



2008 Minerals Yearbook

BANGLADESH

THE MINERAL INDUSTRY OF BANGLADESH

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In 2008, the mineral industry of the People's Republic of Bangladesh was based mainly on the production of coal, granite, natural gas, and petroleum. The country lacks reserves of metallic minerals, but has a large potential for the discovery of natural gas. During 2008, the Bangladesh Oil, Gas and Mineral Corp. (Petrobangla), which is the Government entity that is responsible for the exploration for, production of, and distribution of natural gas countrywide, was actively performing exploratory drillings and conducting three-dimensional (3-D) seismic surveys in an attempt to discover new gasfields to increase the country's natural gas reserves. Petrobangla was also in charge of the development of economically feasible mineral deposits in the country whereas exploring for minerals was the responsibility of the Geological Survey of Bangladesh (Bangladesh Oil, Gas and Mineral Corp., 2008, p. 8, 17).

Production

Bangladesh produced small amounts of industrial minerals and processed products, which included cement, clay, limestone, nitrogen fertilizer, and salt. Eastern Refinery Ltd. (ERL), which was a subsidiary of Bangladesh Petroleum Corp. (BPC), was Bangladesh's sole petroleum refining company. The refinery, which was located in Chittagong, processed imported crude oil from which it produced petroleum products (Eastern Refinery Ltd., 2009).

Structure of the Mineral Industry

In addition to exploring for, producing, and distributing oil and gas, Petrobangla also explored for and produced coal and granite through its subsidiaries Barapukuria Coal Mining Co. Ltd., and Maddhapara Granite Mining Co. Ltd. Table 2 is a list of major mineral industry facilities.

Commodity Review

Industrial Minerals

Cement.—Lafarge Surma Cement Ltd., which was a joint venture of Cementos Molins S.A. of Spain and Lafarge Group of France, operated a plant located at Chhatak in the district of Sunamganj in northeastern Bangladesh. Lafarge Surma mined the raw material that fed the plant from its own quarry at East Khasi Hills in Meghalaya State, India. Materials from the quarry were transported 17 kilometers (km) across the border from India to Bangladesh by conveyor belt. Lafarge Surma commenced commercial production at the plant in October 2006 with an annual production capacity of 1.5 million metric tons (Mt) of cement and 1.15 Mt of clinker; this level of cement production represented about 10% of the domestic cement market. In 2008, the Lafarge Surma cement plant operated below full capacity after a disruption in the supply of limestone

in 2007 halted operations at the plant. The supply disruption was owing to a court injunction concerning a dispute in the land use classification of the quarry facility in India. Lafarge Surma expected the consumption of cement in Bangladesh to increase in the near future owing to the Government's plan to develop new infrastructure (Lafarge Surma Cement Ltd., 2009; LankaBangla Securities, 2009).

HeidelbergCement Bangladesh Ltd., which was a subsidiary of HeidelbergCement Group of Germany, operated two plants in Bangladesh. The plants were located in Chittagong and in the Kanchpur area of Narayanganj. In February, the company completed the installation of a second cement grinding unit with an annual capacity of 450,000 metric tons (t) at its Kanchpur plant, which increased HeidelbergCement Bangladesh's total annual capacity to 2 Mt of cement (LankaBangla Securities, 2008).

Stone, Crushed.—Maddhapara Granite was the Petrobangla subsidiary responsible for the production of granite at its underground mine in the District of Dinajpur. The facility had a capacity to produce about 1.65 million metric tons per year (Mt/yr) of hard rock. The Maddhapara Mine commenced partial commercial production in May 2007. In fiscal year 2007-08 (which runs from July 1 to June 30), the mine produced 258,516 t of stone, of which about 50%, or 128,978 t, was sold domestically for use as construction material, such as aggregates (Bangladesh Oil, Gas and Mineral Corp., 2008, p. 29; Maddhapara Granite Mining Co. Ltd., 2009).

Mineral Fuels

Coal.—The Barapukuria coal mine, which was managed by Barapukuria Coal Mining Co. Ltd. (BCMCL) (a subsidiary of Petrobangla), was the first and only operating coal mine in Bangladesh. The mine reported a total production of 677,000 t of coal in fiscal year 2007-08, which was 50% more than the production target of 450,000 t. The increase in production was mainly owing to stock production from previous years. Coal produced from the mine was being used for power generation in the 250-megawatt coal-fired thermal powerplant located near the mine in the District of Dinajpur. Coal sales for fiscal year 2007-08 reached 491,000 t (Bangladesh Oil, Gas and Mineral Corp., 2008, p. 28-29).

In 2008, the London-based company Global Coal Management Resources (GCM) was still awaiting the approval from the Government for the development of its Phulbari Coal Project, which is located in the northwest region of Phulbari. The Government was in the process of reviewing the country's coal policy, which would set the regulations for the development of the coal industry and help establish a reliable source of energy for the country through the use of coal as the primary fuel for power generation (Global Coal Management Resources, 2008, p. 6-7, 9).

Natural Gas.—Petrobangla started to carry out extensive exploration and drilling activities to increase gas reserves, given that natural gas was used to produce approximately 73% of the commercial energy in Bangladesh. Petrobangla estimated that natural gas reserves would last through 2011 before the demand exceeded supply, based on 2008 gas demand rates. As of yearend 2008, 23 gasfields had been discovered in the country for an estimated proven recoverable reserve of more than 441 billion cubic meters (reported as 15.584 trillion cubic feet) (Bangladesh Oil, Gas and Mineral Corp., 2008, p. 8).

The Titas gasfield was the largest gasfield in the country and supplied about 24% of the country's total requirements for natural gas. The gasfield was operated by Bangladesh Gas Fields Co. Ltd. (BGFCL), which was a subsidiary of Petrobangla. The Sangu gasfield, which was Bangladesh's only offshore gasfield, is located in the Bay of Bengal and produced 4.8 million cubic meters per day (reported as 170 million cubic feet per day) in 2005, which by December 2008, had subsided to 1.4 million cubic meters per day (reported as 50 million cubic feet per day). The Bibiyana field came into production in March 2007 with a production rate of 5.7 million cubic meters per day (reported as 200 million cubic feet per day), which increased to more than 18.4 million cubic meters per day (reported as 650 million cubic feet per day) by mid-2008. The Bibiyana gasfield supplied about 23% of the total gas demand in the country (Bangladesh Oil, Gas and Mineral Corp., 2008, p. 9).

Public sector activities in oil and gas exploration, production, and distribution, and the development of the mineral industry in Bangladesh were managed through Petrobangla's 11 specialized companies. In 2008, Petrobangla's Bangladesh Petroleum Exploration and Production Co. Ltd. (BAPEX) was the only company that conducted exploration for oil and gas in the country. In addition, BAPEX carried out production activities at its properties, which included the Fenchuganj and the Saldanadi gasfields, for a total production of about 307.8 million cubic meters of natural gas (reported as 10.9 billion cubic feet) in fiscal year 2007-2008 (Bangladesh Oil, Gas and Mineral Corp., 2008, p. 18, 20).

In fiscal year 2007-08, the major natural gas producing companies in the public sector were Petrobangla companies BGFCL and Sylhet Gas Fields Ltd. (SGFL), which together accounted for about 53% of total gas production. BGFCL was the leading gas producing company in Bangladesh, and managed the following six gasfields: Bakhrabad, Habigangj, Kamta, Meghna, Narsingdi, and Titas. BGFCL produced about 7.198 billion cubic meters (reported as 254.2 billion cubic feet) in fiscal year 2007-08. In the public sector, SGFL was the second ranked gas producer in the country and operated the Beanibazar, the Haripur, the Kailashtila, and the Rashidpur gasfields. In fiscal year 2007-08, SGFL produced about 1.741 billion cubic meters (reported as 61.5 billion cubic feet) of gas (Bangladesh Oil, Gas and Mineral Corp., 2008, p. 18, 22-23).

Five companies under Petrobangla carried out gas transmission and distribution in Bangladesh. In fiscal year 2007-08, the Gas Transmission Co. Ltd. had a total of 930 km of gas pipeline and transported 12.3 billion cubic meters of gas. In 2008, Titas Gas Transmission and Distribution Co. Ltd. (TGTDC) constructed about 600 km of distribution pipelines for a

total network of 11,140 km. TGTDC sold approximately 12.2 billion cubic meters of gas (reported as 432.4 billion cubic feet) in fiscal year 2007-08, from which 42% was sold to the powerplant sector and 9% was sold to the fertilizer industry. In fiscal year 2007-08, Bakhrabad Gas System Ltd. (BGS) constructed 227.4 km of new distribution pipeline for a total network of 6,092 km. The company sold 2.8 billion cubic meters of gas (reported as 99.8 billion cubic feet), from which 21% was sold to the powerplant sector and 34% was sold to the fertilizer industry. In the same timeframe, Jalalabad Gas Transmission and Distribution System Ltd. constructed 140 km of gas distribution and service pipelines for a total network of 2,890 km of transmission, distribution, and service lines. Gas sold in fiscal year 2007-08 amounted to about 884.6 million cubic meters (reported as 31.24 billion cubic feet), from which approximately 47% was sold to the powerplant sector. Similarly, Pashchimanchal Gas Co. Ltd. had a total network of 887.8 km of pipeline and sold 613.6 million cubic meters (reported as 21.67 billion cubic feet) in fiscal year 2007-08 (Bangladesh Oil, Gas and Mineral Corp., 2008, p. 23-26).

During fiscal year 2007-08, four international companies operated and produced gas in Bangladesh, including Tullow Oil plc of the United Kingdom (698.9 million cubic meters), Cairn Energy plc of the United Kingdom (671.1 million cubic meters), Niko Resources Ltd. of Canada (52.95 million cubic meters), and Chevron Corp. of the United States (5.08 billion cubic meters) (Bangladesh Oil, Gas and Mineral Corp., 2008, p. 30).

Petroleum.—In 2008, ERL produced about 15 petroleum products and supplied about 40% of the country's petroleum products needs. ERL processed crude oil imported by BPC and produced petroleum products that were transferred to other BPC subsidiaries for marketing and distribution (Eastern Refinery Ltd., 2009).

Outlook

Mineral exploration in Bangladesh is expected to increase during fiscal year 2009-10 as a result of projects that started and progressed in 2008, especially in the mineral fuels sector. The Government of Bangladesh has a goal of having the entire country with a dependable power supply by 2020. When completed, the final review of the coal policy will set the regulations for the development of the coal industry. Bangladesh is considering coal as an alternative to natural gas as a reliable supply of energy when used as a primary fuel for power generation. This is particularly important as the country made no new significant natural gas discoveries in 2008, although Petrobangla carried out extensive exploration and drilling activities to increase gas reserves. Lafarge expects the consumption of cement to increase in the near future owing to the development of new infrastructure by the Government (Bangladesh Oil, Gas and Mineral Corp., 2008, p. 8, 35).

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TABLE 1
BANGLADESH: ESTIMATED PRODUCTION OF MINERAL COMMODITIES^{1,2}

(Metric tons unless otherwise specified)

Commodity ³	2004	2005	2006	2007	2008
Cement, hydraulic ⁴	5,000,000	5,100,000	5,100,000	5,100,000	5,000,000
Clays, kaolin ⁴	8,300	8,400	8,500	8,600	8,500
Coal, bituminous ⁴	87,143 ^{r,5}	303,016 ^{r,5}	388,000 ^r	677,000 ^r	700,000
Gas, natural, marketed ^{4,6}	million cubic meters	13,605 ^{r,5}	14,915 ^{r,5}	15,918 ^{r,5}	17,014 ^{r,5}
Iron and steel, metal: ⁴					
Steel, crude, ingot only	25,000	20,000	10,000	--	--
Steel products	70,000	70,000	70,000	60,000	60,000
Nitrogen, N content of urea, ammonia, ammonium sulfate	1,379,500 ⁵	1,380,000	1,250,000	1,300,000	1,300,000
Petroleum:					
Crude	thousand 42-gallon barrels	1,700	1,663 ^{r,5}	1,715 ^{r,5}	1,800 ^r
Refinery products	do.	9,100	9,200	9,300	9,400
Salt, marine ⁴		350,000	350,000	350,000	360,000
Stone, crushed					
Granite		650,000	900,000	1,200,000	1,500,000
Limestone		36,000	35,179 ^{r,5}	67,736 ^{r,5}	70,000 ^r

^rRevised. do. Ditto. -- Zero.

¹Estimated data are rounded to no more than three significant digits.

²Table includes data available through December 28, 2009.

³In addition to the commodities listed, crude construction materials, such as sand and gravel and other varieties of stone, presumably are produced, but available information is inadequate to make reliable estimates of output.

⁴Data are for fiscal year ending June 30 of following year.

⁵Gross production is not reported; the quantity vented, flared, or reinjected is believed to be negligible.

⁶Reported figure.

TABLE 2
BANGLADESH: STRUCTURE OF THE MINERAL INDUSTRY IN 2008

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity ^c	
Cement	Bangladesh Oil, Gas and Mineral Corp. (Petrobangla)	Chittagong	1,000.	
Do.	do.	Sylhet	1,100.	
Do.	Cemex Cement Bangladesh Ltd.	Mahmudnagar	600.	
Do.	HeidelbergCement Bangladesh Ltd.	Chittagong and Narayanganj (near the capital Dhaka)	2,000.	
Do.	Holcim (Bangladesh) Ltd.	Bagerhat and Narayanganj	1,300.	
Do.	Lafarge Surma Cement Ltd. (Lafarge Group and Cementos Molins S.A.)	Chhatak, Sunamganj	1,500 (1,150 clinker).	
Do.	Premier Cement Mills Ltd.	Muktarpul and Munshiganj	1,460.	
Do.	Shah Cement Industries Ltd.	Dhaka	1,860.	
Do.	Unique Cement Industries Ltd.	Chittagong, Dhaka, and Sylhet	1,440.	
Coal	Barapukuria Coal Mining Co. Ltd. (BCMCL) [Bangladesh Oil, Gas and Mineral Corp. (Petrobangla), 100%]	Barapukuria	1,000.	
Fertilizer	Bangladesh Chemical Fertilizer Corp.	Auganish	560.	
Do.	do.	Fenchugani	100.	
Do.	do.	Ghorasai	600.	
Gas, natural	million cubic meters per day	Bangladesh Gas Fields Co. Ltd. (BGFCL) [Bangladesh Oil, Gas, and Mineral Corp. (Petrobangla), 100%]	Bakhrabad, Habiganj, Kamta, Meghna, Narsingdi, and Titas	22.
Do.	do.	Bangladesh Petroleum Exploration and Production Co. Ltd. (BAPEX) [Bangladesh Oil, Gas and Mineral Corp. (Petrobangla), 100%]	Fenchuganj and Saldanadi	2.
Do.	do.	Cairn Energy plc	Sangu (offshore)	3.
Do.	do.	Chevron Corp.	Bibiyana, Jalalabad, and Maulavi Bazar	17.
Do.	do.	Niko Resources Ltd.	Bibiyana and Feni	6.
Do.	do.	Sylhet Gas Fields Ltd. (SGFL) [Bangladesh Oil, Gas, and Mineral Corp. (Petrobangla), 100%]	Beanibazar, Haripur, Kailashtila, and Rashidpur	5.
Do.	do.	Tullow Oil plc	Bangora	2.
Petroleum:				
Crude	42-gallon barrels per day	Cairn Energy plc	Sangu	30,000.
Refined	do.	Eastern Refinery Ltd. (ERL)	Chittagong	34,000.
Steel, crude		Bangladesh Steel and Engineering Corp.	do.	20.
Stone, crushed, granite		Maddhapara Granite Mining Co. Ltd. [Bangladesh Oil, Gas and Mineral Corp. (Petrobangla)]	Maddhapara, District of Dinajpur	1,650.

^cEstimated; estimated data are rounded to no more than three significant digits. Do., do. Ditto.