rabigh	400	37.5%	150
SAMREF-Yanbu'	400	50%	200
YASREF-Yanbu'	400	62.5%	250
SASREF-Jubail	305	50%	153
SATORP-Jubail	400	62.5%	250
Total Saudi Arabia	2,901		1,999
Worldwide			
Motiva-USA	1,070	50%	535
S-OIL-South Korea	669	63.4%	424
Showa Shell-Japan	445	14.96%	67
FREP-China	280	25%	70
Total	5,365		3,095

Chemicals production capacity

(kilotons per annum)

Product groupings	In-Kingdom	Out-of-Kingdom	Total capacity	Saudi Aramco share*
Ethylene	2,714	1,100	3,814	1,682
Propylene	1,471	2,565	4,036	1,775
Paraxylene (including xylenes)	700	3,881	4,581	2,194
Benzene	732	1,218	1,950	925
Polyolefins	2,700	1,503	4,203	1,691
Synthetic rubber and elastomers	—	1,708	1,708	854
Intermediates, derivatives, and others	6,067	1,665	7,732	4,164
Total	14,384	13,640	28,024	13,285

*Saudi Aramco's share of capacity is based on the percentage allocation of the capacity volumes based on the ownership structure in the respective entities. Production capacity figures for 2016 reflect the startup of commercial operations at Sadara and the launch of the Arlanxco joint venture.

Principal products manufactured at in-Kingdom refineries

(millions of barrels)

2016	LPG	Naphtha	Gasoline	Jet fuel/ kerosene	Diesel	Fuel oil	Asphalt & misc.	Total
Ras Tanura	4.743	17.578	46.112	11.858	65.893	31.260	5.344	182.788
Yanbu'	3.601	3.368	11.018	(0.521)	35.154	36.955	—	89.575
Riyadh	2.462	—	12.569	4.904	21.054	(0.047)	7.375	48.317
Jiddah	0.804	2.362	4.063	0.159	2.397	6.837	5.527	22.149
Total in-Kingdom	11.610	23.308	73.762	16.400	124.498	75.005	18.246	342.829

Saudi Aramco share (millions of barrels)

2016	LPG	Naphtha	Gasoline	Jet fuel/ kerosene	Diesel	Fuel oil	Asphalt & misc.	Total
SAMREF	(0.671)	—	24.079	10.481	19.814	14.384	—	68.087
SASREF	1.387	11.787	2.219	10.983	16.580	12.339	—	55.295
Petro Rabigh	0.810	8.482	5.357	5.016	10.829	13.919	—	44.413
SATORP	0.254	3.919	16.627	10.496	45.997	1.716	—	79.009
YASREF	—	—	21.942	—	53.038	—	—	74.980
Total share	1.780	24.188	70.224	36.976	146.258	42.358	—	321.784
Grand total	13.390	47.496	143.986	53.376	270.756	117.363	18.246	664.613

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

Principal products manufactured at in-Kingdom refineries

(millions of barrels)

2015	LPG	Naphtha	Gasoline	Jet fuel/ kerosene	Diesel	Fuel oil	Asphalt & misc.	Total
Ras Tanura	5.487	19.227	42.304	8.495	71.828	34.385	8.029	189.755
Yanbu'	3.461	3.8	10.485	(0.457)	34.037	35.110	—	86.436
Riyadh	2.11	—	11.379	3.95	21.249	0.026	7.184	45.898
Jiddah	0.714	2.54	3.738	(0.047)	2.922	7.790	6.383	24.040
Total in-Kingdom	11.772	25.567	67.906	11.941	130.036	77.311	21.596	346.129

Saudi Aramco share (millions of barrels)

2015	LPG	Naphtha	Gasoline	Jet fuel/ kerosene	Diesel	Fuel oil	Asphalt & misc.	Total
SAMREF	(0.571)	—	23.766	9.882	21.147	14.310	—	68.534
SASREF	1.269	10.540	2.255	8.963	14.112	12.678	—	49.817
Petro Rabigh	0.969	6.181	4.566	4.204	9.051	11.565	—	36.536
SATORP	0.629	3.525	15.639	10.070	43.732	0.643	12.079	86.317
YASREF	—	—	14.222	—	35.505	—	4.684	54.411
Total share	2.296	20.246	60.448	33.119	123.547	39.196	16.763	295.615
Grand total	14.068	45.813	128.354	45.060	253.583	116.507	38.359	641.744

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

In-Kingdom product sales by region

(millions of barrels)

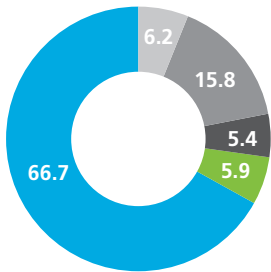
2016	Central	Eastern	Western	Total
LPG	2.396	8.230	6.006	16.632
Gasoline	73.055	40.597	93.721	207.373
Jet fuel/kerosene	10.386	3.561	20.107	34.054
Diesel	68.844	59.133	121.194	249.171
Fuel oil	1.653	1.769	151.827	155.249
Asphalt	6.980	6.638	8.690	22.308
Naphtha	—	1.811	—	1.811
Total	163.314	121.739	401.545	686.598

2015	Central	Eastern	Western	Total
LPG	2.095	7.513	5.806	15.414
Gasoline	71.873	41.014	93.511	206.398
Jet fuel/ Kerosene	9.632	3.011	18.723	31.366
Diesel	81.248	64.540	130.756	276.544
Fuel oil	0.32	2.273	132.879	135.472
Asphalt & misc.	7.59	12.401	11.126	31.117
Total	172.759	130.753	392.801	696.313

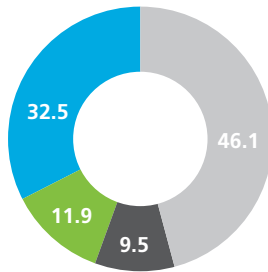
2016 exports by region

(percent)

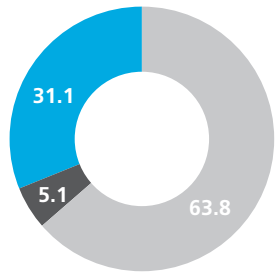
Crude oil



Refined products



NGL*



*includes sales on behalf of SAMREF & SASREF.

- Asia
- Northwest Europe
- Mediterranean
- U.S.
- other

