



# 2009 Minerals Yearbook

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**BELARUS [ADVANCE RELEASE]**

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# THE MINERAL INDUSTRY OF BELARUS

By Richard M. Levine

Belarus had a number of mineral production enterprises, including a steel minimill, a nitrogen production enterprise, two oil refineries, and a potash mining enterprise. The country's only mineral production enterprise that played a major role in world markets was its potash production enterprise. An oil pipeline that passes through Belarus transported about 70 million metric tons per year (Mt/yr) of Russian oil to Europe, and a gas pipeline that passes through Belarus was a significant export route for gas from Russia to Europe (National Statistical Committee of the Republic of Belarus, 2010a).

## Minerals in the National Economy

In 2009, industrial production accounted for 93% of Belarus's gross domestic product (GDP). The fuel sector accounted for 19.4% of the value of industrial production; the chemical and petrochemical sector, 12.1%; the construction materials sector, 5.5%; ferrous metallurgy, 3.2%; and nonferrous metallurgy, 0.3%. The GDP increased by 0.2% in 2009 compared with that of 2008, and the value of industrial output decreased by 2.8% in current prices (National Statistical Committee of the Republic of Belarus, 2010a, p. 95; 2010c, d).

The economy of Belarus was dependent on oil and natural gas imported from Russia. Furthermore, a large percentage of Russia's oil and natural gas exports to Eastern and Western Europe were shipped on pipelines that traversed Belarus. In late 2006, Russia began a process of reducing its subsidies on oil and gas that it exported to Belarus. In December 2006, following a short-term dispute, Belarus and Russia agreed on a schedule of graduated price increases that would increase the price that Belarus would pay for gas to the European market price level. Under the arrangement, the Russian gas producing company OAO Gazprom was to raise prices for gas deliveries to Belarus in 2010 to an average of \$171 per 1,000 cubic meters, which was much greater than the subsidized previous price of \$46 but still less than one-half the price paid by European Union (EU) member states. The price for Russian gas was to continue to increase until 2011, when it was to equal the price paid by EU members. Belarus officials stated in late 2008 and early 2009, however, that Belarus was interested in postponing the rise to EU prices until 2014-15.

Belarus and Russia also engaged in disputes concerning Russian oil exports. In December 2006, Russia decided to levy a duty on oil exported to Belarus in order to recoup profits from Belarus's processing of previously duty-free Russian-sourced crude oil, as Belarus then exported the refined products at world market prices. In January 2007, Belarus and Russia agreed on a duty for oil exports to Belarus and that Belarus would not charge a duty on oil that Russia shipped through Belarus. This agreement resolved a dispute in which Belarus, in response to an initially higher duty that Russia had imposed, began to charge a duty on oil that Russia shipped through Belarus; Russia responded by temporarily discontinuing oil exports through

Belarus. In January 2010, another dispute arose as Belarus and Russia failed to agree on renewing the January 2007 agreement. A new accord was subsequently reached whereby Russia would export oil duty free for Belarus's internal consumption but oil to be processed for reexport would be subject to full export duties (U.S. Department of State, 2010; U.S. Energy Information Administration, 2010a, b).

## Production

In 2009, production of potash in Belarus decreased by 52% to 2.485 million metric tons (Mt). Belarus reduced its production of crude steel by 7.9% to 2.449 Mt; finished roll, by 3.7% to 2.299 Mt; and steel pipe, by 26.4% to 106,700 metric tons (t). Production of crude oil decreased by 1.1% to 1.72 Mt. Production of cement, however, increased by 3.1% to 4.35 Mt (Interfax Russia & CIS Statistics Weekly, 2010; Jasinski, 2010).

## Structure of the Mineral Industry

The Belneftekhim State Concern for Oil and Chemistry, which included among its many enterprises the country's oil production, refining, and transport facilities and potash production enterprise, was the leading concern in the country. It consisted of 50 organizations, including the Open Joint Stock Company (OJSC) Grodno Azot, which specialized in the production of liquefied ammonia and nitrogenous fertilizer; Joint Stock Company (JSC) Belaruskali, which mined the Starobin potash deposit; and practically all enterprises that produced chemical products. In 2006, Belaruskali and the Russian firm OJSC Uralkali founded the Belarus Potash Co., which supplied potash produced by Belaruskali and Uralkali to world markets (Open Joint Stock Company Uralkali, 2010).

## Commodity Review

### Metals

**Iron and Steel.**—The Byelorussian Steel Works (BMZ) in Zhlobin was a minimill that consisted of four main production facilities that were involved in steel melting, rolling, steel cord and wire production, and pipe rolling. The plant also included a number of auxiliary divisions and an administrative division. The steel-melting facilities included a scrap preparation shop and two electric steel melting shops. The rolling production facilities consisted of a section rolling shop, which included three rolling mills with different profiles. The steel cord and wire production facilities included three steel cord and wire shops, a powder metallurgy and die workshop, and a packing workshop. The pipe production facility was located in a separate building that covered an area of 40,000 square meters. The infrastructure facilities consisted of maintenance and repair departments for power, electrical, and mechanical equipment;

a railway workshop; an automobile workshop; and other auxiliary divisions. BMZ exported its products to 71 countries on five continents. In 2009, it supplied steel products for the first time to Afghanistan, Ghana, Iran, Iraq, Israel, Morocco, Nigeria, Philippines, Senegal, Sudan, and other countries of Africa and the Middle East (Byelorussian Steel Works, 2009; 2010b).

In 2009, BMZ exported 1,955,700 t of steel products, of which 62.7% was rolled products, 16.6% was cast billets, 13.2% was steel cord, 3.4% was other types of steel wire, 2.3% was hose wire, and 1.8% was bead wire. Prices for steel products fell precipitously in 2009, and sales proceeds for BMZ were only 55.62% of what they were in 2008. The physical volume of output of steel products decreased by only 4.2%, however (Byelorussian Steel Works, 2010a, p. 14, 22, 26).

### **Industrial Minerals**

**Nitrogen.**—OAO Grodno Azot specialized in the production of liquid ammonia and nitrogenous fertilizers. It had the capacity to produce 976,800 metric tons per year (t/yr) of liquid ammonia, 785,000 t/yr of carbamide, 720,000 t/yr of a carbamide ammonia mixture (KAS), and 319,000 t/yr of ammonium sulfate. About 60% of the company's output was sold on the domestic market, which fully satisfied domestic demand, and the remainder was exported by the company (OAO Grodno Azot, 2010).

In 2009, Belarus increased production of ammonia (nitrogen content) by 9.7% to 891,700 t compared with 812,400 t in 2008 and produced 727,400 t of nitrogenous fertilizers, which was comparable to the 2008 level of production. In 2009, Belarus almost doubled its exports of nitrogenous fertilizers, with exports increasing in 2009 to 305,600 t compared with 153,900 t in 2008 (Interfax Russia & CIS Statistics Weekly, 2010; Joint Stock Company Belaruskali, 2010a; National Statistical Committee of the Republic of Belarus, 2010b).

**Potash.**—In 2009, potash production in Belarus decreased by about 50% compared with that of 2008 to 2.485 Mt from 4.968 Mt in 2008, and potash exports decreased by 46.3% to 1.759 Mt in terms of  $K_2O$  (Interfax Russia & CIS Statistics Weekly, 2010; National Statistical Committee of the Republic of Belarus, 2010b). The decrease in Belarus's potash production and potash exports reflected conditions in the world potash market in 2009 when potash prices fell by more than 50% as the effects of the global recession were felt throughout the agricultural sector, resulting in the collapse of grain and food prices. Farmers in developing countries had difficulty finding banks that would lend money to secure supplies of much-needed fertilizer. As a result, many farmers skipped applying potash to their fields and others relied on stockpiles. Relatively few buyers were seeking potash and those who did were seeking bargain prices (Toovey, 2010).

JSC Belaruskali was one of the world's leading potash producers. Belaruskali mined the Starobin potash deposit, which contained camalite, rock salt, and sylvinite. Commercial levels of potash occur there at depths of 400 to 1,200 meters (m) and deeper. The thickness of individual beds of potash varies from 4 to 20 m. The potassium chloride content of the crude ore extracted, which was composed of halite and sylvinite, was between 19% and 21%; the potassium chloride content of the

sylvinite layer was between 30% and 35%. The halite extracted could be stored in worked-out faces of the mine (Krichenko and others, 2010).

Belaruskali was composed of four mining and processing complexes, auxiliary shops, and servicing units; it employed about 20,000 people. Each of the four mining and processing complexes comprised a potash mine and processing plant that produced potash fertilizers in the form of fine, fine crystallized, and granulated concentrate of potassium chloride. In addition, the company produced cooking salt, technical salt, edible salt, and feed salt (Joint Stock Company Belaruskali, 2010a, c).

The Belaruskali development program for the period 2006 to 2012 called for development of the Krasnoslobodskiy Mine and the construction of a new mine at the Beryozovskiy section of the deposit, which was planned to be operational in 2012. The program also called for renewing the stock of obsolete equipment to ensure the ability to maintain production capacities and to ensure the competitiveness of the product in terms of quality and price. The main objective of the program was to increase Belaruskali exports by increasing its production capacity to 9 Mt/yr of potash fertilizer. On May 7, 2009, commissioning of the first stage of the Krasnoslobodskiy Mine took place, and the first skip with ore from Krasnoslobodskiy was hoisted. The second stage was planned to go into operation in 2010 (Joint Stock Company Belaruskali, 2009; 2010a, b; Krichenko and others, 2010).

### **Outlook**

Belarus is expected to continue to be a major supplier of potash to world markets. The program for the development of Belaruskali for the period 2006-12 addresses development of ore reserves and is based primarily on the commissioning of the Krasnoslobodskiy Mine and development of a new mine in the Beryozovskiy sector of the deposit, as well as on renovating out-of-date equipment. A main direction will be a continuous and steady increase in the quality of fertilizers to make them more competitive on the world market. Because it possesses a sufficient raw materials base, a high production potential, and highly qualified personnel, Belaruskali is expected to be a major world potash supplier for many decades to come (Joint Stock Company Belaruskali, 2010c).

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TABLE 1  
BELARUS: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons unless otherwise specified)

Commodity	2005	2006	2007	2008	2009
<b>METALS</b>					
Steel:					
Crude thousand metric tons	2,076	2,297	2,387	2,660	2,449
Rolled do.	1,839	2,047	2,192	2,387 <sup>r</sup>	2,299
Pipes do.	108,300	134,200	147,900	145,000 <sup>r,e</sup>	106,700
<b>INDUSTRIAL MINERALS</b>					
Cement thousand metric tons	3,131	3,495	3,820	4,219	4,350
Diamond, synthetic <sup>c</sup> thousand carats	25,000	25,000	25,000	25,000	25,000
Lime thousand metric tons	785	853	925	950	950
Nitrogen, N content of ammonia	774,000	815,000	830,000	812,400 <sup>r</sup>	891,700
Potash, K <sub>2</sub> O equivalent thousand metric tons	4,844	4,605	4,972	4,968	2,485
Salt <sup>2</sup>	1,839,000	2,075,693	1,665,350	1,476,000 <sup>r</sup>	1,695,100
Sulfur	48,663	38,567	41,031	44,000 <sup>r</sup>	47,200
Sulfuric acid thousand metric tons	737 <sup>r</sup>	756 <sup>r</sup>	788 <sup>r</sup>	857 <sup>r</sup>	833
<b>MINERAL FUELS AND RELATED MATERIALS</b>					
Natural gas million cubic meters	228	219	201	203 <sup>r</sup>	205
Peat:					
Horticultural use <sup>e</sup> thousand metric tons	300	300	318 <sup>3</sup>	395 <sup>3</sup>	272
Fuel use do.	2,500 <sup>r</sup>	2,500 <sup>r</sup>	2,502 <sup>r</sup>	2,361 <sup>r</sup>	2,213
Total do.	2,800	2,800	2,820	2,756	2,485
Petroleum:					
Crude do.	1,785	1,780	1,760	1,740 <sup>r</sup>	1,720
Refined do.	19,802	21,253	21,349	21,305	21,634

<sup>c</sup>Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. <sup>r</sup>Revised. do. Ditto.

<sup>1</sup>Table includes data available through December 23, 2010.

<sup>2</sup>Includes byproduct salt from potash production.

<sup>3</sup>Reported figure.

TABLE 2  
BELARUS: STRUCTURE OF THE MINERAL INDUSTRY IN 2009

(Metric tons unless otherwise specified)

Commodity	Major operating companies, main facilities, or deposits	Location or deposit names	Annual capacity <sup>e</sup>
Cement	Krichevskiy and Volkovysk plants	Mahilyowskaya Volbasts' and Wawkavysk	NA
Diamond	Gomel Production Association "Kristall"	Homyel'skaya Voblasts'	NA
Nitrogen, N content of ammonia	OAO Grodno "Azot" (Belneftekhim)	Hrodna region	976,800
Peat, fuel use	Production at 37 enterprises that produce mainly briquets	All regions of country	5,000,000 <sup>1</sup>
<b>Petroleum:</b>			
Crude	State Concern for Oil and Chemistry (Belneftekhim)	Rechitskoye, Ostashkovichskoye, Vishanskoye, Tishkovskoye and Yuzhno-Ostashkovichskoye deposits, Southeastern part of country	2,000,000
Refined	JSC Mozyr oil refinery (Government of Belarus, 42.7%, and Slavneft, 42.5%)	Homhyel'	16,000,000 <sup>2</sup>
Do.	Navapolatsk refinery (Naftan)	Vitsyebsk area	10,800,000 <sup>2</sup>
Potash, K <sub>2</sub> O equivalent	Joint Stock Company Belaruskali	Starobin deposit, Salihorsk area	5,000,000
<b>Steel:</b>			
Crude	Belarusian Steel Works (BMZ) (Ministry of Industry)	Zhlobin	2,600,000
Pipe	do.	do.	250,000
Rolled	do.	do.	2,300,000
Do.	JSC Mogilev Metallurgical Works [Belarusian Steel Works (BMZ)]	Mahilyowskaya Voblasts'	80,000

<sup>e</sup>Estimated; estimated data are rounded to no more than three significant digits. Do., do. Ditto. NA Not available.

<sup>1</sup>Total peat for fuel use.

<sup>2</sup>Crude throughput.