



2010 Minerals Yearbook

BULGARIA



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THE MINERAL INDUSTRY OF BULGARIA

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Bulgaria's mineral industry included mine output of metal ores, mineral fuels (mainly coal), and a variety of industrial minerals. Additionally, the metallurgical sector smelted and refined copper, lead, silver, steel, and zinc. On a world scale, however, Bulgaria's mineral industry was small and mainly of regional importance. Bulgaria had the potential to become a globally significant natural gas transit country because the planned Nabucco and South Stream pipelines were to pass through the country.

Minerals in the National Economy

In 2010, Bulgaria's gross domestic product (GDP) based on purchasing power parity was \$99.04 billion, which was a slight increase compared with the country's GDP in 2009 of \$98.84 billion. Bulgaria's industrial sector accounted for 30.7% of the GDP, and in 2010, the sector grew by 0.4% compared with that of the previous year. In 2009 (the latest year for which data were available), the production value of mining and quarrying activities decreased by 19% compared with that of 2008, and a reported 26,586 people were employed in mining and quarrying (National Statistical Institute of the Republic of Bulgaria, 2010a, b, 2011; U.S. Central Intelligence Agency, 2011).

Production

Refined copper production increased by 9% compared with that of 2009, and refined zinc production decreased by 4.3%. Crude steel production increased by 1.9% but no pig iron was produced in 2010. Production of most industrial minerals was estimated to be recovering after having decreased significantly in 2009 owing to difficult economic conditions in the world and decreased construction activity in the country, which affected demand for industrial minerals (table 1; Italcementi Group, 2011, p. 49).

Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities.

Commodity Review

Metals

Copper.—In December, Dundee Precious Metals Inc. of Canada announced a long-term loan agreement in the amount of \$66.75 million with the European Bank for Reconstruction and Development and Unicredit Bulbank. The proceeds of the loan would be used mostly to finance the company's \$150 million Chelopech Mine and Mill expansion. As a result of this expansion, the production of both the mine and the mill was expected to double to approximately 2 million metric tons

per year of ore. The construction project was scheduled to be finished by the end of 2011 (Dundee Precious Metals Inc., 2010).

Gold.—In June, Euromax Resources Ltd. of Canada announced that drilling at its project in Breznik had extended the strike of the high-grade gold-silver deposit by 120%, or to 2,200 meters (m) from nearly 1,000 m. The company also announced that drilling reports had identified a parallel gold-silver deposit and a previously unidentified gold-copper deposit (Euromax Resources Ltd., 2010).

Iron and Steel.—Stomana Industry S.A., which was a subsidiary of Sidenor S.A. of Greece, announced in November a proposed investment of more than \$35 million by the International Finance Corp. of the World Bank Group. This investment would help fund new capital investment, including a new electric arc furnace. This investment was intended to revitalize the company and provide environmental and financial benefits in the long term (Stomana Industry S.A., 2010).

Industrial Minerals

Cement.—Cement production was estimated to have fallen in 2010 as cement consumption in Bulgaria decreased by 22.4% and sales of cement and clinker by the main producers dropped by 33.4% in 2010 compared with consumption and sales in 2009, respectively. Financial distress and a lack of available financing opportunities affected the domestic residential construction market, and an increase in imports contributed to a further drop in production and prices. Public investment in the construction sector was limited because of growing concerns of financial exposure in the public sector (Cembureau, 2011, p. 7; Italcementi Group, 2011, p. 49).

Mineral Fuels

Coal.—Bulgaria's main producer of coal was Mini Maritsa Iztok EAD, which accounted for about 95% of lignite production in Bulgaria. Economic Mining and Power Combine (SMEK) Balkanbass was removed from the list of bituminous coal producers in table 2. No information was available as to when SMEK Balkanbass stopped production of coal, but Mina Balkan 2000 AD was the only reported producer of bituminous coal (table 2; Ministry of Economy, Energy, and Tourism, 2009, p. 11). No coke was produced in 2010 because the production capacity of Kremikovtzi AD (the country's only coke producer) was shut down in late 2008.

Natural Gas.—On January 31, 2009, Melrose Resources S.a.r.l. stopped production at its Galata field in the Black Sea, which had been the only source of natural gas production in Bulgaria. The field was almost depleted, and Melrose planned to convert it into a gas storage facility that would have an eventual capacity of 1.2 billion cubic meters and potentially up

to 1.8 billion cubic meters. Planning continued as the company waited for various approvals from the Government before continuing work on the project. Melrose also began production in November in two offshore fields in the Black Sea—the Kaliakra deposit, which had reported reserves of 1.4 billion cubic meters, and the Kavarna deposit, which had reserves of 0.7 billion cubic meters (Ministry of Economy, Energy, and Tourism, 2009, p. 6; Melrose Resources Plc., 2011, p. 4–5).

In May 2009, Bulgarian Energy Holding EAD and OAO Gazprom of Russia signed an agreement that established the framework for a feasibility study of the South Stream natural gas pipeline's section through Bulgaria and the establishment of a joint venture to build and operate the pipeline. Following elections in July, a new center-right Government took power in Bulgaria and announced that it wanted to reexamine energy deals made with Russia by the former Socialist Party-led Government. In December, the Bulgarian Energy Ministry and Bulgaria Energy Holding EAD agreed to meet in January 2010 with Gazprom to discuss reestablishing terms for the continuation of the South Stream pipeline project in Bulgaria. The South Stream pipeline had a planned capacity of 63 billion cubic meters per year of natural gas to be transported from Russia to Europe through the Black Sea (Leviev-Sawyer, 2009; OAO Gazprom, 2009, 2010).

On July 13, 2009, Bulgaria, along with Austria, Hungary, Romania, and Turkey, signed an agreement that established the basic legal rules and tariff regulations for the Nabucco natural gas pipeline project. Nabucco was supported by the European Union and the United States and was designed to act as an alternative supply route for natural gas to Europe by transporting 31 billion cubic meters per year of natural gas from Central Asia and the Middle East. Supplies of natural gas for the pipeline were the biggest concern for the project because no source of gas had yet been guaranteed (Offshore, 2009).

Outlook

Improvements in the economic situation in Europe and renewed trade led to a slow recovery of the Bulgarian economy in 2010; however, construction activity in Bulgaria in the residential sector remained poor. A modest increase in domestic demand for mineral commodities in Bulgaria is expected as the economic activity in the country accelerates; the country, however, is likely to remain a modest producer in terms of world production.

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TABLE 1
BULGARIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

| Commodity ² | 2006 | 2007 | 2008 | 2009 | 2010 ^c |
|---|-----------------|---------|---------------------|---------------------|----------------------|
| METALS | | | | | |
| Aluminum, metal, secondary | 12,825 | 17,330 | 12,607 ^f | 4,107 ^f | 12,000 |
| Cadmium, metal, smelter | 363 | 459 | 460 ^e | 420 ^e | 420 |
| Copper: | | | | | |
| Ore: | | | | | |
| Gross weight thousand metric tons | 29,572 | 29,674 | 27,826 | 26,936 ^f | 27,000 |
| Cu content ^e do. | 124 | 116 | 109 | 110 ^e | 110 |
| Concentrate: | | | | | |
| Gross weight do. | 502 | 502 | 428 | 415 ^f | 415 |
| Cu content do. | 110 | 110 | 105 | 105 | 105 |
| Metal, primary and secondary: | | | | | |
| Smelter | 238,500 | 229,100 | 278,200 | 276,200 | 277,000 |
| Refined, electrolytically | 65,500 | 69,900 | 126,700 | 196,900 | 215,100 ³ |
| Gold, in concentrate kilograms | 3,818 | 3,964 | 4,160 | 4,300 ^e | 4,400 |
| Iron and steel, metal: | | | | | |
| Pig iron for steelmaking thousand metric tons | 1,147 | 1,069 | 441 | -- | -- |
| Ferroalloys ^e do. | 10 | 10 | 6 ³ | -- | -- |
| Steel, crude do. | 2,124 | 1,909 | 1,330 | 726 | 740 |
| Semimanufactures ^e do. | 1,400 | 1,400 | 1,287 ³ | 700 | 700 |
| Lead: | | | | | |
| Mine output, Pb content | 10,000 | 15,000 | 15,000 | 12,000 ^f | 12,000 |
| Concentrate: | | | | | |
| Gross weight | 25,387 | 23,395 | 18,503 | 19,000 ^e | 19,000 |
| Pb content | 17,771 | 16,377 | 12,950 | 13,000 ^e | 13,000 |
| Metal, refined, primary and secondary | 76,028 | 86,956 | 90,878 | 83,000 | 81,000 |
| Manganese ore: | | | | | |
| Gross weight | 20,000 | 28,000 | 39,000 | 39,000 ^e | 39,000 |
| Mn content ^e | 5,600 | 7,840 | 10,900 | 10,900 | 10,900 |
| Silver, metal ^e kilograms | 65,000 | 55,000 | 55,000 | 55,000 | 55,000 |
| Tin, metal, secondary ^e | 10 | 2 | 2 | 1 | 1 |
| Zinc: | | | | | |
| Mine output, Zn content | 8,000 | 10,000 | 10,000 | 10,000 ^f | 10,000 |
| Concentrate: | | | | | |
| Gross weight | 25,917 | 23,474 | 20,343 | 20,500 ^e | 20,500 |
| Zn content ^e | 13,500 | 12,200 | 10,600 | 10,700 | 10,700 |
| Metal, refined, primary and secondary | 95,341 | 99,992 | 106,453 | 92,000 | 88,000 |
| INDUSTRIAL MINERALS | | | | | |
| Barite ore, run-of-mine ^e | 74,500 | 50,900 | 40,000 | 14,300 | 14,000 |
| Cement, hydraulic thousand metric tons | 4,093 | 4,413 | 4,903 | 3,000 ^e | 3,000 |
| Clays: | | | | | |
| Bentonite do. | 134 | 99 | 178 | 108 ^f | 100 |
| Kaolin, raw do. | 1,658 | 1,631 | 1,530 | 939 ^f | 900 |
| Refractory ^e do. | 18 ³ | 15 | 15 | 15 | 15 |
| Feldspar ^e do. | 93 ³ | 90 | 90 | 80 | 80 |
| Fluorspar ^e do. | 2 | 2 | 2 | 2 | 2 |
| Gypsum and anhydrite: | | | | | |
| Crude do. | 216 | 234 | 210 | 128 ^f | 130 |
| Calcined ^e do. | 75 | 75 | 75 | 70 | 70 |
| Lime, industrial do. | 1,409 | 1,443 | 1,422 | 1,300 ^e | 1,300 |
| Limestone and dolomite do. | 3,340 | 3,335 | 3,340 ^e | 3,100 ^e | 3,100 |
| Nitrogen, N content of ammonia ^e do. | 309 | 350 | 350 ^e | 320 ^e | 320 |
| Perlite do. | 5 | 14 | 7 | 15 ^f | 15 |
| Pyrites, gross weight ^e do. | 150 | 150 | 150 | 150 | 150 |
| Salt, all types do. | 2,000 | 2,000 | 2,100 | 1,300 ^f | 1,300 |

See footnotes at end of table.

TABLE 1—Continued
BULGARIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

| Commodity ² | 2006 | 2007 | 2008 | 2009 | 2010 ^e | |
|---|----------------------------|------------------------|-----------|-----------|---------------------|-----------|
| INDUSTRIAL MINERALS—Continued | | | | | | |
| Sand and gravel: | | | | | | |
| As reported | thousand cubic meters | 4,293 | 4,925 | 5,517 | 2,996 ^r | 3,000 |
| Converted ^c | thousand metric tons | 6,900 | 7,900 | 8,800 | 8,000 | 8,000 |
| Silica, quartz sand | do. | 250 | 551 | 734 | 657 ^r | 660 |
| Sodium carbonate, calcined ^c | do. | 800 | 800 | 800 | 800 | 800 |
| Sulfur: ^c | | | | | | |
| S content of pyrites | | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 |
| Byproduct | | 300,000 | 300,000 | 300,000 | 300,000 | 300,000 |
| Total | | 325,000 | 325,000 | 325,000 | 325,000 | 325,000 |
| Sulfuric acid ^c | | 1,009,500 ³ | 1,010,000 | 1,010,000 | 1,000,000 | 1,000,000 |
| Zeolite ^c | | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 |
| MINERAL FUELS AND RELATED MATERIALS | | | | | | |
| Coal, marketable: | | | | | | |
| Bituminous | thousand metric tons | 52 | 18 | 19 | 23 ^r | 25 |
| Brown | do. | 2,557 | 2,834 | 2,643 | 2,244 ^r | 2,200 |
| Lignite | do. | 22,750 | 25,325 | 26,008 | 24,700 ^e | 25,000 |
| Total | do. | 25,359 | 28,177 | 28,670 | 26,967 ^r | 27,200 |
| Coke | do. | 668 | 525 | 337 | -- | -- |
| Natural gas, marketed | million cubic meters | 519 | 295 | 218 | 12 | 12 |
| Petroleum: ⁴ | | | | | | |
| Crude | thousand 42-gallon barrels | 183 | 176 | 169 | 176 | 180 |
| Refinery products: ^e | do. | 54,600 | 54,400 | 54,500 | 50,000 | 50,000 |

^eEstimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. ^rRevised. do. Ditto. -- Zero.

¹Table includes data available through August 19, 2011.

²In addition to the commodities listed, bismuth, chromite, magnesite, palladium, platinum, tellurium, and a variety of crude construction materials (common clays, dimension stone, and crushed stone) may be produced, but available information is inadequate to make reliable estimates of output.

³Reported figure.

⁴Figures were converted to barrels from production reported in thousand metric tons, which was reported as the following: Crude petroleum production in 2005—27; 2006—25; 2007—24; 2008—23; 2009—24; and 2010—24 (estimated). Petroleum products in 2005—5,971; 2006—6,829; 2007—6,806; 2008—6,812; 2009—6,255; and 2010—6,250 (estimated).

TABLE 2
BULGARIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2010

(Thousand metric tons unless otherwise specified)

| Commodity | | Major operating companies and major equity owners | Location of main facilities | Annual capacity |
|----------------------------|-------------------------|---|--|----------------------|
| Bentonite, mine output | | Bentonit AD (S&B Industrial Minerals AD) | Kardzhali | NA. |
| Cadmium | | KCM S.A. | Plovdiv | 300. |
| Do. | | Lead and Zinc Complex Plc. (LZC) (Intertrust Holding, 90%) | Kardzhali | 150. ^c |
| Cement | | Devnya Cement (Italcementi Group) | Devnya | 2,000. |
| Do. | | Vulkan Cement (Italcementi Group) | Dimitrovgrad | 500. |
| Do. | | Holcim Bulgaria AD (Holcim Ltd.) | Pleven Plant and Beli Izvor Plant | 2,400. |
| Do. | | Titan Zlatna Panega | Zlatna Panega | 1,500. |
| Coal: | | | | |
| Bituminous | | Mina Balkan 2000 EAD | Central Bulgaria | NA. |
| Brown | | Otkrit Vagledobiv Mines EAD | Pernik coal basin, southwest of Sofia | 2,000. ^c |
| Do. | | Vagledobiv Bobov Dol EOOD | Bobov Dol coalfield | 1,000. ^c |
| Do. | | Other small producers | Eastern and western Bulgaria | 1,000. ^c |
| Lignite | | Mini Maritsa Iztok EAD (state owned) | East Maritsa coal basin near Radnevo | 25,000. ^c |
| Do. | | Other small producers | Sofia, Pernik, and Bobov Dol coal basins | 5,000. ^c |
| Coke | | Kremikovtzi A.D. | About 10 kilometers northeast of Sofia | NA. |
| Copper: | | | | |
| Concentrate, Cu content | | Assarel-Medet JSC | Panagurishte, Pazardzhik District | 57. |
| Do. | | Ellatzite-Med AD | Mine 8 kilometers south of Etropole, concentrator near Mirkovo village | 45. |
| Do. | | Dundee Precious Metals Inc. | Chelopech | 13. |
| Do. | | Bradtze | Malko Turnovo | 2. |
| Do. | | Burgaskii Mines Ltd., Zidorovo | Burgas, near the Black Sea | 1. |
| Metal: | | | | |
| Smelter | | Aurubis Bulgaria AD (Aurubis AG) | Pirdop | 275. |
| Refinery | | do. | do. | 200. |
| Gold, in concentrate | kilograms | Dundee Precious Metals Inc. | Chelopech | 2,500. ^c |
| Do. | do. | Ellatzite-Med AD | Mine 8 kilometers south of Etropole and concentrator near Mirkovo village | NA. |
| Iron ore | | Kremikovtzi A.D. | About 10 kilometers northeast of Sofia | NA. |
| Kaolin, mine output | | Kaolin AD | Senovo, Rousse District | NA. |
| Lead-zinc: | | | | |
| Concentrate, Pb-Zn content | | Gorubso Co. (Intertrust Holding) | Erma Reka, Kardzhali, Laki and Zlatograd, all in Madan area near Greek border | 59 lead, 47 zinc. |
| Do. | | Osogovo Ltd. | Osogovo Mountains, western Bulgaria | 3 lead, 2 zinc. |
| Do. | | Rudmetal JSC | Dimov Dol Mine, near Rudozem | 3 lead, 2 zinc. |
| Metal: | | | | |
| Pb, refined | | KCM S.A. | Plovdiv | 65. |
| Do. | | Lead and Zinc Complex Plc. (LZC) (Intertrust Holding, 90%) | Kardzhali | 33. |
| Zn, smelter | | KCM S.A. | Plovdiv | 75. |
| Do. | | Lead and Zinc Complex Plc. (LZC) (Intertrust Holding, 90%) | Kardzhali | 28. |
| Manganese ore | | Obrochishte Mine (Euromangan AD) | Tsarkva village, 10 kilometers west of Balchik | NA. |
| Natural gas | million cubic meters | Melrose Resources S.a r.l. (Melrose Resources Plc., 100%) | Galata field, in the Black Sea off the coast of Varna | NA. |
| Do. | do. | Oil and Gas Exploration and Production Plc. | Gasfield concessions near Dolni Dubnik, Selanovtzi, and others | NA. |
| Perlite, mine output | | Bentonit AD (S&B Industrial Minerals AD) | Kardzhali | NA. |

See footnotes at end of table.

TABLE 2—Continued
 BULGARIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2010

(Thousand metric tons unless otherwise specified)

| Commodity | | Major operating companies and major equity owners | Location of main facilities | Annual capacity |
|----------------------|------------------------------|--|--|---------------------|
| Petroleum: | | | | |
| Crude | | Oil and Gas Exploration and Production Plc. | Tyulenovo, Dolni Dubnik, Dolni Lukovit, Gorni Dubnik, and other oilfields | NA. |
| Refined | 42-gallon barrels per day | Lukoil Neftochim Bourgas AD | Refinery at Bourgas | 215,000. |
| Silver: | | | | |
| In concentrate | kilograms | Dundee Precious Metals Inc. | Chelopech | 3,200. ^c |
| Metal | | KCM S.A. | Plovdiv | 100. |
| Steel, crude | | Kremikovtzi A.D. | About 10 kilometers northeast of Sofia | NA. |
| Do. | | Stomana Industry S.A. (Sidenor S.A., 100%) | Pernik | 1,400. |
| Zeolite, mine output | | S&B Industrial Minerals A.D. | Kardzali | 15. ^c |

^cEstimated. Do., do. Ditto. NA Not available.