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2020–2021 Minerals Yearbook

QATAR [ADVANCE RELEASE]

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The Mineral Industry of Qatar

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Note: In this chapter, information for 2020 is followed by information for 2021.

Qatar was a major producer of aluminum (primary), ammonia, crude petroleum, direct-reduced iron (DRI), helium, natural gas, sulfur, and urea in 2020. As the world's fourth-ranked producer of natural gas, Qatar accounted for about 5.0% of global output. In addition, the country was the leading exporter of liquefied natural gas (LNG), accounting for 21.7% of the world's LNG exports. According to the Organization of the Petroleum Exporting Countries' (OPEC's) Annual Statistical Bulletin, the country's proven natural gas reserves were estimated to be 23.8 trillion cubic meters, which accounted for 13.1% of the world's total and made it the country with the third-largest proven natural gas reserves in the world (after Russia and Iran). Qatar was also the world's second-ranked producer of helium (after the United States), accounting for 32% of global output) and the ninth-ranked producer of urea, accounting for about 3% of global output. Mineral production in Qatar also included calcium carbonate, cement, gypsum, lime, methanol, sand, steel, and stone. Qatar was a member of the Gas Exporting Countries Forum, and the Organization of the Cooperation Council for the Arab States of the Gulf [also known as the Gulf Cooperation Council (GCC)]. In 2019, Qatar withdrew from OPEC after the Government decided to focus its efforts with respect to the mineral industry primarily on expanding its natural gas resources; Qatar had been a member of OPEC for nearly six decades (table 1; CNN Editorial Research, 2020; BP p.l.c., 2021, p. 44; de Sousa and Cross, 2022, p. 8–9; Organization of the Petroleum Exporting Countries, 2022, p. 76, 79; Peterson, 2022).

In 2020, the real gross domestic product (GDP) of Qatar decreased by 3.7% compared with an increase of 0.8% (revised) in 2019. The Qatar Central Bank noted that the decline in the economy was primarily owing to a decrease in the demand for Qatar's hydrocarbon exports during the coronavirus disease 2019 (COVID-19) pandemic. The output of the hydrocarbon sector decreased by 2.1% in 2020, and that of the nonhydrocarbon sector decreased by 4.6%. The components of the nonhydrocarbon sector that showed the most significant decreases in the value added in 2020 were construction, manufacturing, transport and storage, and wholesale and retail trade (Qatar Central Bank, 2021, p. 13, 24).

Minerals in the National Economy

The hydrocarbon sector continued to be the country's primary economic sector in 2020, accounting for 38.6% of the GDP compared with 38.0% (revised) in 2019. Government revenues from hydrocarbon exports decreased by 21.6% in 2020 and the share of hydrocarbon revenue as a percentage of total Government revenues decreased to 77.9% from 79.2% in 2019. The value of Qatar's total exports decreased by 29.4% to $51.5 billion[1] from $72.9 billion in 2019, of which the value of natural gas (including condensates) exports decreased to $31.6 billion from $45.1 billion in 2019, and that of crude petroleum exports decreased to $10.5 billion from $17.5 billion. Internationally, the average Brent crude petroleum price decreased to $42.30 per barrel in 2020 from $64.00 per barrel in 2019 (Qatar Central Bank, 2021, p. 24, 31, 50, 58).

Exports of goods from Qatar to the United States were valued at $1.2 billion in 2020. Petroleum products (other) accounted for 30%, or about $356 million of these exports. Other significant mineral-related exports to the United States included chemicals (fertilizers) valued at $290 million; bauxite and aluminum, $180 million; fuel oil, $104 million; and other precious metals, $2 million. Imports from the United States to Qatar were valued at $3.4 billion in 2020. Jewelry accounted for about 3%, or $97 million of these imports. Other significant mineral-related imports from the United States included drilling and oilfield equipment valued at $61 million; gem diamond, $31 million; petroleum products (other), $24 million; excavating machinery, $13 million; iron and steel products (other), $11 million; nonferrous metals (other), $2 million; and aluminum and alumina, $1 million (U.S. Census Bureau, 2022a, b).

Production

In 2020, significant decreases in production included that of DRI, which decreased by 69%; raw steel and billet (cast), by 52% each; and steel bars (rolled), by 43%. The state-owned company Industries Qatar Q.S.C. (IQ) reported that the decrease in iron and steel production was due to the company's decision to suspend operations at several of its facilities as a result of decreased international demand caused by the global COVID-19 pandemic. Other significant decreases in production included that of sulfur (sulfur content), by 18%; refined petroleum products, by 16%; lime, by an estimated 15%; and cement (hydraulic), by 13%. Significant increases in production included that of natural gas (marketable), which increased by 17%, and methanol, by 14%. Data on mineral production are in table 1 (Industries Qatar Q.S.C., 2021, p. 34).

Structure of the Mineral Industry

The state-owned company Qatar Petroleum (QP), in partnership with international companies, owned and operated crude petroleum and natural gas extraction (both onshore and offshore) and refining facilities in Qatar. Qatargas Operating Co. Ltd. operated four primary LNG enterprises at Ras Laffan,

[1]Where necessary, values have been converted from Qatari rials (QAR) to U.S. dollars (US$) at the annual average exchange rate of QAR3.64=US$1.00 for 2020 and 2019.

which is located 80 kilometers (km) north of Doha. Ras Laffan Liquefied Natural Gas Co. Ltd. (RasGas) operated three primary LNG enterprises at Ras Laffan. Qatargas and RasGas produced helium from three noble gas plants at Ras Laffan in a joint venture (table 2; Qatargas Operating Co. Ltd., 2021a, b; U.S. Department of State, 2021).

Qatar Petrochemical Co. Ltd. Q.S.C. (QAPCO) was partially owned by IQ (80%) and TotalEnergies SE of France (20%). Qatar Fuel Additives Co. Ltd. Q.S.C. (QAFAC), which produced mainly petrochemicals, was also partially owned by IQ (50%) [the remainder of QAFAC shares were owned by OPIC Middle East Corp. (20%), and International Octane L.L.C. and LCY Middle East Corp. (15% each)]. A 100% interest in Qatar Fertilizer Co. S.A.Q. (QAFCO) was also held by IQ, which produced primarily ammonia and urea. Qatar Steel Co. Q.S.C. (QASCO), a wholly owned subsidiary of IQ, produced hot-briquetted iron and DRI, raw steel, steel reinforcing bar (rebar), steel billets, and steel coils, in addition to lime. QASCO was the sole producer of DRI and raw steel in Qatar. Qatar Aluminium Ltd. Q.S.C. (Qatalum), which was a 50–50 joint venture between Norsk Hydro ASA of Norway and Qatar Aluminum Manufacturing Co. Q.P.S.C., was the sole producer of primary aluminum in Qatar. Qatalum's aluminum smelter was located in Mesaieed (about 40 km south of Doha) (table 2; Industries Qatar Q.S.C., 2021, p. 25–35; Norsk Hydro ASA, 2021, p. 168; Qatar Steel Co. Q.S.C., 2021).

Commodity Review

Metals

Aluminum.—Qatalum produced 632,000 metric tons (t) of aluminum in 2020, which was an increase of 0.8% from the 627,000 t produced in 2019. The company's complex, which consisted of an aluminum smelter, a casthouse, a carbon anode plant, and a powerplant, had a total production capacity of 660,000 metric tons per year (t/yr), of which extrusion billets accounted for 350,000 t/yr, and foundry alloys, 310,000 t/yr. The carbon plant had the capacity to produce 335,000 t/yr of anodes. Norsk Hydro reported that the smelter employed 1,027 workers in 2020 and considered it among the lowest cost aluminum smelters in the world (tables 1, 2; Norsk Hydro ASA, 2021, p. 54, 248; Qatar Aluminium Ltd. Q.S.C., 2021).

Iron and Steel.—QASCO's production of raw steel decreased to about 1.2 million metric tons (Mt) in 2020 from about 2.6 Mt in 2019. DRI production also decreased sharply to 800,000 t in 2020 from 2.4 Mt in 2019. QASCO's operations were located in Mesaieed and had production capacities of 2.8 million metric tons per year (Mt/yr) of DRI and 3.5 Mt/yr of raw steel. According to an IQ report in 2020, 44% of Qatar Steel's total sales volume was sold domestically, 41% was sold to other GCC countries, and 15% was sold to customers in Asia (tables 1, 2; Industries Qatar Q.S.C., 2021, p. 35).

Industrial Minerals

Nitrogen.—QAFCO was the sole producer of ammonia and urea in the country. In 2020, ammonia production (nitrogen content) increased to a record high level; the output of ammonia was estimated to be about 3.3 Mt and that of urea was estimated to be about 2.9 Mt. In its 2020 report, IQ noted that QAFCO's annual production capacity was 3.8 Mt/yr of ammonia (nitrogen content) from six ammonia production units and 6.0 Mt/yr of urea (nitrogen content) from six urea production units; QAFCO's operations were based in Mesaieed. In March 2020, IQ increased its ownership share in QAFCO to 100% by acquiring the 25% share held by Yara Netherland B.V. for $1 billion (tables 1, 2; Trade Arabia News Service, 2020b; Industries Qatar Q.S.C., 2021, p. 21, 32).

Mineral Fuels and Related Materials

Helium.—In 2020, Qatargas continued with development of the Helium 3 plant project, which was located at Ras Laffan. The plant was expected to have a production capacity of about 12 million cubic meters of helium and to become operational in 2021. Qatar was estimated to have produced about 45 million cubic meters of helium in 2020, which remained unchanged from that of 2019. The Qatar Helium 1 and 2 plants, also located in Ras Laffan, had a total capacity of 62 million cubic meters per year of liquefied helium (tables 1, 2; Qatargas Operating Co. Ltd., 2021c; Sampson, 2021).

Natural Gas.—Natural gas production in Qatar increased in 2020 to 205.7 billion cubic meters from 176.3 billion cubic meters (revised) in 2019. Qatar was the second-ranked exporter of LNG (after Australia) in the world in 2020 because it exported 106.5 billion cubic meters of natural gas by LNG ships to more than 19 countries; 71.8 billion cubic meters of these exports went to Asia and 30.2 billion cubic meters went to Europe. Qatar exported 21.8 billion cubic meters of natural gas by pipeline; 20.2 billion cubic meters were exported to the United Arab Emirates and 1.6 billion cubic meters were sent to other countries in the Middle East (table 1; BP p.l.c., 2021, p. 44–45; 2022, p. 36).

In 2020, Qatargas continued to develop the offshore Barzan Gas project, which was a joint venture between Qatargas (93%) and Exxon Mobil Corp. of the United States (7%). Since the $10.3 billion project was announced in 2011, its start date had been delayed several times—most recently owing to issues related to pipelines. The project consisted of both offshore and onshore facilities and was to extract gas from the North Field, which was the world's biggest nonassociated gasfield, constituting roughly 10% of the world's known gas reserves. The offshore development area is located approximately 80 km off the coast of Ras Laffan Industrial City in the Persian Gulf. Offshore facilities included 100 km of subsea cables, 300 km of subsea pipelines, and three offshore wellhead platforms. Onshore facilities consisted of a gas-processing unit, a sulfur recovery unit (to remove impurities from the natural gas), and a natural gas liquids (NGL) recovery unit, which would produce methane, ethane, propane, butane, and condensate (Crisp, 2018; Shoeb, 2019; Exxon Mobil Corp., 2021, p. 16; Offshore Technology, 2021).

The Government continued to develop the North Field expansion project, which began in 2019. The North Field is located adjacent to the South Pars Field, which was controlled by Iran. The project included construction of multiple 8.25-Mt/yr LNG trains and initially was intended to increase

the LNG production capacity to 110 Mt/yr by 2024 and then to 126 Mt/yr by 2027 from the LNG capacity of 77.5 Mt/yr in 2020. In June, QP signed deals with three companies from the Republic of Korea (Daewoo Shipbuilding & Marine Engineering; Hyundai Heavy Industries Co., Ltd.; and Samsung Heavy Industries Co., Ltd.) to build 100 LNG carriers by 2027. The total value of the shipbuilding deals was $19 billion (Finn and Tay, 2017; Smith, 2019; Trade Arabia News Service, 2020a).

Petroleum.—In 2020, production of crude petroleum and condensate in Qatar decreased by 0.5% to 627.3 million barrels (Mbbl) from 630.4 Mbbl (revised) in 2019; most of the crude petroleum was exported. Three fields—the Al Shaheen, the Dukhan, and the Idd Al-Shargi Fields—accounted for more than 85% of the country's crude petroleum production capacity. According to OPEC's Annual Statistical Bulletin, the country's proven crude petroleum reserves were estimated to be 25.2 billion barrels, which was 1.6% of the world's total. Qatar ranked sixth among the Middle Eastern countries with the largest crude petroleum reserves (tables 1, 2; Organization of the Petroleum Exporting Countries, 2022, p. 22).

MINERAL INDUSTRY HIGHLIGHTS IN 2021

In 2021, as the world's fourth-ranked producer of natural gas, Qatar achieved a record high natural gas production level of 207 billion cubic meters and accounted for about 5.0% of global output. In addition, the country surpassed Australia and became the leading exporter of LNG, accounting for 20.7% (107 billion cubic meters) of the world's LNG exports. The country's proven natural gas reserves were estimated to be 23.8 trillion cubic meters in 2021, and the country continued to have the third largest proven natural gas reserves in the world (Organization of the Petroleum Exporting Countries, 2020, p. 76, 79). Qatar was the world's second-ranked producer of helium (accounting for 32% of global output) and the ninth-ranked producer of urea (accounting for about 3% of global output) (table 1; BP p.l.c., 2022, p. 36; de Sousa and Cross, 2022, p. 8–9; Hamak and Goodin, 2023).

In 2021, the real GDP of Qatar increased by 1.5%. The output of the hydrocarbon sector decreased by 0.3%, whereas that of the nonhydrocarbon sector increased by 2.7%. The hydrocarbon sector continued to be the country's primary economic sector in 2021, accounting for 36.8% of the GDP. Government revenues from hydrocarbons increased by 110.9% in 2021 and the share of hydrocarbon revenue as a percentage of total Government revenues was 51.6%. The value of total exports from Qatar increased by 69% to $87.2 billion, of which hydrocarbon exports increased to $76.5 billion. The average Qatar (Dukhan) spot oil price increased to $69.92 per barrel in 2021 from $42.44 per barrel in 2020 (International Monetary Fund, 2022, p. 27–28, 30; Organization of the Petroleum Exporting Countries, 2022, p. 67).

In 2021, significant increases in production included that of cement (hydraulic), which increased by 13%. Significant decreases in production included that of raw steel and billet, which decreased by 18% each (table 1).

Exports of goods from Qatar to the United States were valued at $1.9 billion in 2021. Petroleum products (other) accounted for 30%, or about $552 million of these exports. Other significant mineral-related exports to the United States included chemicals (fertilizers) valued at $491 million; fuel oil, $428 million; bauxite and aluminum, $233 million; and natural gas, $28 million. Imports from the United States were valued at $2.6 billion in 2020. Petroleum products (other) accounted for about 2%, or $55 million of these imports. Other significant mineral-related imports from the United States included drilling and oilfield equipment valued at $33 million; jewelry, $14 million; excavating machinery, $12 million; iron and steel products (other), $7 million; and nonferrous metals (other), $856,000 (U.S. Census Bureau, 2022a, b).

In early 2021, Qatargas completed construction of its Helium 3 plant. With the start of operations at Helium 3, Qatargas increased its production capacity to 74 million cubic meters per year of helium. Qatar produced an estimated 45 million cubic meters of helium in 2021. In July, QP signed a 15-year agreement with CPC Corp. of Taiwan to supply CPC with 1.25 Mt/yr of LNG. The agreement was an addition to a previously signed 25-year agreement (in 2007) between QP and Taiwan for 3 Mt/yr of LNG. In 2021, Qatar produced 77 Mt of LNG (tables 1, 2; Oung, 2021; Shokri, 2021).

Outlook

The economy of Qatar is projected to grow by 3.4% in 2022 and 2.5% in 2023. Hydrocarbons are likely to continue to be the dominant mineral commodities in Qatar; consequently, the country's rate of economic growth will likely be tied to global crude petroleum and natural gas prices. The Brent crude petroleum price is projected to increase to $110.80 per barrel in 2022 and then to decrease slightly to $96.10 per barrel in 2023. Production of natural gas is projected to continue to increase with the expected completion of the offshore Barzan Gas project in the next several years and the North Field project in the longer term. The country's economy is also expected to increase owing to the end of a diplomatic rift that started in 2017 between Qatar and Bahrain, Egypt, Saudi Arabia, and the United Arab Emirates, which led to an economic blockade of Qatar. The GCC countries and Egypt signed a reconciliation agreement with Qatar at the GCC Annual Summit on January 5, 2021. The resolution is expected to boost investment in Qatar as well as increase trade and tourism (International Monetary Fund, 2022, p. 5, 7, 27).

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TABLE 1

QATAR: PRODUCTION OF MINERAL COMMODITIES[1]

(Thousand metric tons, gross weight, unless otherwise specified)

Commodity[2]		2017	2018	2019	2020	2021
METALS						
Aluminum, primary, metal		620	616	627	632	634
Iron and steel:						
Direct-reduced iron		2,493 r	2,465 r	2,393 r	753	781
Steel:						
Raw steel		2,645	2,575	2,558	1,218	1,002
Products:						
Bars, rolled		2,044	2,142	2,170	1,242	1,200 e
Billet, cast		2,645	2,575	2,558	1,220 e	1,000 e
INDUSTRIAL MINERALS						
Cement, hydraulic		6,000	5,600 r	4,500	3,900	4,400 e
Helium[e]	million cubic meters	45 r	45 r	45 r	45	45
Lime[e]		130	130	130	110	100
Nitrogen, fertilizer, N content:						
Ammonia		3,100	3,100 e	3,150 e	3,300 e	3,270 e
Urea		2,700 e	2,600	2,650 e	2,900 e	2,870 e
Stone, sand, and gravel, construction:						
Sand and gravel, sand		9,100	7,800	4,800	4,800 e	4,800 e
Stone:						
Dimension, limestone[e]		2,300	2,400	2,000	2,000	2,000
Size and shape unspecified, calcium carbonate		40	47	46	46 e	46 e
Sulfur:[e]						
Byproduct, natural gas, S content		2,000	1,800	2,000 r	1,650	1,700
Compounds, sulfuric acid		10	10	10	10	10
MINERAL FUELS AND RELATED MATERIALS						
Liquefied natural gas	million metric tons	75	76	77 r	77	77
Methanol		1,067	1,091	932 r	1,067	1,115
Natural gas, marketable	million cubic meters	165,370 r	170,040 r	176,300 r	205,720	207,034
Petroleum:						
Crude, including condensate	thousand 42-gallon barrels	640,940 r	654,445 r	630,355 r	627,324	637,290
Refinery	do.	131,692 r	141,000 r	133,225 r	111,325	115,000 e

[e]Estimated. [r]Revised. do. Ditto.

[1]Table includes data available through September 12, 2022. All data are reported unless otherwise noted. Estimated data are rounded to no more than three significant digits.

[2]In addition to the commodities listed, clays, dolomite, gypsum, gravel, and shale may have been produced, but available information was inadequate to make reliable estimates of output.

TABLE 2
QATAR: STRUCTURE OF THE MINERAL INDUSTRY IN 2021

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities**	Annual capacity
Aluminum		Qatar Aluminium Ltd. Q.S.C. (Qatalum) [Norsk Hydro ASA, 50%, and Qatar Aluminium Manufacturing Co. Q.P.S.C., 50%]	Smelter at Mesaieed, 40 kilometers south of Doha	660
Calcium carbonate		Qatar National Cement Co. (QNCC) (private Qatari investors, 57%, and Government, 43%)	Quarry at Umm Bab, 82 kilometers west of Doha	90
Cement:				
Portland		do.	5 kilns and 5 mills at Umm Bab	6,600
Do.		Al Khalij Cement Co. (Qatari Investors Group, 100%)	Kiln at Umm Bab	5,120
Do.		Al Jabor Cement Industries Co. (Al Jabor Holdings, 75%, and Holcim Ltd., 25%)	2 clinker grinding mills at Mesaieed	900
White		United Gulf Cement Co.	do.	170
Do.		Qatar National Cement Co. (QNCC) (private Qatari investors, 57%, and Government, 43%)	Plant at Ubb Bab	NA
Gypsum		Qatari Saudi Co. for Gypsum [National Gypsum Co., 33.375%; Qatar Industrial Manufacturing Co. Q.P.S.C. (QIMC), 33.375%; Qatar National Cement Co. (QNCC), 33.250%]	Mine at Salwa Industrial Area, Doha	135
Helium	million cubic meters	Joint venture of Qatargas Operating Co. Ltd. 1 (Qatargas 1), Ras Laffan Liquefied Natural Gas Co. Ltd. (RasGas), and Ras Laffan Liquefied Natural Gas Co. Ltd. (II) (RasGas II)	Qatar Helium plants 1, 2, and 3, Ras Laffan, 80 kilometers north of Doha	74
Iron and steel:				
Direct-reduced iron		Qatar Steel Co. Q.S.C. (QASCO) [Industries Qatar Q.S.C. (IQ), 100%]	Direct-reduction iron plant at Mesaieed, 50 kilometers south of Doha	2,300
Raw steel		do.	Plant at Mesaieed	3,500
Steel products:				
Rebar		Qatar Metals Coating Co. W.L.L. (Q-Coat) [Qatar Steel Co. Q.S.C. (QASCO) and Qatar Industrial Manufacturing Co. Q.P.S.C. (QIMC)]	Plant at Mesaieed	100
Rolled		Qatar Steel Co. Q.S.C. (QASCO) [Industries Qatar Q.S.C. (IQ), 100%]	Rolling mill at Mesaieed	1,800
Lime		do.	Plant at Mesaieed	225
Do.		Qatar National Cement Co. (QNCC) (private Qatari investors, 57%, and Government, 43%)	Kilns at Umm Bab	15
Methanol		Qatar Fuel Additives Co. Ltd. Q.S.C. (QAFAC) (Industries Qatar Q.S.C. (IQ), 50%; OPIC Middle East Corp., 20%; International Octane L.L.C., 15%; LYC Middle East Corp., 15%)	Plant at Mesaieed	1,100
Natural gas:				
Extracted	billion cubic meters	Dolphin Energy (Mubadala Investment Co., 51%; Occidental Petroleum Corp., 24.5%; TotalEnergies SE, 24.5%)	North Field-Dolphin, offshore	24
Do.	do.	Qatar Petroleum (QP) (Government, 100%)	Al Khaleej Field, offshore	21
Do.	do.	do.	North Field (NFB), offshore	20
Do.	do.	do.	North Field-Alpha (NFA), offshore	10
Liquefied		Ras Laffan Liquefied Natural Gas Co. Ltd. 3 (RasGas 3) [Qatar Petroleum (QP), 70%, and ExxonMobil Qatar Inc., 30%]	Trains 6 and 7 at Ras Laffan	15,600
Do.		Ras Laffan Liquefied Natural Gas Co. Ltd. II (RasGas II) [Qatar Petroleum (QP), 70%, and ExxonMobil Qatar Inc., 30%]	Trains 3, 4, and 5 at Ras Laffan	14,100
Do.		Qatargas Operating Co. Ltd. (Qatargas 1) [Qatar Petroleum (QP), 65%; TotalEnergies SE, 10%; ExxonMobil Qatar Inc., 10%; Marubeni Corp., 7.5%; Mitsui & Co. Ltd., 7.5%]	Three trains at Ras Laffan	10,000
Do.		Qatargas Operating Co. Ltd. (Qatargas 2) [Qatar Petroleum (QP), 70%, and ExxonMobil Qatar Inc., 30%]	Train 4 at Ras Laffan	7,800
Do.		Qatargas Operating Co. Ltd. (Qatargas 2) [Qatar Petroleum (QP), 65%; ExxonMobil Qatar Inc., 18.3%; TotalEnergies SE, 16.7%]	Train 5 at Ras Laffan	7,800
Do.		Qatargas Operating Co. Ltd. (Qatargas 3) [Qatar Petroleum (QP), 68.5%; ConocoPhillips Co., 30%; Mitsui & Co. Ltd., 1.5%]	Train 6 at Ras Laffan	7,800

See footnotes at end of table.

TABLE 2—Continued
QATAR: STRUCTURE OF THE MINERAL INDUSTRY IN 2021

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities**	Annual capacity
Natural gas:—Continued				
Liquefied—Continued		Qatargas Operating Co. Ltd. (Qatargas 4) [Qatar Petroleum (QP), 70%, and Royal Dutch Shell p.l.c., 30%]	Train 7 at Ras Laffan	7,800
Do.		Ras Laffan Liquefied Natural Gas Co. Ltd. (RasGas) [Qatar Petroleum (QP), 63%; ExxonMobil Qatar Inc., 25%; Korea	Trains 1 and 2 at Ras Laffan	6,600
Do.		Gas Corp. (Kogas), 5%; Itochu Corp., 4%; LNG Japan Corp., 3%]		
Nitrogen, fertilizer, N content:				
Ammonia		Qatar Fertilizer Co. S.A.Q. (QAFCO) [Industries Qatar Q.S.C. (IQ), 100%]	Plant at Mesaieed	3,300
Urea		do.	do.	2,900
Petroleum:				
Crude	42-gallon barrels per day	North Oil Co. (NOC) (Qatar Petroeleum, 70%, and TotalEnergies SE, 30%)	Al Shaheen Field, offshore	300,000
Do.	do.	Qatar Petroleum (QP) (Government, 100%)	Dukhan Field, onshore	256,000
Do.	do.	Occidental Petroleum Corp. (operator)[1]	Idd Al Shargi Field, North Dome and South Dome, offshore	113,000
Do.	do.	Total E&P Qatar Ltd. (operator)[1] (TotalEnergies SE)	Al Khaleej Field, offshore	37,500
Do.	do.	Qatar Petroleum (QP) (Government, 100%)	Bul Hanine Field, offshore	37,000
Do.	do.	Total E&P Qatar Ltd. (operator)[1] (TotalEnergies SE)	Maydan Mahzam Field, offshore	36,000
Do.	do.	Occidental Petroleum Corp. (operator)[1]	Al Rayyan Field, offshore	8,600
Do.	do.	United Petroleum Development Co. Ltd. (Bunduq Oil Production Co. Ltd, 97%, and BP p.l.c., 3%)	El Bunduq Field, offshore2	7,300
Do.	do.	Qatar Petroleum Development Co. (operator)[1] (Cosmo Oil Co., Nissho Iwai Corp., and United Petroleum Development Co.)	Al Karkara and A Structure Fields, offshore	6,200
Refined	do.	The Laffan Refinery Co. Ltd. [Qatar Petroleum (QP), 51%; Cosmo Oil Co., 10%; Exxon Mobil Corp., 10%; Idemitsu Kosan Co. Ltd., 10%; Mitsui and Co., 4.5%; Marubeni Corp., 4.5%]	Ras Laffan I & II complex, Ras Laffan	292,000
Do.	do.	Qatar Petroleum Refinery [Qatar Petroleum (QP), 100%]	Refinery at Mesaieed	137,000
Sand, washed		Qatar Sand Treatment Plant [Qatar Industrial Manufacturing Co. Q.P.S.C. (QIMC)]	Quarry at Umm Bab	12,000
Do.		Qatar National Cement Co. (QNCC) (private Qatari investors, 57%, and Government, 43%)	do.	10,000
Stone, limestone		Qatar Steel Co. Q.S.C. (QASCO) [Industries Qatar Q.S.C. (IQ), 100%]	do.	75
Do.		Al Khalij Cement Co. (Qatari Investors Group, 100%)	do.	NA
Sulfur:				
Elemental		Ras Laffan Liquefied Natural Gas Co. Ltd. (RasGas) [Qatar Petroleum (QP), 63%; ExxonMobil Qatar Inc., 25%; Korea Gas Corp. (Kogas), 5%; Itochu Corp., 4%; LNG Japan Corp., 3%]	Plant at Ras Laffan	400
Do.		Qatar Liquefied Gas Co. Ltd. Q.S.C. (Qatargas)	do.	300
Do.		Qatar Petroleum (QP) (Government, 100%)	Plant at Mesaieed	100
Do.		Qatar Petrochemical Co. Ltd. Q.S.C. (QAPCO) [Industries Qatar Q.S.C. (IQ), 80%, and TotalEnergies SE, 20%]	Plant at Umm Said	100
Sulfuric acid		Qatar Industrial Manufacturing Co. Q.P.S.C. (QIMC)	Plant at Mesaieed	37

Do., do. Ditto. NA Not available.

[1]Operated under a development and production-sharing agreement with Qatar Petroleum.

[2]The El Bunduq Field is located on the offshore border between Qatar and the United Arab Emirates. Royalties are shared by the Governments.

**First-order administrative division names conform to spellings in the U.S. Central Intelligence Agency's "The World Factbook" (https://www.cia.gov/the-world-factbook/field/administrative-divisions/) and may include the use of anglicized forms of the names.