

2020–2021 Minerals Yearbook

KUWAIT [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF KUWAIT

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

Kuwait was the world's 10th-ranked crude petroleum producer in 2020 and its output averaged about 2.7 million barrels per day (Mbbl/d). By yearend 2020, proven crude petroleum reserves were estimated to be 101.5 billion barrels (Gbbl) and accounted for 5.9% of the world's total (BP p.l.c., 2021, p. 16). Proven natural gas reserves in Kuwait were estimated to be about 1.7 trillion cubic meters and accounted for 0.9% of the world's total (BP p.l.c., 2021, p. 34). Nonfuel mineral commodities produced included cement, clays, gypsum, raw steel and steel products, salt, and sulfur. Production of mineral fuels other than crude petroleum included condensate, natural gas, and refined petroleum products. Kuwait is a member of the Organization of the Petroleum Exporting Countries (OPEC) and a member of the Cooperation Council for the Arab States of the Gulf, originally known as the Gulf Cooperation Council (GCC) (Cooperation Council for the Arab States of the Gulf, 2022; Organization of the Petroleum Exporting Countries, 2022b). Data on mineral production are in table 1.

In 2020, the crude petroleum and natural gas sector was the leading sector of Kuwait's economy, accounting for 33.4% of the gross domestic product (GDP). The country's crude petroleum exports accounted for 89% of total exports and about 90% (estimated) of Government revenue. In 2020, Kuwait's real GDP decreased by 8.9% compared with a 0.6% decrease in 2019 and a 2.4% increase in 2018. The International Monetary Fund (2022) estimated Kuwait's nominal GDP in 2020 to be about \$106 billion. The value of total exports decreased by 38% to \$40 billion¹ in 2020 from \$64 billion in 2019. The decline was almost entirely due to the decrease in the total value of crude petroleum exports to about \$36 billion from \$59 billion in 2019. The average price of Kuwait Export (the country's single crude petroleum export blend) decreased to \$41.49 per barrel in 2020 from \$64.25 per barrel in 2019. The value of total imports decreased by 17% to \$28 billion from \$34 billion in 2019 (Kuwait Central Statistics Bureau, 2021; International Trade Administration, 2021; Central Bank of Kuwait, 2022, tables 26, 35; Organization of the Petroleum Exporting Countries, 2022a, p. 66).

The legislative framework for the mineral sector in Kuwait is provided by Article 21 of the Constitution and law No. 21 of 1995, law No. 16 of 1996, and decision No. 210 of 2001. Executive Regulations under law No. 116 of 2014 provide the legal framework for public-private partnerships. Law No. 116 of 2014 established the Higher Committee and the Kuwait Authority for Partnership Projects (KAPP). The Higher Committee, under the jurisdiction of the Ministry of Finance, is responsible for granting approvals for contracts, feasibility studies, and land allocations for public-private partnership

projects. The KAPP, under the authority of the Higher Committee, is authorized to establish public joint stock companies to implement public-private partnership projects. Additionally, the KAPP is responsible for the assessment of feasibility studies and for developing contracts and public-private partnership agreements. Article 34 of law No. 116 lifts ownership restrictions of project companies to be foreign owned (State of Kuwait, 1962, p. 4; Ashurst LLP, 2015; Environment Public Authority, 2020).

Production

In 2020, significant decreases in production included that of residual fuel oil, which decreased by 50%; gasoline, by 16%; kerosene, by 15%; liquefied petroleum gas, by 14%; and cement (hydraulic), by 13% (estimated). The decreases in Kuwait's mineral production were due to the global economic downturn caused by the coronavirus disease 2019 (COVID-19) pandemic. Data on mineral production are provided in table 1.

Structure of the Mineral Industry

Government organizations responsible for the petroleum sector included the Kuwait Petroleum Corp. (KPC), the Ministry of Oil, and the Supreme Petroleum Council. Subsidiaries of KPC included Kuwait Oil Co. K.S.C. (KOC), which managed exploration and production operations of crude petroleum and natural gas; Kuwait Gulf Oil Co., which managed crude petroleum and natural gas operations in the Partitioned Neutral Zone (also known as the Divided Zone) between Kuwait and Saudi Arabia; Petrochemical Industries Co. K.S.C., which dominated Kuwait's fertilizer manufacturing sector; and Kuwait National Petroleum Co. K.S.C. (KNPC), which operated the country's petroleum refineries. State-owned Kuwait Investment Authority held interests in Kuwait's cement companies. Privately owned companies were active in the industrial minerals and metals sectors, including cement producer ACICO Group and United Steel Industrial Co. K.S.C.C. (KWTSTEEL). Table 2 is a list of major mineral industry facilities.

Commodity Review

Metals

Iron and Steel.—In 2020, KWTSTEEL operated a billet melt shop and a rolling mill in the Shuaiba Industrial Area using imported iron ore and other raw materials from Oman, Qatar, and Russia. The melt shop, with a capacity of 1.2 million metric tons per year (Mt/yr) of raw steel, produced steel billets from an electric arc furnace and a ladle refining furnace. The 1.4-Mt/yr-capacity rolling mill produced steel-reinforcing bar (table 2; Arab Iron and Steel Union, 2020; United Steel Industrial Co. K.S.C.C., 2021).

¹Where necessary, values have been converted from Kuwaiti dinars (KWD) to U.S. dollars (US\$) at the annual average exchange rates of KWD0.3063=US\$1.00 for 2020 and KWD0.3066=US\$1.00 for 2019.

Industrial Minerals

Cement.—Cement production in 2020 decreased to 3.4 million metric tons (Mt) (estimated) from 3.9 Mt (revised) in 2019. Kuwait Cement Co. K.S.C. (KCC), which was the leading cement producer in Kuwait, operated cement kilns at the Shuaiba Industrial Area [located 45 kilometers (km) south of Kuwait City] and had a production capacity of 4.9 Mt/yr clinker and about 5.2 Mt/yr of cement (gray and white). Gulf Nations Construction Materials Co. (GNCMC) (a subsidiary of Oasis Holding Co.) operated the Baitak cement plant at the West Shuaiba Industrial Area. The Baitak plant had a production capacity of 2.3 Mt/yr of portland cement. A subsidiary of the ACICO Group called ACICO Cement Co., which was also located in the Shuaiba Industrial Area, had cement operations with a production capacity of 1.0 Mt/yr clinker and 3.2 Mt/yr of cement (gray and white) (tables 1, 2; Oasis Holding Co., 2015; International Cement Review, 2020, p. 194–195; ACICO Group, 2021; Kuwait Cement Co. K.S.C., [undated]).

Mineral Fuels

Natural Gas.—The total production of natural gas (marketable) decreased by 7.7% to 12.9 billion cubic meters in 2020 from 14.0 billion cubic meters in 2019. KOC reported that its natural gas production (gross) consisted of about 75% associated natural gas and 25% nonassociated natural gas. KOC also noted that the production of nonassociated natural gas (gross) increased by about 10% owing to an improvement in the procedures for shutting down facilities for maintenance operations (table 1; Kuwait Oil Co. K.S.C., 2020, p. 26).

Petroleum.—Kuwait had 85 active crude petroleum rigs in 2020 compared with 87 rigs in 2019; this was the second greatest number of active rigs among Middle Eastern countries (Iran had the most with 117 rigs). In 2020, Kuwait produced crude petroleum from more than 12 developed oilfields; production decreased by 9.2% to 986 million barrels (Mbbl) from about 1.1 Gbbl in 2019. Exports of crude petroleum decreased to about 670 Mbbl in 2020, of which 30% was exported to the Organization for Economic Co-operation and Development (OECD) Asia and Pacific region (primarily Australia, Japan, and the Republic of Korea), 29% to China, 24% to other countries of Asia, and 10% to India. Kuwait's domestic primary energy consumption decreased by 9.9% to 1.51 exajoules in 2020; crude petroleum and natural gas accounted for the greatest shares, respectively, at 50% and 49%, whereas coal and renewable energy together accounted for the remaining 1% (table 1; BP p.l.c., 2021, p. 10-11; Organization of the Petroleum Exporting Countries, 2022a, p. 23, 47; Kuwait Oil Co. K.S.C., [undated]).

In 2020, KNPC continued to implement the Clean Fuels Project (CFP), which was a \$15 billion project initiated in 2014 to modernize and integrate the country's two crude petroleum refineries: the Mina Abdullah refinery and the Mina Al-Ahmadi refinery. The project was expected to increase the capacity of the Mina Abdullah refinery to 454,000 barrels per day (bbl/d) from 270,000 bbl/d. After renovations, the Mina Al-Ahmadi refinery was expected to have a capacity of 346,000 bbl/d compared with its current capacity of 466,000 bbl/d. The new

800,000-bbl/d integrated refinery complex was expected to produce higher value low-sulfur fuels for the domestic and international markets. In April 2020, KNPC announced that all the work on the Mina Al-Ahmadi refinery, which included 31 units, was completed. The work on the Mina Abdullah refinery, which included 70 units, was expected to be completed in 2021 (Oil and Gas Journal, 2014; Warrier, 2020; Kuwait National Petroleum Co., 2021).

Kuwait Integrated Petroleum Industries Co. (KIPIC) (a subsidiary of KPC) continued to develop the \$16 billion Al-Zour refinery in 2020. The 615,000-bbl/d refinery was expected to process Kuwait Export crude petroleum and Kuwait Heavy crude petroleum. Although KIPIC planned to begin initial operations in 2020, the project was delayed owing to issues related to the COVID-19 pandemic. The Al Zour refinery project was expected to increase the country's refining capacity to 1.415 Mbbl/d (Kuwait Petroleum Corp., 2019; Enerdata, 2020; Thomson Reuters, 2020; Itayim, 2021).

MINERAL INDUSTRY HIGHLIGHTS IN 2021

In 2021, the real GDP of Kuwait increased by 1.3%. The International Monetary Fund (2022) estimated the GDP of Kuwait in 2021 to be about \$135 billion.² There were notable increases in production in several refined petroleum products. Production of kerosene increased by 28%; residual fuel oil, by 23%; and gasoline, by 19. In 2021, the value of total exports increased by 58% to \$63 billion. The increase was due to the rising total value of crude petroleum exports, which increased to about \$58 billion. The average price of Kuwait Export increased to \$70.50 per barrel in 2021. The value of total imports increased by 15% to \$32 billion (table 1; Central Bank of Kuwait, 2022, table 35; Organization of the Petroleum Exporting Countries, 2022a, p. 66).

In June 2021, the Ministry of Commerce and Industry announced a ban on all exports and reexports of cement and other construction materials from Kuwait. The ban was expected to counter recent increases in the domestic prices of construction materials. The Ministry of Commerce and Industry subsidized building materials, including cement and concrete (Global Cement, 2021).

Kuwait's production of crude petroleum increased by 1.4% to 1.0 Gbbl in 2021 and its production of natural gas decreased by 1.2% to 12.7 billion cubic meters. In January, the Ministry of Oil announced that KOC had made three crude petroleum and natural gas discoveries. The first discovery was in northwestern Kuwait in an area with no previous petroleum discoveries and was named the Homah Oilfield. The second discovery was in the Qashaniyah Field, located in northern Kuwait and close to the Raudatain and Sabriya Fields. The third discovery was in an area north of the Burgan Field and south of Kuwait City (table 1; Saadi, 2021).

Kuwait's production of refined petroleum products increased by 8.0% to 308 Mbbl in 2021. In May, KNPC announced that the Mina Abdullah refinery expansion project was completed and that the CFP project was officially commissioned.

²Where necessary, values have been converted from Kuwaiti dinars (KWD) to U.S. dollars (US\$) at the annual average exchange rate of KWD0.3012=US\$1.00 for 2021.

In December, KPC announced that the construction of the Al Zour refinery had yet to be completed and that crude petroleum input feedstock that was planned to be used by the refinery would be sold to refineries in India (Brelsford, 2021; Thomson Reuters, 2021).

Outlook

According to the International Monetary Fund (2022), Kuwait's GDP is projected to increase by 8.3% in 2022 and by 2.6% in 2023. Kuwait is likely to remain an important world supplier of crude petroleum and a key regional supplier of natural gas, petroleum products, and sulfur. Government revenues are expected to continue to remain significantly dependent on exports of crude petroleum and therefore dependent on the global economy and international commodity prices. Completion of the Mina Abdullah expansion project and expected completion of the Al-Zour refinery will likely expand Kuwait's role in providing low-sulfur refined petroleum products to regional and international markets (International Monetary Fund, 2022).

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 $\label{eq:table 1} \textbf{TABLE 1} \\ \textbf{KUWAIT: PRODUCTION OF MINERAL COMMODITIES}^1 \\$

(Metric tons, gross weight, unless otherwise specified)

Commo	2017	2018	2019	2020	2021	
INDUSTRIAL MINERALS						
Cement, hydraulic ^e	thousand metric tons	3,400	3,400 ^r	3,900 ^r	3,400	3,500
Nitrogen, N content:						
Ammonia		546,000	270,000 r			
Urea	·	520,000	262,000			
Salt		58,200	59,300 ^r	58,600 ^r	59,000	59,000 °
Sulfur, byproduct, petroleum, S cont	556,800 ^r	671,000 ^r	623,300 ^r	620,000 e	620,000 e	
MINERAL FUELS AND R	ELATED MATERIALS					
Natural gas, marketable	million cubic meters	17,102	17,738	13,952	12,883	12,728
Petroleum:						
Crude, including condensate	thousand 42-gallon barrels	1,098,000	1,113,000	1,086,000 ^r	986,000	1,000,000
Refinery:						
Distillate fuel oil	do.	62,050	62,415	61,320	66,246	69,350
Gasoline	do.	13,140	13,140	22,265	18,666	22,265
Kerosene	do.	52,195	52,195	49,640	42,090	54,020
Liquefied petroleum gas	do.	9,746	9,308	8,687	7,430	7,300 e
Residual fuel oil	do.	55,845	56,210	53,655	26,718	32,850
Other	do.	129,320 ^r	131,948 ^r	127,823 ^r	124,696	122,640
Total	do.	322,000	325,000	323,000	286,000	308,000

^eEstimated. ^rRevised. do. Ditto. -- Zero.

¹Table includes data available through July 26, 2022. All data are reported unless otherwise noted. Totals and estimated data are rounded to no more than three significant digits; may not add to totals shown.

²In addition to the commodities listed, secondary aluminum, calcined coke, chlorine, clays, glass, gypsum, methanol, raw steel, sand and gravel, steel products, and sulfuric acid may have been produced, but available information was inadequate to make reliable estimates of output.

$\label{eq:table 2} \text{KUWAIT: STRUCTURE OF THE MINERAL INDUSTRY IN 2021}$

(Metric tons unless otherwise specified)

~	12.	Major operating companies	Y	Annual
	nmodity	and major equity owners	Location of main facilities**	capacity
Aluminum, seconda	ıry	Arabian Light Metals Co. K.S.C. (Kuwait Industries Co. Holding K.S.C.)	Smelter at Ahmadi Industrial Area	15,000
Cement:		5 /		
Clinker		Kuwait Cement Co. K.S.C. (KCC) (Kuwait Investment Authority, 29.4%; National Industries Group Holding, 27.4%; Al Rashed Trading and Industry Co., 7.5%; Kuwait Public Institution for Social Security, 5.1%)	2 kilns at Shuaiba Industrial Area, 45 kilometers south of Kuwait City	4,900,000
Do.		ACICO Cement Co. (ACICO Group)	do.	1,000,000
Gray portland		Kuwait Cement Co. K.S.C. (KCC) (Kuwait Investment Authority, 29.4%; National Industries Group Holding, 27.4%; Al Rashed Trading and Industry Co., 7.5%; Kuwait Public Institution for Social Security, 5.1%)	Kiln and mill at Shuaiba Industrial Area, 45 kilometers south of Kuwait City	5,000,000
Do.		ACICO Cement Co. (subsidiary of ACICO Group)	Mill at Shuaiba Industrial Area	3,000,000
Do.		Gulf Nations Construction Materials Co. (GNCMC) (Oasis Holding Co.)	Baitak cement plant at West Shuaiba Industrial Area	2,300,000
Do.		Alghanim International General Trading and Contracting Co.	Tarek cement plant at West Shuaiba Industrial Area	1,000,000
White		ACICO Cement Co. (ACICO Group)	Mill at Shuaiba Industrial Area	200,000
Do.		Kuwait Cement Co. K.S.C. (Kuwait Investment Authority, 29.4%; National Industries Group Holding, 27.4%; Al Rashed Trading and Industry Co., 7.5%; Kuwait Public Institution for Social Security, 5.1%)	Kiln and mill at Shuaiba Industrial Area, 45 kilometers south of Kuwait City	170,000
Iron and steel, steel:				
Raw steel		United Steel Industrial Co. K.S.C.C. (KWTSTEEL) (local investors, 51%, and Ahwaz Steel Commercial and Technical Services GmbH, 49%)	Melt shop at Shuaiba Industrial Area	1,200,000
Do.		Al Oula Steel Manufacturing Co. K.S.C.	do.	150,000
Rolled:				
Bar and rod		United Steel Industrial Co. K.S.C.C. (KWTSTEEL) (local investors, 51%, and Ahwaz Steel Commercial and Technical Services GmbH, 49%)	Rolling mill at Shuaiba Industrial Area	1,400,000
Do.		Kuwait Reinforcement Steel Manufacturing Co. (Ali Al-Sarraf International Group Co.)	do.	400,000
Pipe		Kuwait Pipes Industries and Oil Services Co. K.S.C.	Pipe mill at Sulaibiya Industrial Area	120,000
Do.		do.	Pipe mill at Shuwaikh ¹	65,000
Natural gas	million cubic meters	Kuwait Oil Co. K.S.C. (KOC) [Kuwait Petroleum Corp. (KPC), 100%]	Various fields ²	20,000
Nitrogen:				
Ammonia		Petrochemical Industries Co. K.S.C. [Kuwait Petroleum Corp. (KPC), 100%]	Plant B, Shuaiba Industrial Area ³	600,000
Urea	·	do.	Plants A and B, Shuaiba Industrial Area ³	600,000
Petroleum:				
Crude	42-gallon barrels per day	Kuwait Oil Co. K.S.C. (KOC) [Kuwait Petroleum Corp. (KPC), 100%]	South and East Field (Burgan, Khasman, and Madina Fields)	1,519,000
Do.	do.	do.	North Field (Abdali, Bahra, Matraba, Ratqa, Raudhatain, and Sabriya Fields)	671,000
Do.	do.	Al-Khafji Joint Operations (Kuwait Gulf Oil Co., 50%, and Aramco Gulf Operations Co., 50%)	Khafji Field, offshore Partitioned Neutral Zone	500,000

See footnotes at end of the table.

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

(Metric tons unless otherwise specified)

		Major operating companies		Annual	
Commodity		and major equity owners	Location of main facilities**	capacity	
Petroleum:—Continued					
Crude—Continued	42-gallon	Kuwait Oil Co. K.S.C. (KOC) [Kuwait Petroleum	West Field (Abdaliya, Kra' Al-Mero,	477,000	
	barrels per day	Corp. (KPC), 100%]	Managish, and Umm Gudair Fields)		
Do.	do.	do.	Sabriya and West Raudhatain Fields	176,000	
Do.	do.	Kuwait Gulf Oil Co. [Kuwait Petroleum Corp.	South Fuwaris, South Umm Gudair, and	80,000	
		(KPC), 100%]	Wafra Fields, onshore Partitioned		
			Neutral Zone		
Heavy crude	do.	do.	South Rumaila Field in Northrn Kuwait	60,000	
Natural gas liquids	thousand	Kuwait Oil Co. K.S.C. (KOC) [Kuwait Petroleum	Mina Al-Ahmadi GasPort import	70,000	
	42-gallon barrels	Corp. (KPC), 100%]	facility, Mina Al-Ahmadi		
Refinery:					
Coke, calcined		Petroleum Coke Industries Co. (PCIC)	Kiln coke calciner at Shuaiba	350,000	
			Industrial Area		
Other products	42-gallon	Kuwait National Petroleum Co. K.S.C. (KNPC)	Mina Abdullah refinery, 60 kilometers	454,000	
	barrels per day	[Kuwait Petroleum Corp. (KPC), 100%]	south of Kuwait City		
Do.	do.	do.	Mina Al-Ahmadi refinery, 45 kilometers	346,000	
			south of Kuwait City		
Salt		Al Kout Industrial Projects Co. K.S.S.C.	Salt pan at Shuaiba Industrial Area	15,000	
Sulfur, byproduct, petroleum, S content		Kuwait National Petroleum Co. K.S.C. (KNPC)	Mina Abdullah and Mina Al-Ahmadi	990,000	
		[Kuwait Petroleum Corp. (KPC), 100%]	refineries, south of Kuwait City		
Sulfuric acid		Chemikuwait Co.	Plant at West Shuaiba Industrial Area	18,000	

Do., do. Ditto.

¹Seasonal operations, typically April through October.

²Some natural gas was produced and recovered from most crude petroleum production operations in Kuwait and the Partitioned Neutral Zone. Nonassociated natural gas was produced from the Sabriya Field.

³Closed in June 2018.

^{**}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.