



# 2005 Minerals Yearbook

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BANGLADESH

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# THE MINERAL INDUSTRY OF BANGLADESH

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Bangladesh is one of the world's most densely populated and poorest countries, with underdeveloped mineral resources that include large potential natural gas reserves. The country's gross domestic product (GDP) grew by 5.8% in 2005. The per capita GDP based on purchasing power parity was low at \$2,011. Inflation remained high at 7% (International Monetary Fund, 2006<sup>§</sup>). Agriculture accounted for 35% of the GDP. The Government attempted to diversify its economy away from agriculture by encouraging industrial development and natural gas exploration. Bangladesh has small reserves of coal and oil. The output of the mineral industry consisted of the production of small amounts of cement, clay, limestone, nitrogen fertilizers, salt, and steel. The Ministry of Energy and Mineral Resources has overall responsibility for the country's energy sector.

The demand for cement in the construction industry grew at a rate of from 5% to 8% per year. Bangladesh's installed capacity was more than 17 million metric tons per year (Mt/yr) from 65 mills. The cement industry was ailing and had too much capacity for current demand. Bangladesh had no abundant indigenous limestone and continued to import 6 Mt/yr of clinker. An integrated cement plant with a capacity of 1.2 Mt/yr using limestone from India was set up by Holcim (Bangladesh) Ltd. near Sylhet in northeastern Bangladesh. Commercial production was expected to begin in 2006. Holcim had a combined capacity of 1.3 Mt/yr with three plants in two locations at Meghnaghat and in southwestern Bangladesh (World Cement, 2005).

Asia Energy plc reported that core sample analysis from drilling at its Phulbari coal project in northwestern Bangladesh confirmed expectations of bituminous coal with high volatiles, low ash, and good calorific value. Some of Phulbari's coal production might be suitable for sale either as a semisoft coking coal or as a pulverized injection coal. An opencast coal mine was envisioned to produce 15 Mt/yr in 2007. A definitive feasibility study would define the deposit, which had potential reserves in excess of 400 million metric tons. The planned mine would export coal to India and provide a long-term source of sustainable energy to Bangladesh (Asia Energy plc, 2005<sup>§</sup>).

The Barapukuria coal mine being developed would produce 1 Mt/yr of coal, of which 65% would be used in the 250-megawatt (MW) coal-fired powerplant, and 35%, in brick fields and for other domestic purposes. The management and production contract was awarded to China National Machinery Import and Export Corp.; the completion date of the project was extended owing to power supply interruptions and unforeseen hydrogeologic environmental conditions. The underground mine development work was near completion, and inspection and testing were in progress in March (Barapukuria Coal Mining Co. Ltd., 2005<sup>§</sup>).

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<sup>§</sup>References that include a section mark (§) are found in the Internet References Cited section.

The Government's licensing round for oil and gas was scheduled for early 2006. Bangladesh was reported by state-owned Bangladesh Oil, Gas & Mineral Corp. to have significant gas reserves of approximately 433 billion cubic meters (15.3 trillion cubic feet). The country's demand for natural gas was expected to grow by 6% per year, and potential uses of natural gas included use of compressed gas for vehicles, for fertilizer and petrochemicals production, and for power generation (U.S. Energy Information Administration, 2005<sup>§</sup>).

Tullow Oil plc made a gas discovery with its Bangora-1 well on Block 9 near its Lalmai find. The well flowed at an average rate of 3.4 million cubic meters per day of gas from three zones during testing. Partners in the block were Tullow (30%) as operator, Niko Resources Ltd. of Canada (60%), and state-owned Bangladesh Petroleum Exploration and Production Co. (Bapex) (10%) (Petroleum Economist, 2005a).

In January, a fire spread at the Tengrakhali Gasfield, which is located in the Sunamganj District in northeastern Bangladesh about 400 kilometers (km) from Dhaka; the gasfield was being tested and further explored under the joint venture of Bapex and Niko. Niko had invested more than \$15 million in the field. Bangladesh produced gas from 13 of 22 discovered gasfields (Reuters.com, 2005<sup>§</sup>).

In August, Unocal Corp. began commercial production at the Moulavibazar Gasfield. Output was expected to reach full capacity of 4.2 million cubic meters per day within three months, which would bring the country's total gas production to 41.6 million cubic meters per day and exceed its total demand of 41 million cubic meters per day. The \$42 million development cost included a 24-km pipeline link to the national network. The next major development would be the Bibiyana Field, which would add 5.7 million cubic meters per day of production by late 2006. Unocal also operated the Jalalabad Field in Block 13, which supplied 5.7 million cubic meters per day of gas (Petroleum Economist, 2005b).

Wartsila Corp. of Finland was awarded contracts by Bangladesh's Summit Power Ltd. to supply gas-fueled generating sets for two separate powerplants at Comilla and Narsingdi. Each generating set produced up to 9 MW of power. Three generating sets for Narsingdi and two others for Comilla were due for shipment in February 2006, and both plants were expected to be fully operational and connected to the national grid by July 2006 (Wartsila Corp., 2005).

## References Cited

- Petroleum Economist, 2005a, News in brief: Petroleum Economist, v. 72, no. 1, January, p. 46.  
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Wartsila Corp., 2005, Gas-fuelled generating sets for Bangladesh: Wartsila Corp. press release, September 22, 2 p.  
World Cement, 2005, A developing industry: World Cement, v. 36, no. 11, November, p. 51.

## Internet References Cited

Asia Energy plc, 2005 (January 12), Tests of coal quality at Asia Energy's Phulbari deposit indicate presence of high quality export coal products, accessed January 18, 2005, via URL <http://www.londonstockexchange.com/LSECWS/IFSPages>.

Barapukuria Coal Mining Co. Ltd., 2005, Activities, accessed June 19, 2006, at URL <http://www.bcml.org/bd>.

International Monetary Fund, 2006 (April), Bangladesh, World Economic Outlook Database, accessed May 31, 2006, via URL <http://www.imf.org/external/pubs/ft/weo/2006/01/data/index.htm>.

Reuters.com, 2005 (January 8), Fire spreading at gasfield in Bangladesh, accessed January 8, 2005, via URL <http://yahoo.reuters.com/financeQuoteCompanyNewsArticle.jhtml>.

U.S. Energy Information Administration, 2005 (August), Bangladesh country analysis brief, accessed May 16, 2006, at URL <http://www.eia.doe.gov/emeu/cabs/bangla.html>.

## Major Sources of Information

Bangladesh Oil, Gas & Mineral Corp.  
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Dhaka, Bangladesh  
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Bangladesh Petroleum Corp.  
GPO Box 2003  
Dhaka, Bangladesh  
Telephone: 880 2 235717  
Geological Survey of Bangladesh  
153 Pioneer Road  
Dhaka, Bangladesh  
Telephone: 880 2 406201  
Ministry of Energy and Mineral Resources  
Dhaka, Bangladesh  
Telephone: 880 2 404051

## Major Publications

Bangladesh Bureau of Statistics, Dhaka:  
Monthly Statistical Bulletin of Bangladesh.  
Statistical Yearbook of Bangladesh.

TABLE 1  
BANGLADESH: ESTIMATED PRODUCTION OF MINERAL COMMODITIES<sup>1,2</sup>

(Metric tons unless otherwise specified)

| Commodity <sup>3</sup>                                 |                            | 2002                   | 2003                   | 2004                   | 2005               |       |
|--|----------------------------|------------------------|------------------------|------------------------|--------------------|-------|
| Cement, hydraulic <sup>4</sup>                         | 5,005,000 <sup>5</sup>     | 5,000,000              | 5,000,000              | 5,000,000              | 5,100,000          |       |
| Clays, kaolin <sup>4</sup>                             | 8,000                      | 8,100                  | 8,200                  | 8,300                  | 8,400              |       |
| Gas, natural, marketed <sup>4,6</sup>                  | million cubic meters       | 7,000                  | 7,200                  | 7,300                  | 8,100 <sup>r</sup> | 9,400 |
| Iron and steel, metal: <sup>4</sup>                    |                            |                        |                        |                        |                    |       |
| Steel, crude, ingot only                               | 30,000                     | 30,000                 | 25,000                 | 25,000                 | 20,000             |       |
| Steel products   | 80,000                     | 80,000                 | 70,000                 | 70,000                 | 70,000             |       |
| Nitrogen, N content of urea, ammonia, ammonium sulfate | 1,273,000 <sup>5</sup>     | 1,288,500 <sup>5</sup> | 1,388,700 <sup>5</sup> | 1,379,500 <sup>5</sup> | 1,380,000          |       |
| Petroleum:   |                            |                        |                        |                        |                    |       |
| Crude  | thousand 42-gallon barrels | 1,550                  | 1,600                  | 1,800                  | 1,700              | 1,900 |
| Refinery products                                      | do.                        | 8,800                  | 8,900                  | 9,000                  | 9,100              | 9,200 |
| Salt, marine <sup>4</sup>                              | 350,000                    | 350,000                | 350,000                | 350,000                | 350,000            |       |
| Stone, limestone <sup>4</sup>                          | 30,000                     | 32,000                 | 34,000                 | 36,000                 | 37,000             |       |

<sup>r</sup>Revised.

<sup>1</sup>Estimated data are rounded to no more than three significant digits.

<sup>2</sup>Table includes data available through June 1, 2006.

<sup>3</sup>In 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 levels.

<sup>4</sup>Data are for years ending June 30 of that stated.

<sup>5</sup>Reported figure.

<sup>6</sup>Gross production is not reported; the quantity vented, flared, or reinjected is believed to be negligible.