



الهيئة العامة للإحصاء
General Authority for Statistics

Metadata Report of Oil and Gas Statistics

V-2.2

Quality Management



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1. Contact

1.1. Contact organization	General Authority of Statistics
1.2. Contact organization unit	Environment, Agriculture, and Energy Statistics Department
1.3. Contact person function	Director of Environment, Agriculture, and Energy Statistics Department
1.4. Contact mail address	P.O. Box: 3735 Riyadh, 11481 Kingdom of Saudi Arabia
1.5. Contact email address	info@stats.gov.sa
1.6. Contact phone number	199009

2. Metadata Update

2.1. Metadata last update	04/01/2024
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3. Statistical Presentation

3.1. Data description
<p>The oil and gas statistics presents the data on reserves, production, and consumption of crude oil, natural gas, and refined products in the Kingdom of Saudi Arabia.</p> <p>Oil and gas statistics are statistics about fossil fuels and refined products in the Kingdom, where data is collected about the key characteristics as follows:</p> <ul style="list-style-type: none">• The reserves of crude oil and natural gas.



- The primary and secondary production of oil products.
- The exports and imports of oil products.
- The final consumption of oil products.

The data It is further used to estimate the:

- The percentage of energy extracted from crude oil out of the total crude oil reserves.
- The percentage of energy extracted from natural gas out of the total natural gas reserves.
- The number of consecutive years of crude oil production.
- The number of consecutive years of natural gas production.
- Per capita share of liquefied petroleum gases consumption.
- Per capita share of gasoline consumption.

3.2. Classification system

The following classifications are applied in oil and gas statistics:

Standard International Energy Product Classification (SIEC):

It is a classification that ranks energy products according to a statistical classification. The main purpose of SIEC is to serve as a basis for developing or revising national classification schemes for energy products so as to make them compatible with international standards and, consequently, to ensure significantly improved cross-country comparability of energy data.

3.3. Sector coverage

Oil and gas statistics cover the energy sector in the field of fossil fuels and refined products in the Kingdom of Saudi Arabia.

3.4. Statistical concepts and definitions

Terms and concepts of oil and gas statistics:

- **Production:**

It is the capture, extraction, or manufacturing of types of fuel, or energy in its ready-to-use forms for general consumption.

- **Exports:**

It includes all types of fuel and other energy products leaving the national territory.



- Imports:

It includes all types of fuel and other energy products entering the national territory.

- Refined products:

They are secondary products derived from crude oil and primary hydrocarbon materials.

- Crude Oil:

A mineral oil of fossil origin extracted by conventional means from underground reservoirs and comprising liquid or near-liquid hydrocarbons and associated impurities such as sulphur and metals.

- Natural Gas:

A mixture of gaseous hydrocarbons, especially methane, and generally contains ethane, propane, and higher hydrocarbons in much smaller quantities, as well as some non-combustible gases such as nitrogen and carbon dioxide.

- Natural Gas Liquids (NGL):

It is a mixture of ethane, propane, and butane. Natural Gas Liquids (NGLs) are produced in conjunction with oil or natural gas and are removed in field facilities or gas processing plants before the selling stage.

- Liquefied Petroleum Gases (LPG):

They are light paraffinic hydrocarbons derived from refining operations, crude oil distillation, and natural gas processing plants. They primarily consist of propane (C_3H_8) and butane (C_4H_{10}) or as a mixture of the two.

- Gasoline:

A complex mixture of hydrocarbons that distill at temperatures ranging from 25 degrees Celsius to 220 degrees Celsius, formed from compounds in the range of C_4 and C_{12} .

- Kerosene and Jet Fuel:

Mixtures of hydrocarbons in the range C_9 to C_{16} and distilling over the temperature interval $145^\circ C$ to $300^\circ C$, but not usually above $250^\circ C$ and with a flash point above $38^\circ C$.

- Naphtha:



It is a feedstock oil specifically for the petrochemical industry. Naphtha is derived from a material in the distillation range between 30 degrees Celsius and 210 degrees Celsius or a portion of this range. Naphtha is imported for blending and synthesis purposes.

- Gas Oil/Diesel Oil:

Gas oils are middle distillates, predominantly of carbon number range C_{11} to C_{25} and with a distillation range of 160°C to 420°C.

- Fuel Oil:

Comprises residual fuel oil and heavy fuel oil. Residual fuel oils have a distillation range of 350°C to 650°C and a kinematic viscosity in the range 6 to 55 cSt at 100°C.

- Asphalt (Bitumen):

It is a solid or semi-solid substance, or viscous hydrocarbons with a tar-like composition that tends to be brown or black in color.

- Lubricants:

They are oils produced from crude oil, primarily used to reduce friction between sliding surfaces and during the metal cutting process.

3.5. Statistical unit

Not applicable.

3.6. Statistical population

Not applicable.

3.7. Reference area

Oil and gas statistics cover the energy sector in the field of fossil fuels and refined products in the Kingdom of Saudi Arabia.



3.8. Time coverage

The oil and gas statistics data cover the years from 2010 to 2022 AD.

3.9. Base period

Not applicable.

4. Unit of measure

- Most indicators are measured in numbers (e.g.,) Crude oil production (in thousand barrels)
- Some indicators are reported as rates (such as: Per capita share of gasoline consumption.
- some results are reported as percentage (such as: The percentage of energy extracted from natural gas out of the total natural gas reserves.

5. Reference period

The data for oil and gas statistics are based on administrative records up to the last day of each calendar year.

6. Confidentiality

6.1. Confidentiality - policy

According to the Royal Decree No. 23 dated 07-12-1397, data must always be kept confidential, and must be used by GASTAT only for statistical purposes.



Therefore, the data are protected in the data servers of the Authority.

6.2. Confidentiality - data treatment

Data were displayed in appropriate tables to facilitate its summarization, comprehension, and results extraction. Also, to compare data with other data and extract statistical meanings for the study community. It is also easier to check tables without the need to see any sensitive or confidential data, which violates data confidentiality of statistical data.

7. Release policy

7.1. Release calendar

The oil and gas statistics publication is added to the statistical calendar.

7.2. Release calendar access

The statistical calendar is available at: <https://www.stats.gov.sa/en/future-releases>

7.3. User access

One of GASTAT's objectives is to meet its clients' needs, so it immediately provides them with the publication's results once the Oil and Gas Statistics Publication is published.

It also receives questions and inquiries of the clients about the Publication and its results through various communication channels, such as:

- GASTAT's official website: www.stats.gov.sa
- GASTAT's official e-mail address: info@stats.gov.sa
- Client Support's e-mail address: cs@stats.gov.sa
- Official visits to GASTAT's official head office in Riyadh or one of its branches in Saudi Arabia.
- Official letters.
- Statistical telephone (199009).



8. Frequency of dissemination

Annual.

9. Accessibility and clarity

9.1. News release

The announcements for each publication are available on the statistical calendar as mentioned in 7.2. The press releases can be viewed on the website of GASTAT on the link:
<https://www.stats.gov.sa/en/news>

9.2. Publications

GASTAT issues the Oil and Gas Statistics on a regular basis within a pre-prepared dissemination plan and are published on GASTAT's website. GASTAT is keen to publish its publications in a way that serves all users of different types, including publications in different formats that contain (publication tables, data graphs, indicators, and metadata) in both English and Arabic.

Results of oil and gas statistics are available on:

<https://www.stats.gov.sa/en/1195>

9.3. On-line database

Not applicable.



9.4. Micro-data access

Not applicable.

9.5. Other

Not available.

9.6. Documentation on methodology

The Oil and Gas Statistics Publication is based on concepts, definitions, and classifications in line with the international recommendations for energy statistics adopted by the Statistics Division of the United Nations.

The Recommendations for Energy Statistics Guide:

<https://unstats.un.org/unsd/energystats/methodology/ires/>

9.7. Quality documentation

Quality documentation covers documentation on methods and standards for assessing, measuring, and monitoring the quality of statistical process and output. It is based on standard quality criteria such as relevance, accuracy and reliability, timeliness and punctuality, accessibility and clarity, comparability, and coherence.

10. Quality management

10.1. Quality assurance

GASTAT declares that it considers the following principles: impartiality, user orientated, quality of processes and output, effectiveness of statistical processes, reducing the workload for respondents.

Quality controls and validation of data are actions carried out throughout the process in different stages such as the data input and data collection and other final controls.



10.2. Quality assessment

GASTAT performs all statistical activities according to a national model (Generic Statistical Business Process Model - GSBPM). According to the GSBPM, the final phase of statistical activities is overall evaluation using information gathered in each phase or sub-process. This information is used to prepare the evaluation report which outlines all the quality issues related to the specific statistical activity and serves as input for improvement actions.

11. Relevance

11.1. User needs

Internal users in the GASTAT for oil and gas statistics data:

- International indicators department.
- General Department of Strategic Communication and Client Support.
- International trade department.

Some several external users and beneficiaries greatly benefit from the oil and gas statistics, including:

- Government entities.
- Regional and international organizations.
- Research institutions.
- Media.
- Individuals.

The disseminated key variables that mostly used by key users:

Ministry of Energy	<ul style="list-style-type: none"> • The reserves of crude oil and natural gas. • The primary and secondary production of oil products. • The exports and imports of oil products. • The final consumption of oil products.
The Statistical Centre for the Cooperation Council for the Arab Countries of the Gulf (GCC-Stat)	
The United Nations Statistics Division (UNSD)	
International Energy Agency (IEA)	



Saudi Central Bank	
Organization of Arab Petroleum Exporting Countries (OAPEC)	
Organization of the Petroleum Exporting Countries (OPEC)	
11.2. User satisfaction	
Not available.	
11.3. Completeness	
The data of oil and gas statistics relies on administrative records from relevant entities associated with fossil fuel and refining statistics. This is done to provide a comprehensive and integrated overview of the oil and gas sector in the Kingdom of Saudi Arabia, and the data is in a complete state.	

12. Accuracy and reliability

12.1. Overall accuracy
<ul style="list-style-type: none">• Oil and gas statistics data is checked with previous years to identify any significant changes in the data.• The internal consistency of oil and gas statistics data is verified before finalization.• The links between variables are checked and coherence between different data series is confirmed for Oil and gas statistics data.

13. Timeliness and punctuality

13.1. Timeliness
The General Authority for Statistics is committed to applying internationally recognized standards regarding the announcement, clarification, and timing of publishing statistics on its



official website, as outlined in the statistical calendar. In the event of any delay, updates will be provided accordingly.

13.2. Punctuality

The publication takes place according to the published release dates on the statistical calendar for oil and gas statistics on the website of the General Authority for Statistics.

The data are available at the expected time, as scheduled in the statistical release calendar, If the publication is delayed, reasons shall be provided.

14. Coherence and comparability

14.1. Comparability - geographical

The data is geographically comparable.

14.2. Comparability - over time

Data is fully comparable.

14.3. Coherence- cross domain

Not applicable.

14.3.1. Coherence - sub annual and annual statistics

Not applicable.

14.3.2. Coherence- National Accounts

Not applicable.

14.4. Coherence - internal

Not applicable



15. Data revision

15.1. Data revision - policy

Not applicable, only final results will be published.

15.2. Data revision - practice

Not applicable, only final results will be published.

16. Statistical processing

16.1. Source data

The administrative records at the Ministry of Energy are considered the primary source of data for the publication of oil and gas statistics in the Kingdom of Saudi Arabia.

The disseminated key variables are:

- The reserves of crude oil and natural gas.
- The primary and secondary production of oil products.
- The exports and imports of oil products.
- The final consumption of oil products.

16.2. Frequency of data collection

Annual.

16.3. Data collection

Form of data collection from administrative records:

In coordination with the relevant departments of the authority responsible for requesting and managing data collection, administrative data for the oil and gas statistics publication is obtained from the Ministry of Energy. This includes data on reserves, production, consumption, exports, and imports of fossil fuels and refined products.



The data is stored in the authority's databases after undergoing auditing and review processes following approved statistical methods and recognized quality standards. If errors or discrepancies are discovered, the data is cross-referenced with the data source for correction or clarification.

16.4. Data validation

Data are reviewed and matched to ensure their accuracy and precision in a way that suits their nature with the aim of giving the presented statistics quality and accuracy.

The data of the current year publication are compared with the data of the previous year to ensure their integrity and consistency in preparation for processing data and extracting and reviewing results.

In addition to the data processing and tabulation to check their accuracy, all the outputs are stored and uploaded to the database after being calculated by GASTAT to be reviewed and processed by specialists in the Energy Statistics team through modern technologies and software designed for this purpose.

16.5. Data compilation

Data editing:

Specialists of the Energy Statistics team have processed and analyzed data in this stage, and this step was based on the following measures:

- Sorting and arranging data in groups or different categories in a serial order.
- Summarizing detailed data into key points or data.
- Combining many data segments and ensuring their interconnection.
- Converting data into statistically significant data.
- Arranging, presenting, and interpreting data.

The applied statistical equations:

GASTAT has relied on the formulas approved by the international standards in calculating the key indicators for oil and gas statistics., as follows:

- Percentage of energy extracted from crude oil from the total crude oil reserves = $(\text{Crude oil production} \div \text{Crude oil reserves}) * 100$.
- Percentage of energy extracted from natural gas from the total natural gas reserves = $(\text{natural gas production} \div \text{natural gas reserves}) * 100$.



- Number of consecutive years of crude oil production = Crude oil reserves ÷ Crude oil production.
- Number of consecutive years of natural gas production = natural gas reserves ÷ natural gas production.
- Per capita consumption of liquefied petroleum gases (LPG) = Consumption of LPG ÷ Population.
- Per capita consumption of gasoline = Consumption of gasoline ÷ Population.

16.6. Adjustment

Not applicable, only final results will be published.

17. Comment