



2015 Minerals Yearbook

SLOVENIA [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF SLOVENIA

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In 2015, Slovenia's output of mineral commodities was not significant on either a world or a regional scale, and mineral-related activities played a minor role in the country's domestic production. There was no metal mining in the country. The metallurgy sector produced aluminum, crude (raw) steel, refined lead, and semimanufactured steel products. Industrial minerals produced included chert, clay, crushed and dimension stone, salt, and sand and gravel, most of which were consumed on the domestic market. Energy minerals produced included lignite and small amounts of hydrocarbons. The only uranium mine in the country was in the process of closing, but there is significant potential for geothermal energy. Slovenia continued to import most mineral commodities, including mineral fuels, ferrous and nonferrous metal ores and metals, and other mining and quarrying products to meet its mineral demand (table 1; Geological Survey of Slovenia, 2016, p. 4–5).

All mineral resources in Slovenia are owned by the state. The exploration and production of minerals, including oil and natural gas reserves, are governed by law No. 61/2010, as amended (the Mining Act), which entered into force in January 2011. The Ministry of Infrastructure is responsible for the administration, management, and oversight relating to the Mining Act, including granting licenses for mineral exploration, approving concessions for extraction of mineral resources, and the decommissioning of projects. The Energy Act of 2008, as amended, regulates the storage, transportation, and distribution of natural gas. The act defines the country's energy policy, regulates the energy markets and commercial services, and sets standards for the operation of powerplants and other energy installations. The Energy Agency is the principal energy regulator in the country (European Bank for Reconstruction and Development, 2014, p. 7; Food and Agriculture Organization of the United Nations, 2016; Smolnikar and Tominec, 2016).

Minerals in the National Economy

In 2015, Slovenia's real gross domestic product (GDP) growth rate was 2.3% compared with 3.1% in 2014. The International Monetary Fund (IMF) estimated that the growth rate would be about the same in 2016 but anticipated slower growth in 2017 of 1.8%. The country's nominal GDP was \$42.8 billion in 2015, and the manufacturing and construction sectors accounted for 20.1% and 4.7% of the GDP, respectively. The gross value added by the manufacture of fabricated metal products was \$1.2 billion¹ (2.8% of the GDP); the production of basic metals, \$456 million (1.1%); and the manufacture of nonmetallic mineral products, \$331 million (0.8%). The mining and quarrying sector was a minor contributor to domestic production; the gross value added by the sector was \$141 million, or 0.3% of the GDP. In 2015, the mining

and quarrying sector employed 2,500 people (International Monetary Fund, 2016; Statistical Office of the Republic of Slovenia, 2016d, e).

Production

In 2015, Slovenia's production of silica sands was 343,455 metric tons (t), which was an increase of 66% compared with that of 2014; chert production increased by 37% to 21,041 t; natural gas, by 27% to 3.5 million cubic meters; crude ceramic clay, by 25% to 202,426 t; dimension stone, by 21% to 136,326 t; and bentonite, by 17% to 232 t. In addition, salt production was reported as 2,191 t in 2015, whereas salt production in 2014 was reported to be zero. In 2015, Slovenia's production of crude petroleum was 1,936 barrels, which was a decrease of about 29% from that in 2014; and cement production decreased by 11% to 1.19 million metric tons (Mt) (table 1).

Structure of the Mineral Industry

The major mineral industry facilities that were operating in Slovenia in 2015, with their locations and annual capacities, are listed in table 2.

Mineral Trade

In 2015, Slovenia's total exports were valued at EUR23.9 billion (\$26.6 billion), which was an increase of 4.4% from the value in 2014; and total imports were valued at EUR23.3 billion (\$25.9 billion), which was an increase of 2.7% from the value in 2014. European Union (EU) member states continued to be the most important trade markets for Slovenia and, in 2015, received 76.8% of Slovenia's total exports and supplied 80.6% of Slovenia's total imports. Slovenia's principal export partners in 2015 were Germany (which received 20.7% of Slovenia's exports, by value); Italy (11.2%), Austria (8.5%), Croatia (7.8%), and France (4.9%). Slovenia's principal import partners were Germany (which provided 19.0% of Slovenia's imports, by value), Italy (15.9%), Austria (11.8%), and Croatia (5.9%). Petroleum and oils from bituminous minerals constituted the largest share of total imports in 2015 (Statistical Office of the Republic of Slovenia, 2016b, c).

Commodity Review

Metals

Aluminum.—Talum d.d. (Talum), through its subsidiary Talum Aluminij d.o.o., was the only producer of primary aluminum in Slovenia; it produced billets, castings, discs, foundry alloys, and slugs. Talum produced 83,775 t of primary aluminum in 2015, which was slightly less than the 84,361 t produced in 2014. The company produced a total of 140,416 t of aluminum products in 2015 and sales volumes were 138,860 t.

¹Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US\$) at an annual average exchange rate of EUR0.9012=US\$1.00 for 2015.

The state-owned electricity transmission system operator Elektro Slovenija d.o.o. (ELES) was a majority shareholder of Talum. In 2015, ELES increased its share capital in Talum by 6.6 million euros (\$7.3 million), thereby increasing its ownership stake to 85.61% from 84.71% in 2014 (Cus and others, 2015, p. 1; Elektro Slovenija d.o.o., 2016, p. 117; Emerging Markets Information Service, 2016; Talum d.d., 2016, p. 12, 31).

Iron and Steel.—Slovenska Industrija Jekla, d.d. (SIJ), which was owned by Dilon d.o.o. (72.22% interest) and the Government (25% interest), was a leading steel producer in Slovenia. The SIJ Group's steelworks division was composed of its Metal Ravne d.o.o. subsidiary, which produced finished steel products, and its Acroni d.o.o. subsidiary, which produced flat-rolled products. In 2015, the production of crude (raw) steel by the SIJ Group decreased to 442,127 t, or by 5.3% compared with that of 2014. In 2015, 87.3% of the steel production was exported; the principal recipients of the exports were Germany (23.6% of sales) and Italy (21.7%) (SIJ Group, The, 2016, p. 6, 15, 18, 39, 47).

In 2015, Metal Ravne completed a EUR17.5 million (\$19.4 million) investment program at its steel mill at Ravne na Koroskem to refurbish the ladle furnace and install a new vacuum oxygen decarburization device. The investment was expected to increase production efficiency and facilitate the manufacture of new types of steel, such as austenitic stainless and duplex steels used in the energy sector. The electric arc furnace was also upgraded, which increased productivity and reduced electricity consumption. At the beginning of the year, Acroni upgraded the continuous line for heat processing of plates, which provided additional manufacturing capacity. In addition, an EUR32 million (\$35.5 million) investment program was initiated in 2015 to install an argon oxygen decarburization device that was expected to be operational in early 2017. The device was expected to reduce the production time for stainless steel, increase capacity, and reduce energy consumption. At the end of 2015, Acroni employed an average of 1,077 people and Metal Ravne employed an average of 973 people (SIJ Group, The, 2016, p. 20, 34, 49, 65, 66, 73).

Industrial Minerals

Cement.—Salonit Anhovo d.o.o., which was located near the town of Deskle in western Slovenia, was the leading cement producer in Slovenia. The company produced standard cement types as well as cements for use in the oil and gas industry, along with aggregates, clinker, and concrete. The company was owned by the Wietersdorfer Gruppe of Austria (71.6% interest) and Buzzi Unicem SpA of Italy (25% interest). In 2015, sales amounted to EUR58.5 million (\$64.9 million) (European Bank for Reconstruction and Development, 2016).

In March 2015, Slovenia's Ministry of Environment and Spatial Planning ordered Lafarge Cement d.d.'s cement plant in Trbovlje, which had an annual production capacity of 0.6 Mt, to suspend operations owing to its lack of environmental permits. The shutdown was in response to EU judicial proceedings announced in February against Slovenia for its failure to fully implement environmental licensing for industrial plants in accordance with the integrated pollution prevention and control

directive. Also in response to the judicial proceedings, the Government announced in June that it was proposing changes to the environmental protection laws that would address deficiencies in the provisions that govern environmental permits. The shutdown of the plant likely contributed to the country's 10% decrease in cement production in 2015 (tables 1, 2; Global Cement, 2015).

Mineral Fuels, Related Materials, and Other Sources of Energy

Coal.—In 2015, Slovenia produced approximately 3.2 Mt of lignite, all of which came from the Velenje Mine, which was the country's only working coal mine. The country imported 30,000 t of lignite and 366,000 t of subbituminous coal in 2015. The Velenje lignite mine, which was operated by Premogovnik Velenje d.d., was expected to remain operational into the 2050s and had 1,254 employees in 2015. The entire output from the Velenje Mine was used by the nearby Sostanj thermal power station [Termoelektrarna Sostanj d.o.o. (TES)]. At yearend 2015, state-owned Holding Slovenske Elektrarne d.o.o (HSE) had a 99.2% interest in Premogovnik Velenje d.d. and a 100% interest in TES. In June, construction of a new 600-megawatt production unit at TES was completed, which would replace older, obsolete units. HSE also had a 100% interest in the Trbovlje thermal power station (Termoelektrarna Trbovlje d.o.o.), which was in liquidation owing to the need for expensive maintenance, the high cost of electricity produced, and market conditions (table 1; European Association for Coal and Lignite, 2016; Geological Survey of Slovenia, 2016, p. 5; Holding Slovenske Elektrarne d.o.o., 2016, p. 13, 37, 38, 59, 185; Statistical Office of the Republic of Slovenia, 2016a).

Natural Gas.—Slovenia's petroleum and natural gas production was negligible, and the country was dependent on imports to meet demand. In 2015, Slovenia's production of natural gas was about 3.5 million cubic meters, which was an increase of 27% compared with that of 2014. In 2015, imports of natural gas increased to 813 million cubic meters from 766 million cubic meters in 2014. Austria provided about 67% of Slovenia's imported natural gas and Russia provided approximately 31% (table 1; Agencija za Energija, 2016, p. 102; Smolnikar and Tominec, 2016; Statistical Office of the Republic of Slovenia, 2016a).

The Petišovci tight gas project was a joint venture between Ascent Resources plc of the United Kingdom, through its subsidiary Ascent Slovenia Ltd. (operator, 75% interest), and Geoenergo, d.o.o. (concession holder, 25% interest). Ascent reported an independently verified estimate of 13 billion cubic meters of gas in place. At the end of 2015, the company was awaiting approval of an IPPC permit that was necessary for construction of a treatment facility to process the gas prior to connection to Slovenia's national grid. The company also explored an alternate option for gas production that would not require an IPPC permit; this option would use pipelines to transport the gas to a third-party treatment facility. The company anticipated that gas production from the field could start in 2016 (Ascent Resources plc, 2015, 2016).

Renewable Energy.—To meet the goals of the joint environmental energy policy of the European Union under

directive 2009/28/ES, to which member states are committed, Slovenia prepared a national renewable energy action plan (NREAP) for 2010–20 with a goal of achieving 25% of gross final energy consumption through renewable resources by 2020. In 2014, the share of renewable energy sources in gross final energy consumption was 21.9%. Electricity produced by renewable resources was promoted through a system of feed-in and premium tariffs, loans, and subsidies (the support scheme). In 2015, there were 3,920 qualified renewable energy production facilities included in the support scheme, 85% of which were solar energy facilities; the remainder were biogas, biomass, hydropower, wind power, and high-efficiency co-generation CHP (combined heat and power) fossil fuel facilities. Together, these production facilities generated 980.8 gigawatt-hours of electricity, which was an increase of 8% from that of 2014. The national energy policy supported the improvement of energy efficiency through the use of CHP facilities and the use of renewable energy sources in the production of electricity. The share of renewable resources in final energy consumption was set to increase in future years if coal production decreases as expected and natural gas and petroleum production remain negligible. The benefits of the increased use of renewables include improvements in the environment, security of supply, and regional development and employment opportunities (Agencija za Energija, 2016, p. 125, 127, 128; Naydenova, 2016).

References Cited

Agencija za Energija, 2016, Report on the energy sector in Slovenia for 2015: Agencija za Energija [Energy Agency], June, 151 p. (Accessed October 31, 2016, at <https://www.agen-rs.si/documents/54870/68629/Report-on-the-energy-sector-in-Slovenia-for-2015/f1302ae0-7267-4ae7-b74d-7ce8c4323043>.)

Ascent Resources plc, 2015, Operational & IPPC permit update: Ascent Resources plc, December 16. (Accessed November 1, 2016, at <http://www.ascentresources.co.uk/news/operational-ippc-permit-update>.)

Ascent Resources plc, 2016, Final results for the year ended 31 December 2015: Proactive Investors, May 4. (Accessed November 1, 2016, at <http://www.proactiveinvestors.com/companies/rms/160504ast1432x>.)

Cus, Zlatko, Sibila, Avgust, Jursek, Branko, and Kores, Stanislav, 2015, 25 years of continuous improvements in TALUM smelter: Dubai, United Arab Emirates, The International Committee for Study of Bauxite, Alumina & Aluminum, Proceedings 2015, 12 p. (Accessed December 13, 2016, at <http://icsoba.org/sites/default/files/2015paper/aluminiumpapers/AL04%20-%2025%20years%20of%20continuous%20improvements%20in%20TALUM%20smelter.pdf>.)

Elektro Slovenija d.o.o., 2016, Annual report 2015: Ljubljana, Slovenia, Elektro Slovenija d.o.o., May, 157 p. (Accessed October 26, 2016, at http://www.eles.si/en/files/eles/userfiles/ANG/About_ELES/Annual_reports/Annual%20Report%20of%20Company%20ELES%202015_Interactive.pdf.)

Emerging Markets Information Service, 2016, Talum d.d.: Emerging Markets Information Service. (Accessed October 27, 2016, at https://www.emis.com/php/company-profile/BK/Talum_dd_Kidrichevo_en_1538991.html.)

European Association for Coal and Lignite, 2016, Slovenia: European Association for Coal and Lignite. (Accessed November 1, 2016, at <https://euracoal.eu/info/country-profiles/slovenia/>.)

European Bank for Reconstruction and Development, 2014, Commercial laws of Slovenia: European Bank for Reconstruction and Development, April, 22 p. (Accessed October 28, 2016, at <http://www.ebrd.com/documents/legal-reform/slovenia-country-law-assessment.pdf>.)

European Bank for Reconstruction and Development, 2016, Saloni: European Bank for Reconstruction and Development. (Accessed October 27, 2016, at <http://www.ebrd.com/work-with-us/projects/psd/saloni.html>.)

Food and Agriculture Organization of the United Nations, 2016, Legal office FAOLEX—Slovenia: Food and Agriculture Organization of the United Nations. (Accessed October 31, 2016, at <http://faolex.fao.org/docs/html/slv101690.htm>.)

Geological Survey of Slovenia, 2016, Bulletin—Mineral resources in Slovenia 2015, Republic of Slovenia, Ministry of Infrastructure, Geological Survey of Slovenia, 12 p. (Accessed December 12, 2016, at http://www.geo-zs.si/images/GeoZS/PeriodicnePublikacije/Mineral_Resources/Mineral_Resources_2016_new.pdf.)

Global Cement, 2015, Government changes eco permit provisions in line with EU demands: Pro Global Media Ltd., June 25. (Accessed October 27, 2016, at <http://www.globalcement.com/news/item/3770-government-changes-eco-permit-provisions-in-line-with-eu-demands>.)

Holding Slovenske Elektrarne d.o.o., 2016, Annual report of the company HSE and the HSE Group 2015: Ljubljana, Slovenia, Holding Slovenske Elektrarne d.o.o., 266 p. (Accessed November 2, 2016, at <http://www.hse.si/en/files/default/letna-porocila/en/Letno%20poro%C4%8Dilo%20dru%C5%BEbe%20in%20skupine%20HSE%202015%20ANG.PDF>.)

International Monetary Fund, 2016, World economic outlook database—Slovenia: International Monetary Fund, October. (Accessed October 25, 2016, at

Naydenova, Ivana, 2016, Legal sources on renewable energy—Slovenia summary: Res Legal Europe, June 21. (Accessed November 1, 2016, at <http://www.res-legal.eu/search-by-country/slovenia/summary/c/slovenia/s/res-e/sum/192/lpid/191/>.)

SIJ Group, The, 2016, SIJ forged for future—Annual report 2014: Ljubljana, Slovenia, The SIJ Group and company SIJ d.d., April, 212 p. (Accessed October 28, 2016, at <http://www.sij.si/assets/magazine-files/SIJ-annual-report-2015.re.pdf>.)

Smolnikar, Petra, and Tominec, Misa, 2016, International comparative legal guides—Slovenia—Oil & gas regulation 2016: Global Legal Group, January 5. (Accessed October 28, 2016, at <http://www.iclg.co.uk/practice-areas/oil-and-gas-regulation/oil-and-gas-regulation-2016/slovenia>.)

Statistical Office of the Republic of Slovenia, 2016a, Balance of solid, liquid and gas fuels, Slovenia, annually: Statistical Office of the Republic of Slovenia. (Accessed October 31, 2016, at http://pxweb.stat.si/pxweb/Dialog/varval.asp?ma=1818002E&ti=&path=../Database/Environment/18_energy/04_18180_fuels/&lang=1.)

Statistical Office of the Republic of Slovenia, 2016b, Exports and imports by countries, Slovenia, cumulative data: Statistical Office of the Republic of Slovenia. (Accessed October 25, 2016, at http://pxweb.stat.si/sistat/en/MainTable/tbl_2401722.)

Statistical Office of the Republic of Slovenia, 2016c, External trade in 2015 the highest since Slovenia joined the EU: Statistical Office of the Republic of Slovenia. (Accessed October 25, 2016, at <http://www.stat.si/StatWeb/en/show-news?id=5755&idp=4&headerbar=9>.)

Statistical Office of the Republic of Slovenia, 2016d, GDP production structure (output, intermediate consumption and value added by activities, NACE Rev. 2), Slovenia, annually: Statistical Office of the Republic of Slovenia. (Accessed October 25, 2016, at http://pxweb.stat.si/pxweb/Dialog/varval.asp?ma=0301915E&ti=&path=../Database/Economy/03_national_accounts/05_03019_GDP_annual/&lang=1.)

Statistical Office of the Republic of Slovenia, 2016e, Persons in employment by activities (NACE Rev. 2), Slovenia, annually: Statistical Office of the Republic of Slovenia. (Accessed October 25, 2016, at http://pxweb.stat.si/pxweb/Dialog/varval.asp?ma=0775321E&ti=&path=../Database/Demographics/07_labour_force/05_labour_force_register/01_07753_lab_force_year_average/&lang=1.)

Talum d.d., 2016, Letno Porocilo Skupine Talum za leto 2015 [Annual report of Group Talum for 2015]: Kidricevo, Slovenia, Talum d.d., March, 125 p. (Accessed October 27, 2016, at http://ebook.creativelabdevelop.eu/TALUM/Letno%20porocilo/2015/Creativelab_Talum_letno%20porocilo_2015_final_predogled.pdf.)

TABLE 1
SLOVENIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	2011	2012	2013	2014	2015
METALS					
Aluminum:					
Primary	75,301 ^r	83,278 ^r	84,035 ^r	84,361 ^r	83,775
Secondary ^c	18,900	18,300	18,000	18,000	18,000
Iron and steel, metal:					
Crude steel from electric arc furnaces	648,000	632,000	618,000	615,000	604,000
Semimanufactures	706,133	700,826	677,095	664,200	664,000 ^e
Lead, refined, secondary	15,000	14,000 ^r	12,000	11,000 ^r	12,000
INDUSTRIAL MINERALS					
Cement	thousand metric tons	620	953	1,140 ^r	1,330 ^r
Clay:					
Bentonite		168	98	143	199
Ceramic clay, crude		10,103	165,041	184,227	162,405
Salt, all sources		4,291	5,684	3,360	--
Sand and gravel, excluding silica sands	thousand metric tons	1,900	1,707	2,143	2,799
Silica sand, quartz and quartzite		230,908	219,481	224,387	207,381
Stone, excluding quartzite, crude:					
Aggregate	thousand metric tons	11,527	9,265	9,211	10,923
Chert		18,907	9,960	11,530	15,340
Crushed, dolomite and limestone	thousand metric tons	9,627	7,557	7,068	8,124
Dimension		55,000 ^e	55,906	70,506	112,671
MINERAL FUELS AND RELATED MATERIALS					
Coal:					
Subbituminous	thousand metric tons	453	314	--	--
Lignite	do.	4,066 ^r	3,967 ^r	3,721	3,108
Total	do.	4,519 ^r	4,281 ^r	3,721	3,108
Natural gas	thousand cubic meters	2,489	1,593	3,033	2,736
Petroleum, crude ³	42-gallon barrels	1,929 ^r	2,062 ^r	2,211 ^r	2,715 ^r

^cEstimated; 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 December 12, 2016.

²In addition to the commodities listed, kaolin and lime also were produced, but available information was inadequate to make reliable estimates of output.

³Figures were converted to barrels from production in metric tons, which was reported as the following: 2011—260; 2012—278; 2013—298; 2014—366; and 2015—261.

TABLE 2
SLOVENIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2015

(Thousand metric tons)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Aluminum, primary	Talum Aluminij d.o.o. (Elektro Slovenija d.o.o., [ELES], 85.61%; Kapitalska družbe, d.d., 4.16%; Talum d.d. 4.78%; Factor banka, d.d., 5.46%)	Smelter at Kidricevo	85 ^e
Cement	Salonit Anhovo d.o.o. (Wietersdorfer Gruppe, 71.6%, and Buzzi Unicem SpA, 25%)	Plant at Anhovo	1,100 ^e
Do.	Lafarge Cement d.d. (LafargeHolcim S.A., 56%, and European Bank for Reconstruction and Development, 44%)	Plant at Trbovlje	600 ¹
Coal:			
Subbituminous	Rudnik-Trbovlje-Hrastnik d.o.o. (RTH) (Government, 100%)	Trbovlje Hrastnik Mine near Trbovlje	500 ^{e, 2}
Lignite	Premogovnik Velenje, d.d. (Holding Slovenske Elektrarne d.o.o., 99.2%)	Velenje Mine	4,000
Lead, metal, secondary	MPI-Reciklaza Metalurgija, plastika in inženiring d.o.o.	Refinery at Zerjav	35
Natural stone, granite and marble	Mineral Ltd.	Plant at Podpec	NA
Salt	SOLINE Pridelava soli d.o.o. (Mobitel d.d.)	Salt pans at Secovlje and Strunjan	2
Steel, raw	Acroni d.o.o. [Slovenska Industrija Jekla d.d. (SIJ)] (Dilon, d.o.o., 72.22%; Government, 25%; others, 2.8%)	Plant at Jesenice	800
Do.	Metal Ravne d.o.o. [Slovenska Industrija Jekla d.d. (SIJ)] (Dilon, d.o.o., 72.22%; Government, 25%; others, 2.8%)	Plant at Ravne na Koroskem	90
Do.	Štore Steel d.o.o. (Unior d.d., 29.25%)	Plant at Store	185 ^e

^eEstimated. Do. Ditto. NA Not available.

¹Production suspended in March 2015.

²Production ceased in the first quarter of 2013.