

Data

The following table presents Aramco's sustainability metrics for the years 2023, 2022, and 2021. Reporting boundaries for each metric and for each year are shown for transparency, and where possible, comparability. There are three common terms in reference to the metrics' reporting boundaries and the definitions of the commonly used terms are:

- **Company in-Kingdom** — Saudi Arabian Oil Company in-Kingdom wholly-owned operated assets.
- **Operational control** — Saudi Arabian Oil Company in-Kingdom wholly-owned operated assets, SASREF, Motiva, ARLANXEO, Aramco Trading Company (ATC), Aramco Services Company (ASC), Aramco Overseas Company B.V. (AOC) and Saudi Aramco Asia Company Ltd. (SAAC).
- **Group** — Saudi Arabian Oil Company, together with its consolidated subsidiaries, and where the context requires, its joint operations, joint ventures and associates.



Our metrics

Material topic	Metric (unit of measure)	2023 actual	2023 boundaries	2022 actual	2022 boundaries	2021 actual	2021 boundaries	
Climate change and the energy transition								
Climate change	Scope 1 emissions (million metric tons of CO ₂ e)	54.4** ¹	Operational control excluding ATC, ASC, AOC and SAAC	55.7** ¹	Operational control excluding ATC, ASC, AOC and SAAC	52.3** ¹	Operational control excluding ATC, ASC, AOC and SAAC	
	Scope 2 emissions (million metric tons of CO ₂ e) Location-based	18.2** ¹	Operational control excluding ATC, ASC, AOC and SAAC	16.1** ¹	Operational control excluding ATC, ASC, AOC and SAAC	15.5** ¹	Operational control excluding ATC, ASC, AOC and SAAC	
	Scope 2 emissions (million metric tons of CO ₂ e) Market-based	13.0** ¹	Operational control excluding ATC, ASC, AOC and SAAC	10.3** ¹	Operational control excluding ATC, ASC, AOC and SAAC	Metric not disclosed previously		
	Upstream carbon intensity (Ratio of total upstream GHG emissions (Scopes 1 and 2) to production sold, kg CO ₂ e/boe) Location-based	10.7**	Operational control	10.3**	Operational control	10.7**	Operational control	
	Upstream carbon intensity (Ratio of total upstream GHG emissions (Scopes 1 and 2) to production sold, kg CO ₂ e/boe) Market-based	9.6**	Operational control	9.3**	Operational control	Metric not disclosed previously		
	Upstream methane emissions (metric tons of CH ₄)	27,708	Operational control	29,193	Operational control	26,754	Operational control	
	Upstream methane intensity (methane emissions from upstream operations per volume of marketed natural gas, %)	0.05	Operational control	0.05	Operational control	0.05	Operational control	
	Flaring intensity ³ (volume of hydrocarbon gas flared per barrel of oil equivalent produced, scf/boe)	5.64** ¹	Operational control	4.60** ¹	Operational control	5.51** ¹	Operational control	
	Flared gas ³ (MMscf)	27,506 ¹	Operational control	23,818 ¹	Operational control	25,825 ¹	Operational control	
	Energy intensity ³ (ratio of total net energy consumption and total production, thousand Btu per boe)	153.8	Operational control	146.2 ^{1,2}	Operational control	116.6** ^{1,2}	Company in-Kingdom	
	Energy consumption* (MMBtu/hr)	85,649	Operational control	Metric not disclosed previously		Metric not disclosed previously		
	% of patents filed relating to sustainability technologies* (sustainability patents filed/total patents filed, %)	20	Operational control (including Global Research Centers)	15	Operational control (including Global Research Centers)	14	Operational control (including Global Research Centers)	
	% of sustainability-related R&D out of total R&D spend*	63	Company in-Kingdom plus Global Research Centers, SASREF, Motiva, ATC, ASC, AOC and SAAC	59	Company in-Kingdom plus Global Research Centers, SASREF, Motiva, ATC, ASC, AOC and SAAC	52	Company in-Kingdom plus Global Research Centers, SASREF, Motiva, ATC, ASC, AOC and SAAC	

Safe operations and people development

Workforce protection	Number of fatalities	3**	Operational control	5**	Operational control	1**	Operational control
	Fatal accident rate* (number of recordable workforce fatalities x100,000,000/total work hours)	0.305**	Operational control	Metric not disclosed previously		Metric not disclosed previously	
	Lost time injuries/illnesses rate (Number of LTI cases x 200,000/total work hours)	0.018**	Operational control	0.014**	Operational control	0.017	Operational control

* Metric reported for the first time externally.

** This figure has undergone/undergoing external limited assurance in accordance to the ISAE 3000 (revised). Upon completion of assurance, the assurance report can be found [online](#) on the Sustainability section of our website.

- Jazan Refinery was excluded from our GHG reporting in 2022 and 2021, while the energy metrics were excluded in 2021. In 2022, it remained in the startup and stabilization phase, and we began reporting associated energy metrics. In 2023, in addition to the energy metrics, the stabilized units of Jazan Refinery were included in the reporting of our GHG emissions and flaring metrics.
- As we progress on our reporting journey and our controls around ESG data mature, for this metric from 2022 onwards, we have expanded the reporting boundary from Company in-Kingdom to operational control. The 2021 figure is at a Company in-Kingdom level only.
- This metric is not applicable to our office-based entities: ATC, ASC, AOC and SAAC.

Material topic	Metric (unit of measure)	2023 actual	2023 boundaries	2022 actual	2022 boundaries	2021 actual	2021 boundaries
Safe operations and people development continued							
Workforce protection continued	Total recordable case rate (Total recordable incidents x 200,000/total work hours)	0.042	Operational control	0.050	Operational control	0.054	Operational control
	Health performance (Number of overdue major health findings x 100/total number of open major health findings) (%)	19**	Operational control excluding ATC, ASC, AOC and SAAC	15**	Operational control excluding ATC, ASC, AOC and SAAC	15	Operational control excluding ATC, ASC, AOC and SAAC
Process safety and asset integrity	Number of Tier 1 process safety events	15	Operational control	11	Operational control	11	Operational control
Human rights	Number of grievances raised	230	Company in-Kingdom	293	Company in-Kingdom	236	Company in-Kingdom
	Sites with a grievance mechanism in place (%)	100	Company in-Kingdom	100	Company in-Kingdom	100	Company in-Kingdom
Labor practices	Attrition rate (%)	2.2	Company in-Kingdom	2.4	Company in-Kingdom	2.8	Company in-Kingdom
	Number of Company employees	73,311	Company in-Kingdom	70,496	Company in-Kingdom	68,493	Company in-Kingdom
	Breakdown of Company employees (by age) ⁴						
	– 35 years and under	45,277	Company in-Kingdom	45,043	Company in-Kingdom	44,271	Company in-Kingdom
	– Between 36-44 years old	14,464	Company in-Kingdom	12,771	Company in-Kingdom	12,023	Company in-Kingdom
	– 45 years and above	13,570	Company in-Kingdom	12,682	Company in-Kingdom	12,199	Company in-Kingdom
	Number of female employees	5,294	Company in-Kingdom	4,503	Company in-Kingdom	3,802	Company in-Kingdom
	Female (%) of total employees	7.2	Company in-Kingdom	6.4	Company in-Kingdom	5.6**	Company in-Kingdom
	Number of female employees in leadership positions	233	Company in-Kingdom	176	Company in-Kingdom	136	Company in-Kingdom
	Female (%) of total number of new hires	24.1	Company in-Kingdom	28.4	Company in-Kingdom	31.2	Company in-Kingdom
Female employees in leadership positions (%)	4.8	Company in-Kingdom	3.8	Company in-Kingdom	3.1	Company in-Kingdom	
Number of contractor employees	8,125	Company in-Kingdom	7,639	Company in-Kingdom	6,339	Company in-Kingdom	
Number of nationalities in the workforce*	94	Company in-Kingdom	90	Company in-Kingdom	90	Company in-Kingdom	
Employees acknowledging performance review meetings ¹ (%)	92.0	Company in-Kingdom	90.6	Company in-Kingdom	96.8	Company in-Kingdom	
Employee engagement score (%)	Not applicable as this survey is done every two years		85	Company in-Kingdom	Not applicable as this survey is done every two years		
Total hours of training and development ³ (million)	9	Company in-Kingdom	Please refer to footnote 2 below		Please refer to footnote 2 below		
Total hours of training and development (per employee) ⁴	95	Company in-Kingdom	Please refer to footnote 2 below		Please refer to footnote 2 below		
Number of hired graduates	1,665	Company in-Kingdom	1,459	Company in-Kingdom	1,447	Company in-Kingdom	
Number of apprentices (new intake)	2,200	Company in-Kingdom	1,728	Company in-Kingdom	1,369	Company in-Kingdom	
Number of interns	3,201	Company in-Kingdom	3,190	Company in-Kingdom	1,922	Company in-Kingdom	

* Metric reported for the first time externally.

** This figure has undergone external limited assurance in accordance to the ISAE 3000 (revised). The assurance report can be found [online](#) on the Sustainability section of our website.

- In accordance with our ongoing review of our sustainability performance data, we have determined that the metric "Employees receiving regular performance reviews (%)" reported in 2022 and 2021 should be renamed "Employees acknowledging performance review meetings (%)" in order to more accurately reflect what this metric entails.
- Updated methodology: in 2023, a ministerial decision was issued mandating that any establishment with 50 employees and above shall disclose its training data annually as per a specific procedural guide. Therefore, the 2023 training and development hours are reported using the methodology as outlined by the Ministry Procedural Guidelines. 2022 and 2021 previously reported numbers in the 2022 Sustainability Report would not be comparable under this methodology, thus these figures have not been disclosed in this report.
- In line with the new methodology of calculating the training hours, the total number of training hours includes all training offered corporate-wide during the year for all employee categories in addition to trainees and contractors.
- Total hours of training and development (per employee) metric consists of total training offered by the company during the year for all participants including Aramco employees, contractors and average levels of trainees.

Our metrics continued

Material topic	Metric (unit of measure)	2023 actual	2023 boundaries	2022 actual	2022 boundaries	2021 actual	2021 boundaries
Minimizing environmental impact							
Local environmental impact	Number of hydrocarbon spills ¹ Total number of accidental release events of liquid petroleum hydrocarbon into the environment, where the spill incident is > 1 bbl	12	Operational control	15	Operational control	13	Operational control
	Volume of hydrocarbon spills ¹ (barrels) Total volume of liquid petroleum hydrocarbon accidentally released into the environment, where the spill incident is > 1 bbl	8,566**	Operational control	142,885**	Operational control	14,447	Operational control
	Recovered hydrocarbon ¹ (%) Percentage of liquid petroleum hydrocarbon removed from the environment via recovery methods	88**	Operational control	9**	Operational control	94	Operational control
	Hydrocarbon discharge to water ¹ (barrels) The total of hydrocarbons that are systematically released to surface water through regulated industrial wastewater discharges	14.3**	Operational control	16.4**	Operational control	30.7	Operational control
	SOx emissions (metric kilotons) ^{1,4} Quantity of sulfur oxides including sulfur dioxide (SO ₂) and sulfur trioxide (SO ₃) expressed as SO ₂ equivalent	146**	Operational control	167**	Operational control	141	Operational control
	Sites with ISO 14001 certification ¹ (%)	100**	Operational control	98**	Operational control	Metric not disclosed previously	
	Biodiversity	Net positive impact ¹ (%) (total biodiversity areas (km ²)/Footprint area (km ²) x 100)	85.6** ⁵	Operational control	53.0**	Operational control	Metric not disclosed previously
Water management	Freshwater consumption (million m ³) The difference between the volume of freshwater removed from the environment, incl. surface water, groundwater, for use in operations, and freshwater returned to the source. The total dissolved solids (TDS) concentration of this type of water is up to 2,000 mg/l	89.9**	Operational control excluding ATC, ASC, AOC and SAAC	93.6**	Operational control excluding ATC, ASC, AOC and SAAC	94.6	Operational control excluding ATC, ASC, AOC and SAAC
	Freshwater withdrawal (million m ³)	135.7	Operational control excluding ATC, ASC, AOC and SAAC	136.6	Operational control excluding ATC, ASC, AOC and SAAC	137.3	Operational control excluding ATC, ASC, AOC and SAAC
	Freshwater intensity (m ³ /boe)* Total freshwater consumed relative to our hydrocarbon production	0.02	Operational control excluding ATC, ASC, AOC, SAAC	Metric not disclosed previously	Metric not disclosed previously		
	Product stewardship and waste management	Industrial waste disposed ^{1,2,3} (metric tons) Total amount of industrial waste, hazardous and nonhazardous, generated from operating facilities, not including waste recycling, reusing, and recovery	481,561	Operational control	318,656	Operational control	240,255
	– Industrial waste disposed – Upstream ¹ (metric tons)	253,044	Operational control	Breakdown not previously disclosed			
	– Industrial waste disposed – Downstream ¹ (metric tons)	174,790	Operational control	Breakdown not previously disclosed			
	Industrial waste recycled ¹ (%)	35.7**	Operational control	39.9**	Operational control	39.8	Operational control

* Metric reported for the first time externally.
 ** This figure has undergone external limited assurance in accordance to the ISAE 3000 (revised). The assurance report can be found [online](#) on the Sustainability section of our website.
 1. This metric is not applicable to our office-based entities: ATC, ASC, AOC and SAAC.
 2. The name of this metric was changed from industrial waste generated to industrial waste disposed in 2023. The definition of the metric remained the same.
 3. Industrial waste disposed number includes operationally controlled affiliates and other waste streams not generated by upstream and downstream operations.
 4. The Jazan Refinery is excluded from our SOx reporting in 2022 and 2021. In 2023, data from Jazan Refinery's stabilized units is included in our SOx reporting.
 5. Ongoing management and review of the BPAs resulted in exclusion of the Manifa BPA from our NPI metric as a BPA, pending implementation of enhancements to align with the Company's biodiversity governance.

Material topic	Metric (unit of measure)	2023 actual	2023 boundaries	2022 actual	2022 boundaries	2021 actual	2021 boundaries
Growing societal value							
Labor practices	Number of people on Aramco sponsored community programs ¹	15,099	Company in-Kingdom	12,160	Company in-Kingdom	9,010	Company in-Kingdom
National content	Saudization (% of Saudi nationals as part of Aramco's workforce)	90.3	Company in-Kingdom	90.9	Company in-Kingdom	90.5	Company in-Kingdom
	Saudization of construction contracts (%) Percentage of Saudi construction contractors relative to the total construction contractors' workforce	29.7	Company in-Kingdom	28.0	Company in-Kingdom	25.6	Company in-Kingdom
	Saudization of service contracts (%) Percentage of Saudi service contractors relative to the total service contractors' workforce	56.2	Company in-Kingdom	57.2	Company in-Kingdom	56.6	Company in-Kingdom
	iktva procurement spend within the Kingdom (%)	65.0	Company in-Kingdom	63.0	Company in-Kingdom	59.0	Company in-Kingdom
	Cumulative iktva GDP contribution* (\$ billion)	202.9	Company in-Kingdom	166	Company in-Kingdom	136	Company in-Kingdom
	Human rights	% of active suppliers signed up to Aramco's Supplier Code of Conduct	100	Company in-Kingdom	100	Company in-Kingdom	100
	Number of active suppliers	3,472	Company in-Kingdom	3,199	Company in-Kingdom	Metric not disclosed previously	
Community and society	Social investment (\$ million) ²	475	Company in-Kingdom plus ASC, AOC and SAAC	453	Company in-Kingdom plus ASC, AOC and SAAC	Metric not disclosed previously	
	Total number of volunteers ³	7,037	Company in-Kingdom plus ASC, AOC and SAAC	4,941	Company in-Kingdom plus ASC, AOC and SAAC	4,153	Company in-Kingdom
	Total number of volunteering hours ³	171,633	Company in-Kingdom plus ASC, AOC and SAAC	168,590	Company in-Kingdom plus ASC, AOC and SAAC	136,284	Company in-Kingdom
	Number of employee volunteers ³	3,405	Company in-Kingdom plus ASC, AOC and SAAC	Metric not disclosed previously	Metric not disclosed previously		
	Number of employee volunteering hours ³	18,179	Company in-Kingdom plus ASC, AOC and SAAC	Metric not disclosed previously	Metric not disclosed previously		
	Number of Aramco facilitated community volunteers ³	3,632	Company in-Kingdom plus ASC, AOC and SAAC	Metric not disclosed previously	Metric not disclosed previously		
	Number of Aramco facilitated community volunteering hours ³	153,454	Company in-Kingdom plus ASC, AOC and SAAC	Metric not disclosed previously	Metric not disclosed previously		

* Metric reported for the first time externally.
 1. These programs include the Vocational College Internship Program (VCIPI), University Internship Program (UIP), Summer enrichment program, Tomooh program, Advantage program, and Arizona Centers for Comprehensive Education and Life Skills (ACCEL) International Ajyal Center.
 2. Updated methodology: this is the first year we are reporting on the costs of running Aramco-built schools as part of our social investment. We have also revised the prior year figure to reflect this change. With this updated methodology, the 2022 figure is now \$453 million compared to \$370 million under the previous methodology.
 3. Increased data management identified that in the 2022 Sustainability Report, Aramco's volunteering hours consisted of not only employees' volunteering hours but also members of our communities. Therefore, from 2023 onwards, Aramco will now separately report the 'number of volunteers' and 'number of volunteering hours' for both employees and members of community volunteering with Aramco.

Our metrics continued

Material topic	Metric (unit of measure)	2023 actual	2023 boundaries	2022 actual	2022 boundaries	2021 actual	2021 boundaries
Growing societal value continued							
Economic contribution	Direct economic value generated and distributed: ¹						
	• Revenues (\$ million)	440,875	Group	535,188	Group	359,181	Group
	• Other income related to sales (\$ million)	54,158	Group	69,178	Group	41,287	Group
	• Operating costs (\$ million)	263,489	Group	299,279	Group	194,624	Group
	• Employee wages and benefits (\$ million)	16,088	Group	14,665	Group	14,066	Group
	• Dividends paid includes dividends to shareholders and non-controlling interests in subsidiaries ² (\$ million)	101,628	Group	78,863	Group	76,911	Group
	• Payments to Saudi and foreign governments ³ (\$ million)	205,027	Group	229,435	Group	149,775	Group
	• Payments to the Saudi government ³ (\$ million)	199,228	Company in-Kingdom	225,866	Company in-Kingdom	148,542	Company in-Kingdom
	Total R&D expenses ¹ (\$ million)	1,386	Group	1,178	Group	1,033	Group
Governance							
Corporate governance	Board composition by average age ⁴	63.45	Company in-Kingdom ⁵	62.45	Company in-Kingdom ⁵	61.45	Company in-Kingdom ⁵
	Board composition by average tenure	7	Company in-Kingdom ⁵	6	Company in-Kingdom ⁵	5	Company in-Kingdom ⁵
	Board members' average attendance (%)	100	Company in-Kingdom ⁵	100	Company in-Kingdom ⁵	97	Company in-Kingdom ⁵
	Number of independent Board members	5	Company in-Kingdom ⁵	5	Company in-Kingdom ⁵	5	Company in-Kingdom ⁵
	Board diversity (number of females on the Board)	1	Company in-Kingdom ⁵	1	Company in-Kingdom ⁵	1	Company in-Kingdom ⁵
Ethics, bribery, and corruption (compliance)	Number of allegations received through the 24-hour hotline	826	Company in-Kingdom	655	Company in-Kingdom	539	Company in-Kingdom
	Anti-bribery and anti-corruption training hours	27,674	Company in-Kingdom	22,575	Company in-Kingdom	7,300	Company in-Kingdom

1. This metric is converted at a fixed rate of U.S. dollar 1.00 = SAR 3.75 for convenience only.

2. Dividends paid includes dividends to shareholders and non-controlling interests in subsidiaries.

3. Figure includes income taxes, royalties and dividends to Saudi government.

4. For the 2023 Sustainability Report, the average age for 2023, 2022, and 2021 is calculated for each corresponding calendar year (i.e., January 1 – December 31). In previous years, the reporting time period extended beyond the calendar year, therefore, figures for previous years have been re-calculated herein to reflect this update of the reporting period.

5. For this metric, Company in-Kingdom refers to Saudi Arabian Oil Company.

Abbreviations, terms, and glossary

Currencies

Currency conversion

All financial amounts in SAR and USD in this Report are reported in line with the exchange rates reported in Aramco's 2023 Annual Report.

SAR/Saudi Riyal

Saudi Arabian riyal, the lawful currency of the Kingdom

\$/USD/US\$/Dollar

US dollar

Units of measurement

Barrel (bbl)

Barrels of crude oil, condensate or refined products

boe

Barrels of oil equivalent

bscf

Billion standard cubic feet

bscfd

Billion standard cubic feet per day

Btu

British thermal unit

GW

Gigawatts

Mboed

Thousand barrels of oil-equivalent per day

MMboed

Million barrels of oil-equivalent per day

MMscf

Million standard cubic feet

MMtpa

Million metric tons per annum

MMtCO₂e

Million metric tons of carbon dioxide equivalent

MW

Megawatts

kg CO₂e/boe per day

Volumes are converted into a daily basis using a calendar year (Gregorian)

scf

Standard cubic feet

Ton

Metric ton (equals to 1,000 kg)

Terms and glossary

Affiliate

With respect to financial information, the term Affiliate is defined by IFRS, meaning the Company's subsidiaries, joint arrangements, and associates.

AGOC

Aramco Gulf Operations Company

ARLANXEO

ARLANXEO Holding B.V., a wholly-owned specialty chemicals subsidiary.

ATC

Aramco Trading Company, a wholly-owned subsidiary of Aramco.

BPA

Biodiversity Protection Area

Carbon credit

A carbon credit is a tradable instrument that represents either: a permit to emit one metric ton of CO₂ or equivalent GHG (tCO₂e) into the atmosphere, or a certificate that represents the avoidance or removal of one metric ton of CO₂ or equivalent GHG (tCO₂e) from the atmosphere.

Carbon dioxide (CO₂)

A naturally occurring gas, and also a byproduct of burning fossil fuels and biomass, as well as land-use changes, and other industrial processes. It is the principal greenhouse gas that affects the Earth's radiative balance. It is the reference gas against which other greenhouse gases are measured and therefore has a Global Warming Potential of 1.

Carbon capture, and storage (CCS)

A set of technologies that can mitigate CO₂ emissions from new and existing coal- and gas-fired power plants, industrial processes, and other stationary sources of CO₂. It is a threestep process that includes the capture of CO₂ from power plants or industrial sources; the transport of the captured and compressed CO₂ (usually in pipelines); and underground injection and geologic sequestration, or permanent storage, of that CO₂ in rock formations that contain tiny openings or pores that trap and hold the CO₂.

Sequestration and storage are often used interchangeably.

Carbon capture, utilization and storage (CCUS)

Utilization is where CO₂ is reused in other applications, e.g., food preparation, carbonated drinks manufacturing, etc.

Carbon dioxide equivalent (CO₂e)

A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP). Carbon dioxide equivalents are commonly expressed as "million metric tons of carbon dioxide equivalents (MMtCO₂e)." The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP: MMtCO₂e = (million metric tons of a gas) x (GWP of the gas).

Abbreviations, terms, and glossary continued

Carbon intensity

A measure of greenhouse gas emissions in carbon dioxide (CO₂) equivalent per barrel released to produce oil equivalent.

Carbon markets

Two types of carbon market exist:

- (1) Regulatory compliance markets – used by companies and governments that by law have to account for their GHG emissions. It is regulated by mandatory national, regional or international carbon reduction regimes.
- (2) Voluntary markets – the trade of carbon credits is on a voluntarily basis.

Carbon offset

Mitigation credits generated in one location that are transferred to another location or entity, and are usually denominated in metric tons of a reduced emission or MWh of renewable energy produced.

CHP

Combined Heat and Power.

Circular carbon economy

A circular carbon economy is a framework for managing and reducing emissions. It is a closed loop system involving 4Rs: reduce, reuse, recycle, and remove.

Circular economy

A circular economy is an economic system designed and built to retain the highest value of company resources by utilizing sustainable and environmental business models.

Climate

Usually defined as the “average weather,” or more rigorously, in terms of the mean and variability of relevant quantities over a period of time ranging from months to millions of years.

Climate change

Any significant change in the measures of climate lasting for an extended period of time. Climate change includes major changes in temperature, precipitation, or wind patterns, among others, that occur over several decades or longer.

Cogeneration

Cogeneration is a method that uses heat and power systems to capture waste heat from gas turbines and convert it into steam. This process captures heat, reducing its escape into the atmosphere, and enables the production of electricity as a natural by-product.

Company

Saudi Arabian Oil Company (The Company).

Concession

As defined and discussed on page 126 of the Aramco Annual Report 2023.

CO₂

Carbon dioxide.

CO₂e

Carbon dioxide equivalent.

Condensate

Light hydrocarbon substances produced with raw gas, which condenses into liquid at normal temperatures and pressures associated with surface production equipment.

Direct Air Capture (DAC)

Technologies and processes that extract CO₂ directly from the atmosphere. The CO₂ can be permanently stored in geological formations or used as a feedstock in the production of fuels, chemicals, building materials, and other products containing CO₂.

Domestic

Refers to the Kingdom of Saudi Arabia.

Emissions

The release of a substance (usually a gas when referring to the subject of climate change) into the atmosphere.

Emissions reduction

Carbon reduction projects result in a net reduction in absolute CO₂/GHG emissions relative to current emission levels or relative to a historical baseline.

Energy efficiency

Using less energy to provide the same service. Energy efficiency is one of the core strategies for reducing greenhouse gas emissions from fossil fuels.

Energy intensity

An index for measuring the total energy consumed to generate a unit of product, represented in thousand Btus per total production in barrel of oil equivalent.

Energy transition

A significant structural change in an energy system.

Environment

The natural world, as a whole or in a particular geographical area, especially as affected by human activity.

ESG

Environmental, social, and governance.

Flaring intensity

Volume of gas flared per barrel of oil equivalent produced (scf/boe).

Freshwater

Groundwater or surface water with total dissolved solids concentration up to 2,000 mg/l.

G20

Group of Twenty is an intergovernmental forum comprising 19 countries and the European Union (EU).

GDP

Gross domestic product. The broadest quantitative measure of a nation’s total economic activity, representing the monetary value of all goods and services produced within a nation’s geographic borders over a specified period of time.

Greenhouse gas (GHG)

Any gas that absorbs infrared radiation in the atmosphere rather than allowing it to radiate into space. Greenhouse gases include CO₂, methane, nitrous oxide, ozone, chlorofluorocarbons, hydrochlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

GHG avoidance

The avoidance of GHG emissions that would otherwise occur without the protective actions implemented by an offset project.

GHG emission mitigation

The process of reducing CO₂ (GHG) emissions from the Company’s operations.

GHG reduction

A quantified absolute decrease in GHG emissions specifically related to/arising from an activity.

GHG removal

Withdrawal of a GHG and/or a precursor from the atmosphere by a GHG sink or GHG removal technology.

Government

The Government of the Kingdom of Saudi Arabia (and “Governmental” shall be interpreted accordingly).

Greenhouse gas (GHG) emissions

Any gaseous compound in the atmosphere that is capable of absorbing infrared radiation. Generally, consists of water vapor, CO₂, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Aramco’s inventory includes CO₂, methane and nitrous oxide.

Greenhouse Gas Protocol

The GHG Protocol establishes comprehensive global standardized frameworks to measure and manage greenhouse gas emissions from private and public sector operations, value chains and mitigation actions. It is a product of the collaboration between the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD).

Group

Saudi Arabian Oil Company, together with its consolidated subsidiaries and, where the context requires, its joint operations, joint ventures and associates.

HSSE

Health, Safety, Security and Environment.

Hydrocarbons

Substances containing only hydrogen and carbon. Fossil fuels are made up of hydrocarbons.

Hydrocarbons law

Law governing hydrocarbons, hydrocarbon resources, and hydrocarbon operations existing within the territory of the Kingdom, enacted by Royal Decree No. M/37, dated 2/4/1439H (corresponding to December 20, 2017), as amended.

IFRS

International Financial Reporting Standard(s) that are endorsed in the Kingdom and other standards and pronouncements endorsed by Saudi Organization for Chartered and Professional Accountants (SOCPA).

iktva

In-Kingdom Total Value Add. The Company’s program to promote the development of a localized energy/industrial ecosystem.

Income tax law/tax law

Income Tax Law issued under Royal Decree No. M/1 dated 15/1/1425H (corresponding to March 6, 2004) and its Implementing Regulations issued under Ministerial Resolution No. 1535 dated 11/6/1425H (corresponding to August 11, 2004), as amended from time to time.

Ipieca

International Petroleum Industry Environmental Conservation Association.

IPO

Initial public offering.

ISO

International Organization for Standardization.

Joint venture/JV

The term joint venture, as defined by IFRS, means a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint arrangement.

KAUST

King Abdullah University of Science and Technology.

KFUPM

King Fahd University of Petroleum and Minerals.

Kingdom

Kingdom of Saudi Arabia.

LTI

Lost time injuries/illnesses.

Master Gas System (MGS)

An extensive network of pipelines that connects Aramco’s key gas production and processing sites throughout the Kingdom.

Ministry of Energy, Industry, and Mineral Resources

Ministry of Energy of the Kingdom. Successor to MEIM.

Methane (CH₄)

A hydrocarbon that is a greenhouse gas with a global warming potential most recently estimated at 25 times that of carbon dioxide (CO₂). Methane is produced through anaerobic decomposition of waste in landfills, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Motiva

Motiva Enterprises LLC – located in the US.

Abbreviations, terms, and glossary continued

Namaat

Aramco's industrial investment program.

National

Refers to the Kingdom of Saudi Arabia.

Natural gas

Underground deposits of gases consisting of 50–90% methane (CH₄) and small amounts of heavier gaseous hydrocarbon compounds such as propane (C₃H₈) and butane (C₄H₁₀).

NDC

Nationally Determined Contributions, or NDCs, are countries' self-defined national climate pledges under the Paris Agreement, detailing what they will do to help meet the goals of the Paris Agreement.

Net-zero emissions

This is achieved when anthropogenic GHG emissions to the atmosphere are balanced by anthropogenic removals.

NGL

Natural gas liquids, which are liquid or liquefied hydrocarbons produced in the manufacture, purification and stabilization of natural gas. For purposes of reserves, ethane is included in NGL. For purposes of production, ethane is reported separately and excluded from NGL.

Nitrogen oxides (NO_x)

Gases consisting of one molecule of nitrogen and varying numbers of oxygen molecules. Nitrogen oxides are produced in the emissions of vehicle exhausts and from power stations. In the atmosphere, nitrogen oxides can contribute to the formation of photochemical ozone (smog), can impair visibility, and have health consequences; they are thus considered pollutants.

Operational control

Saudi Arabian Oil Company in-Kingdom wholly-owned operated assets, SASREF, Motiva, ARLANXEO, Aramco Trading Company (ATC), Aramco Services Company (ASC), Aramco Overseas Company B.V. (AOC) and Saudi Aramco Asia Company Ltd. (SAAC)¹.

Original concession

See definition to "Concession."

PIF

Public Investment Fund of Saudi Arabia.

Production costs

The sum of operating costs and depreciation, reflecting both the erosion of asset value over time on an accounting basis and the cost of operating the business.

R&D

Research and development.

RTP

Reinforced Thermo Plastics.

Lower Carbon Aviation Fuel

Lower Carbon Aviation Fuel (LCAF) is defined in Annex 16 Environmental Protection (Volume IV) of the United Nations International Civil Aviation Organization's Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) as a fossil-based aviation fuel that meets the CORSIA Sustainability Criteria. LCAF can serve as a complementary measure alongside Sustainable Aviation Fuels (SAF) in helping to reduce aviation greenhouse gas (GHG) lifecycle emissions.

Sustainable aviation fuels

Sustainable aviation fuels (SAF) are defined as renewable or waste-derived aviation fuels that meets sustainability criteria as contained within Annex 16 Environmental Protection (Volume IV) of the United Nations International Civil Aviation Organization's Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).

Reserves

Those quantities of liquids and gas, which by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible – from a given date forward, from known reservoirs, and under existing economic conditions, operating methods and government regulations – prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence the project within a reasonable time.

Reliability

Total products volume shipped/delivered within 24 hours of the scheduled time, divided by the total products volume committed. Any delays caused by factors that are under the Company's control (e.g., terminal, pipeline, stabilization, or production) negatively affect the score, whereas delays caused by conditions that are beyond the Company's control, such as adverse weather, are not considered. A score of less than 100% indicates there were issues that negatively impacted reliability.

SABIC

Saudi Basic Industries Corporation.

SASREF

Saudi Aramco Jubail Refinery Company, a subsidiary of Aramco, formerly known as Saudi Aramco Shell Refinery Company.

SATORP

Saudi Aramco Total Refining and Petrochemical Company, a joint venture established by Aramco and Total Refining Saudi Arabia SAS in 2008.

Saudi Aramco/Aramco

Saudi Arabian Oil Company, together with its consolidated subsidiaries, and where the context requires, its joint operations, joint ventures and associates. Any reference to "us", "we" or "our" refers to Aramco except where otherwise stated.

Unless otherwise stated, the text does not distinguish between the activities and operations of the Company and those of its subsidiaries.

Saudi Green Initiative (SGI)

A national initiative that unites environmental protection, energy transition, and sustainability programs with the overarching aim of offsetting and reducing emissions, increasing the Kingdom's use of clean energy, and addressing climate change.

Scope 1 GHG emissions

Direct emissions, which include GHG emissions from on-site fuel combustion, flaring, venting and fugitive emissions.

Scope 2 GHG emissions

Indirect emissions, which account for GHG emissions from offsite power generation including electricity and steam.

Senior executives/Management Committee

The members of the Senior Management of Aramco holding the title of CEO, President, or Executive Vice President.

Senior management

The senior management and other officers of Aramco who, while subordinate to the senior executives, are still involved in the management of Aramco and participate in driving its strategies, decisions or operations.

Shareholder

Any holder of shares.

Shareek program

A cooperative government program that is designed to provide support via various pillars, including financial, monetary, operational, and regulatory cooperation and asset investment, striving to enhance the development and resilience of the Saudi economy by increasing the gross domestic product, providing job opportunities, diversifying the economy and strengthening cooperation between public and private sectors.

SME

Small and medium enterprise.

SOCPA

Saudi Organization for Chartered and Professional Accountants.

S-Oil

S-Oil Corporation.

SSC

Sustainability Steering Committee.

STEM

Science, technology, engineering and mathematics.

Subsidiaries

Except with respect to financial information, the term subsidiaries means the companies that Aramco controls through its ability to influence the actions or decisions of another person through, whether directly or indirectly, alone or with a relative or affiliate (i) holding 30% or more of the voting rights in a Company, or (ii) having the right to appoint 30% or more of the Board of a Company.

With respect to financial information, the term subsidiaries is defined by IFRS, meaning entities over which the Company has control.

Synthetic fuels

A broad class of hydrocarbon fuels that are chemically synthesized from hydrogen and CO₂ that is captured either directly from the air or from industrial installations.

Tier 1 process safety event

An unplanned or uncontrolled release of any material, including non-toxic and non-flammable materials, from a process that results in one or more of the consequences listed in API Recommended Practice-754.

Total recordable case (TRC) rate

Sum of recordable cases that occurred in the workplace per 200,000 work hours.

UN SDGs

United Nations Sustainable Development Goals.

Upstream carbon intensity

Upstream carbon intensity is calculated based on the total upstream Scope 1 and Scope 2 GHG emissions divided by the upstream marketed production and excludes sales gas own use and AGOC, as found on the assurance statement.

U.S./United States/USA

United States of America.

Well-to-wake

Refers to the entire process from fuel production, and delivery to using on-board ships and GHG emissions produced therein.

Wheeled power

The power generated by an Aramco cogeneration facility and transferred through the electricity grid to be used by another Aramco facility. The transaction is governed by a principle buyer and is enabled by the regulatory frameworks in the Kingdom.

VOC

Volatile organic compounds.

Zero carbon

Applies only to energy sources, processes, products, projects, etc., that emit zero carbon emissions.

¹ Referenced affiliates are separate legal entities that are subject to their own governance frameworks.

Forward-looking statements

This Sustainability Report (the "Report") may contain certain forward-looking statements with respect to Aramco's financial position, results of operations and business and certain of Aramco's plans, intentions, expectations, assumptions, goals and beliefs and include all matters that are not historical fact and generally, but not always, may be identified by the use of words such as "believes," "expects," "are expected to," "anticipates," "intends," "estimates," "should," "strive," "will," "shall," "may," "is likely to," "plans," "targets," "goals," or similar expressions, including variations and the negatives thereof or comparable terminology. These statements include, among other things, statements about expectations in connection with Aramco's sustainability and environmental, social and governance ("ESG") initiatives, including the targets and goals set forth in this Report.

Prospective investors should be aware that forward-looking statements are not guarantees of future of future performance and that Aramco's actual performance may differ significantly from those made in or suggested by these forward-looking statements. Factors that could cause actual results to differ materially from Aramco's expectations, including our goals related to ESG and mitigating our environmental impact, safe operations and people development and growing societal value within the Kingdom, include, among other things, the following:

- the inability to successfully meet the targets set forth in this Report, including through the management GHG emissions; the inability to meet our plastic waste and water management targets or successfully protect biodiversity; the inability to develop and deploy technology solutions to allow us to deliver the benefits of oil and gas hydrocarbons for future generations;
- global supply, demand and price fluctuations of oil, gas and petrochemicals;
- global economic market conditions;
- competition in the industries in which Aramco operates;
- climate change concerns, weather conditions and related impacts on the global demand for hydrocarbons and hydrocarbon-based products;
- risks related to Aramco's ability to successfully meet its ESG targets, including its failure to fully meet its GHG emission reduction targets by 2050;
- conditions affecting the transportation of products;
- operational risk and hazards common in the oil and gas, refining and petrochemicals industries;
- the cyclical nature of the oil and gas, refining and petrochemicals industries;
- political and social instability and unrest and actual or potential armed conflicts in the MENA region and other areas;
- Aramco's exposure to inflation, interest rate risk and foreign exchange risk;
- risks related to operating in a regulated industry and changes to oil, gas, environmental, health, safety or other regulations that impact the industries in which Aramco operates;
- Legal proceedings, international trade matters, and other disputes or agreements; and
- Other risks set forth in our 2023 Annual Report available on our website.

In light of these risks, uncertainties and assumptions, the forward-looking statements described in this Report may not occur in the manner described or may not occur at all. These forward-looking statements speak only as of the date of this Report. We undertake no obligation to update or revise any forward-looking statement, whether as a result of new information, future events or otherwise. All subsequent written and oral forward-looking statements attributable to us or to persons acting on our behalf are expressly qualified in their entirety by the cautionary statements referred to above and contained elsewhere in this Report. Undue reliance should not be placed on the forward-looking statements.

Except where noted, the information covered in this Report highlights the company's performance and initiatives in fiscal year 2023. The inclusion of information in this Report should not be construed as a characterization regarding the materiality or financial impact (or potential impact) of that information. Sections of this Report have been prepared with reference to and guidance from various reporting frameworks, standards and guidelines, as outlined at the start of this Report. The Company's application of the various frameworks, standards and guidelines is based on its interpretation and judgment.

This Report may contain references to links to or information from other internet sites. Such links and information are not endorsements of any products or services in such sites, are not being incorporated by reference herein, and no information in such sites has been endorsed or approved by Aramco.