



2011 Minerals Yearbook

SLOVAKIA

THE MINERAL INDUSTRY OF SLOVAKIA

By Harold R. Newman

In 2011, Slovakia continued to produce a modest range of mineral products but was not a significant world producer of any mineral commodity. Aluminum and steel were two of Slovakia's most valuable metal products, and some industrial minerals, such as cement, dolomite, lime, and magnesite, were produced. Brown coal, including lignite, was produced; however, Slovakia was dependent on foreign imports to meet most of its domestic demand for mineral fuels, including for power generation.

In 2011, Slovakia's real gross domestic product (GDP) decreased by 3.3% compared with a 4.2% increase in the GDP in 2010. The decrease was primarily because of the reduced demand for Slovakia's exports. Services amounted to 61.4% of the GDP, and industrial production amounted to 34.8%. Mining and quarrying of minerals made up about 0.6% of the nominal GDP. In 2011, employment in the mining industry was 6,346 employees, which was down from 6,937 in 2010. Slovakia's exports of \$78.5 million included machinery and electrical equipment (35.9%), base metals (11.2%), and chemicals and mineral commodities (6.1%). Imports of \$75.1 billion included mineral products (13%), base metals (9%), and chemicals (8%) (U.S. Central Intelligence Agency, 2013).

The State Geological Institute of the Slovak Republic is a Government organization supervised by the Ministry of Environment. It is responsible for basic and regional geologic research, geologic mapping, the compilation and publishing of general geologic maps as well as specialized and thematic geologic maps; research and evaluation of the raw material deposits; metallogenetic investigation and modeling of the raw material deposits; raw minerals exploration; and geophysical works. The Ministry of Economy is responsible for mineral resource development and the issuance of mining permits (State Geological Institute of the Slovak Republic, 2011, p. 10).

At yearend 2011, 150 exploration licenses were in force; however, more than 70 of them were issued for mineral and thermal waters. Metal exploration licenses (42 areas) included base metals, cobalt, molybdenum, nickel, precious metals, rare-earth elements, and tungsten. Mineral fuels exploration claims included natural gas and petroleum (6 areas) and uranium ores (10 areas) (Mining Journal, 2012).

Production

Production of mineral commodities remained at more or less the same levels as in 2010. Production of copper and ferrosilicon increased whereas production of crude steel and pig iron decreased. Production of most industrial minerals was estimated; reported production of cement increased, and that of bentonite and lime decreased. Production of construction materials and industrial minerals covered domestic needs. All domestic metal consumption was satisfied by imports (table 1).

Structure of the Mineral Industry

Table 2 lists the major mineral companies that were operating in Slovakia in 2011 and their respective mine and (or) plant locations and capacities. No significant changes in ownership took place in 2011.

Commodity Review

Metals

Copper.—In 2011, Global Minerals Ltd. of Canada was focused on developing its copper and silver Strieborna deposit in Roznava. Global Mineral's licenses covered about 135 square kilometers in the Strieborna project area. The Strieborna deposit is a quartz-siderite-sulfide vein-type deposit that is hosted in Early Paleozoic metamorphic rocks. The mineralization is characterized by antimony-, copper-, and silver-bearing minerals (mainly tetrahedrite), which are the principal minerals of economic interest. The project's infrastructure included electric power, railway access, and paved highways, and the local workforce was experienced in underground mining operations. A preliminary economic assessment was planned for release by yearend 2012 and would incorporate metallurgical studies along with an update of information on mine plans (Global Minerals Ltd., 2011).

Gold.—In 2011, only one gold deposit was being exploited in Slovakia. Gold was mined and processed at the Banska Hodrus Mine, which was owned by Slovenska Banska Ltd. After the exploration efforts of 2011, new reserves were estimated but had not been reported. A majority of the gold concentrate produced was exported to Belgium (Kolroser and others, 2011).

EMED Mining Public Ltd. of the United Kingdom's principal asset in Slovakia was the Biely Vrch gold project. EMED Mining stated that a preliminary assessment indicated economic viability for development of the project and that the company was moving ahead with the development of the 1,700-kilogram-per-year (kg/yr) mine. The Biely Vrch deposit contained indicated resources of 14,495 kilograms (kg) and estimated inferred reserves of 16,900 kg (EMED Mining Public Ltd., 2011).

Iron and Steel.—U.S. Steel Košice s.r.o., which was one of the driving forces in the Slovak economy, announced a revenue increase of 39% in 2010 to €2.6 billion (\$3.1 billion)¹ and a revenue decrease of €25 million (\$33 million) in 2011. This decrease in 2011 was owing to the economic environment and higher raw material and energy costs. The company announced that it had made capital investments that totaled €105 million (\$140 million). In 2011, U.S. Steel Košice focused on manufacturing products for the automotive and construction industries (Slovak Spectator, The, 2011).

¹Where necessary, values have been converted from euro zone euros (€) to U.S. dollars (US\$) at a rate of €0.75=US\$1.00.

Mineral Fuels and Related Materials

Slovakia does not have significant indigenous primary energy reserves. Although mineral resources were thought to be abundant, the majority of these resources were not exploited in 2011. Economic reserves of mineral fuels were limited to brown coal, lignite, and uranium. Hard coal, natural gas, and petroleum reserves were not significant, and demand for these mineral commodities was satisfied mainly by imports from Russia. Exploitable estimated lignite coal reserves, including brown coal, were about 100 Mt. Estimated natural gas reserves were about 10 billion cubic meters, and petroleum reserves were estimated to be about 2 Mt. An insignificant deposit of hard coal located in eastern Slovakia was not exploitable (European Association for Coal and Lignite, 2011).

Slovakia played a key role in Europe's natural gas and petroleum supply chain. The country was a net exporter of refined petroleum products and provided an important share of product supply to neighboring countries. Slovakia was a major entry point of natural gas for the European Union (EU), with transit volumes that represented about 20% of total EU natural gas consumption (International Energy Agency, 2011, p. 3).

Coal.—Hornonitrianske Bane Prievidza (HBP) is located in Prievidza and extracted coal from three operations—the Cigel, the Handlova, and the Novaky Mines. The depths of the worked coal seams range from 150 meters (m) to 450 m. The lignite seams are up to 20 m thick and were mostly extracted using long wall sublevel caving methods. It was estimated that there would be a decrease in coal production during the next decade owing to reserve depletion. Production in 2015 was expected to be about 2 million metric tons per year (Mt/yr) and to decrease to 1.5 Mt/yr by 2025 (European Association for Coal and Lignite, 2011).

Uranium.—European Uranium Resources Ltd. (the name was changed from Tournigan Energy Ltd. in 2011) of Canada's Kuriskova deposit is located about 10 kilometers northeast of Kosice. The deposit was estimated to contain an indicated reserve of 2.3 Mt of ore grading 0.56% uranium oxide (U_3O_8) and an additional estimated inferred reserve of 3.1 Mt of ore grading 0.18% U_3O_8 using a cutoff grade of 0.05% U_3O_8 .

The project could be developed as an underground mine and processing facility. The uranium could be extracted using conventional alkaline (non-acid) processing (European Uranium Resources Ltd., 2011).

Outlook

No major increases in production of mineral commodities are expected in Slovakia in the foreseeable future. Decreased coal production, however, is expected during the next several decades. The country will probably continue to import the majority of its metallic ores and concentrates and to depend on imported mineral fuels for its domestic consumption.

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TABLE 1
SLOVAKIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	2007	2008	2009	2010	2011 ^e
METALS					
Aluminum ingot, primary	160,461	162,995	149,604	162,997 ^r	162,840 ³
Copper, smelter, secondary	thousand metric tons	20	27	34	46 ^e
Gold, content of concentrate	kilograms	92	90 ^e	346	534 ^e
Iron and steel:					
Iron ore:					
Gross weight	thousand metric tons	570	392	--	NA
Metal content ^c	do.	190	130	--	NA
Concentrate, gross weight	do.	349	182	--	NA
Metal:					
Pig iron	do.	4,012	3,529	3,019	3,649
Ferroalloys:					
Ferrochromium		--	--	--	NA
Ferromanganese		74,065	61,194	21,000	21,000 ^e
Ferrosilicomanganese		71,587	59,940	32,000	32,000 ^e
Ferrosilicon		8,583	10,844	5,000	37,034
Steel, crude	thousand metric tons	5,089	4,478	3,747	4,580 ^e
Semimanufactures	do.	5,069	4,477	3,740	4,567
INDUSTRIAL MINERALS					
Asbestos		400	200	200	--
Barite:					
Mine output		58,000	20,000	30,000	17,000 ^e
Concentrate		11,000	12,950	8,000	13,000 ^e
Basalt		69,000	63,000	101,000	60,000 ^e
Cement, hydraulic	thousand metric tons	3,718	4,157	3,021	2,888
Clays:					
Bentonite		149,000	145,000	109,000	130,521
Ceramic ^e		47,000 ³	47,000	47,000	47,000
Kaolin ^e		46,000 ³	44,000 ³	44,000	44,000
Refractory ^e		--	12,000 ³	12,000	12,000
Feldspar ^e		--	10,000 ³	10,000	10,000
Gypsum and anhydrite, crude		151,000	152,000	131,000	87,000 ^e
Lime, hydrated and quicklime	thousand metric tons	1,123	1,082	867	986 ^r
Magnesite, concentrate	do.	957	807	800	800 ^e
Nitrogen, N content of ammonia ^c		260,000	260,000	260,000	493,000 ^r
Perlite		20,000	25,000	25,000	25,000 ^e
Salt		101,000	99,000	38,000	38,000 ^e
Sand and gravel ^e	thousand metric tons	8,200	9,300	8,500	6,932 ^r
Silica sand (foundry and glass sands)	do.	591	619	620	620 ^e
Stone:					
Dolomite	do.	1,057	1,249	908	895
Limestone and other calcareous stones for cement	do.	9,615	4,992	5,099	4,952
Quartzite		1,000	--	--	--
Crushed stone ^e	thousand metric tons	15,000	18,500	10,571	11,904
Zeolites		57,000	87,000	85,000	85,000 ^e
MINERAL FUELS AND RELATED MATERIALS					
Coal, brown and lignite	thousand metric tons	2,111	2,423	2,572	2,378
Coke, unspecified		1,856	1,737	1,573	1,570 ^e
Natural gas	million cubic meters	134	111	110	110 ^e
Petroleum: ^{e,4}					
Crude	thousand 42-gallon barrels	160	140	140	140
Refinery products	do.	48,000	47,100	48,100	47,195 ³

^eEstimated; estimated data are rounded to no more than three significant digits. ^rRevised. do. Ditto. NA Not available. -- Zero.

¹Table includes data available through January 11, 2013.

²In addition to the commodities listed, a small amount of silver occurs in concentrate produced by gold ore processing at the Banska Hodrusa deposit.

³Reported figure.

⁴Figures were converted to barrels from production reported as follows in thousand metric tons: 2007—23; 2008—21; 2009—21 (estimated); 2010—21 (estimated); and 2011—21 (estimated). Petroleum products were reported as follows (in thousand metric tons): 2007—6,006; 2008—5,893; 2009—6,012; 2010—5,734; and 2011—6,148.

TABLE 2
SLOVAKIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2011

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners ¹	Location of main facilities	Annual capacity	
Aluminum	Slovalco, a.s. (Norsk Hydro ASA, 55.3%, and ZSNP SCO, a.s., 44.7%)	Ziar nad Hronom, central Slovakia	165	
Brown coal and lignite	Hornonitranske Bane Prievidza, a.s. (HBP)	Mines at Cigel, Handlova, and Novaky	2,200	
Do.	Bana Dolina, a.s.	Mine east of V'iky Krtis, southern Slovakia	150	
Do.	Bana Cary, a.s.	Mine at Cary, western Slovakia	500 ^e	
Cement	Povazska Cementaren, a.s.	Ladce	NA	
Do.	Cemmac a.s. (Asamer & Hufnagl Baustoff Holding Wien GmbH, 82.72%)	Horne Srnie	NA	
Do.	VSH, a.s. Turna	Turna	1,300	
Do.	Holcim (Slovensko), a.s.	Rohoznik	2,200	
Coke	U.S. Steel Kosice, s.r.o.	Kosice, eastern Slovakia	NA	
Copper, smelter, secondary	Kovohuty, a.s. [Montanwerke Brixlegg AG, 100% (A-TEC Industries AG)]	Krompachy, central Slovakia	90	
Ferroalloys	Oravske Feroziliatinarske Zavody (OFZ), a.s. (ArcelorMittal S.A.)	Istebne	170	
Gold in concentrate	Slovenska Banska, s.r.o.	Hodrusa-Hamre	NA	
Iron:				
Ore	SIDERIT, s.r.o. Nizna Slana	Nizna Slana, central Slovakia	600 ^e	
Concentrate	do.	do.	400 ^e	
Magnesite	SMZ, a.s. Jelsava	Jelsava, eastern Slovakia	370 ^e	
Do.	Slovmag, a.s. Lubenik (Magnezit Group)	Lubenik, central Slovakia	NA	
Do.	GE.NE.S., a.s.	Mutnik, near Hnusta in central Slovakia	NA	
Natural gas	million cubic meters	NAFTA, a.s.	Oilfields and natural gas fields in western and eastern Slovakia	NA
Do.	do.	ENGAS, s.r.o.	Brno	NA
Petroleum:				
Crude	NAFTA, a.s.	Oilfields and natural gas fields in western and eastern Slovakia	NA	
Refinery	SLOVNAFT, a.s. (MOL Plc., 98.5%)	Bratislava	6,000	
Do.	Petrochema, a.s.	Dubova	150	
Pig iron	U.S. Steel Kosice, s.r.o.	Kosice, eastern Slovakia	4,500	
Salt	Solivary, a.s. Presov	Presov, eastern Slovakia	NA	
Steel, crude	U.S. Steel Kosice, s.r.o.	Kosice, eastern Slovakia	4,900	
Do.	Zeleziarne Podbrezova, a.s.	Podbrezova	600 ^e	
Zeolites	Zeochem, a.s.	Quarry near Nizny Hrabovec and processing plant near Bystre	NA	
Do.	PRO-ZEO, s.r.o.	Humenne	NA	

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

¹Abbreviations used for types of companies in this table include the following: a.s., joint stock company; s r.o., limited company.