

2013 Minerals Yearbook

CROATIA

THE MINERAL INDUSTRY OF CROATIA

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Croatia is a moderately developed country located in the western part of the Balkan Peninsula. One of the six former Republics of Yugoslavia, Croatia borders Bosnia and Herzegovina, Hungary, Montenegro, Serbia, and Slovenia. The country occupies most of the eastern Adriatic Sea shoreline, giving it the largest territorial water area among Balkan countries suitable for offshore exploration (Croatia.eu, 2013a, c). Croatia produced a limited number of mineral commodities, none of which were produced in a quantity that was significant on a world or regional scale. Mineral resources included clays, dolomite, gypsum, limestone, natural gas, petroleum, and salt. Crude petroleum and natural gas extraction and refining remained the major economic activities of Croatia's mineral industry. The country moved towards launching its first round of offshore hydrocarbon exploration licensing in 2014 following the completion of a petroleum and gas survey of its territorial waters in the Adriatic Sea. The iron and steel sector was revived following production stoppages in 2012. The country remained reliant on mineral commodity imports for the bulk of its industrial and energy needs. Most industrial mineral output was consumed by the domestic market, particularly by the construction sector (Agency for Investments and Competitiveness, 2013; Croatian Hydrocarbon Agency, 2014a).

Government Policies and Programs

Croatia became a full member of the European Union (EU) on July 1 following 8 years of accession negotiations conducted with the European Commission. During this process, the country undertook major economic reforms to transition fully into a functioning market economy. The implemented changes affected every industry of the economy, but particularly the mineral sector (European Commission, 2014). The Concession Act (passed in December 2012), the Mining Act (April 2013), and the Hydrocarbons Exploration and Exploitation Act (July 2013) replaced the Mining Act of 2009, as amended, and aligned Croatia's mining and hydrocarbon laws with those of the EU, as required by the EU-Croatia Accession Treaty (Macesic and Manovelo, 2013b).

The Mining Act of 2013 and the Concession Act of 2012 introduced a new licensing and concession regime on exploration and production of mineral resources in Croatia. The previous Mining Act (2009) and its amendments (2011) had restored greater control of mineral resource development to the Government by requiring licensed companies to begin exploration and extraction projects within a specified and relatively short period of time. Among other provisions of the older law, an exploration permit did not guarantee a resource exploitation license (Macesic, 2011). The new Mining Act (2013) establishes greater procedural transparency and sets in place defined criteria, conditions, and requirements for obtaining authorization to explore for and produce mineral commodities in Croatia. It also opens public tendering procedures to all interested entities, as required by the nondiscrimination clauses of the EU Hydrocarbon Licensing Directive 94/22/EC (Santic, 2013).

The Hydrocarbons Exploration and Exploitation Act (known as the Hydrocarbon Act) of 2013 is the third major component of recent legal reforms that established a complete legal framework for natural gas and petroleum exploration and extraction in Croatia. Under the Act, hydrocarbon exploration and extraction are no longer regulated under the Mining Act. In line with the provisions of the Mining Act and the Concession Act, exploration and extraction are still regarded as two separate rights; however, the tender procedure awards successful bidders an exploration license and an automatic right to a concession in the case of discovery. In other words, companies that discover commercially exploitable reserves of hydrocarbons are now entitled to exploit such reserves (Macesic and Manovelo, 2013b).

The Hydrocarbon Act establishes a new Government agency responsible for mineral fuels in Croatia—the Croatian Hydrocarbon Agency. The Agency is authorized to issue tenders and exploitation permits for petroleum and natural gas both onshore and offshore. It is also tasked with monitoring the fulfillment of contractual obligations by permit holders and reporting results to the European Commission. Finally, the Agency is responsible for the preparation of documents on the hydrocarbon potential of Croatia that are presented to potential investors (Croatian Hydrocarbon Agency, 2014b).

With the establishment of the Hydrocarbon Agency, the Mining Department of the Energy and Mining Directorate assumed responsibility for administrative and oversight activities related to the exploration for and extraction of nonfuel minerals. The Department maintained the responsibility for issuing licenses for exploration and extraction of all other minerals, for issuing building permits for mining facilities and plants, and for granting approvals for mining concessions (Energy and Mining Directorate, 2013).

In November, the Government adopted the Strategic Investments Act (SI Act) in an effort to stimulate the economy by increasing investment activity and generating employment in key sectors, such as energy, infrastructure, irrigation and the environment, and tourism in Croatia. Private high-value-added investment projects related to the energy sector, as well as those related to business support, development, and innovation; infrastructure; and manufacturing were defined as eligible to qualify as strategic and receive financial support from the Government. The SI Act, which took effect on November 14, established a special investment regime with an accelerated permit process for eligible strategic projects (Vidan, 2013; U.S. Department of State, 2014).

Minerals in the National Economy

In 2013, Croatia's economy continued to contract, albeit at a slower rate than in 2012. The country's gross domestic product (GDP) decreased by 1% in real terms following a 2% decrease in the previous year. The nominal GDP in current dollars in 2013 was \$57.5 billion, slightly up from \$56.5 billion. This was the Croatian economy's fifth consecutive year of recession since the global economic crisis of 2008, during which time the GDP decreased by 12% on a cumulative basis. The country's ongoing recession was partly owing to a "spillover effect" from the economic turmoil in the euro area countries and partly a result of lower domestic demand for goods and services and other structural factors that limited the country's economic competitiveness. The Croatian current account balance turned positive in 2013, with a surplus of 1.3% of the GDP. This positive balance, however, was mainly because the decrease in imports was larger than the decrease in exports, reflecting a continued weakening of trade and foreign demand for Croatian goods. As the restructuring of key industries (such as petrochemicals) continued, exports of coke and refined petroleum products decreased further (European Bank for Reconstruction and Development, 2014; World Bank, The, 2014a, b).

In 2012 (the latest year for which data were available), the mineral sector was a relatively modest component of Croatia's national economy, generating about 5.6% of the gross value added compared with 5.3% in 2011. Among its components, the manufacture of coke and refined petroleum products accounted for 2.2%; the manufacture of fabricated metal products, except machinery and equipment, 1.4%; mining and quarrying, 0.7%; the manufacture of other nonmetallic mineral products, 0.7%; the manufacture of chemicals and chemical products, 0.4%; and the manufacture of base metals, 0.2%. The gross value added of the manufacture of coke and refined petroleum products increased by 12.2%; that of the manufacture of fabricated metal products, except machinery and equipment, by 2.6%; and that of mining and quarrying, by 2.4%, respectively, compared with that of 2011. On the other hand, the gross value added of the manufacture of base metals decreased by 9.8%; that of the manufacture of chemicals and chemical products, by 3.5%; and that of the manufacture of other nonmetallic mineral products, by 0.8%, respectively, compared with that of 2011. As of March 2013, the mining and quarrying sector comprised 386 registered and 291 active business enterprises and employed 5,262 people compared with 430 registered and 290 active enterprises and 5,593 employees in 2012 (Croatian Bureau of Statistics, 2013, p. 81, 141; 2014, p. 85, 147, 211–213).

The value of annual production of mineral raw materials in Croatia was estimated to be about \$1.06 billion. Mineral fuels, including oil, gas, and condensate, accounted for 88% of the total value, and industrial minerals, including construction stone, dimension stone, and carbonate mineral raw materials for industrial processing, accounted for the remaining 12% (Lismore-Scott, 2013; Santic, 2013).

Mineral commodities continued to be Croatia's leading import category; mineral commodity exports were insignificant to the economy, with the exception of coke and refined petroleum products. In 2013, Croatia imported about EUR2.173 billion (\$2.775 billion)1 worth of mining and quarrying products (including crude petroleum and natural gas), which was an increase of 0.7% compared to their level in 2012, and exported about EUR166 million (\$212 million) worth, which was an increase of 42%. Energy imports amounted to EUR3.567 billion (\$4.555 billion), which was a decrease of 5.2% compared with their value in 2012, whereas energy exports were worth EUR1.314 billion (\$1.678 billion), which was an increase of 1.4%. Imports of crude petroleum and natural gas accounted for EUR2.027 billion (\$2.589 billion), which was up by 0.3%, and made up about 12.3% of total Croatian imports. Coke and refined petroleum products imports and exports were significant in terms of their effect on the national economy and on domestic energy consumption. Imports of coke and refined petroleum products were valued at about EUR987 million (\$1.26 billion), which was a decrease of 14.6% compared with their value in 2012, and accounted for 6.0% of total imports. Exports of coke and refined petroleum products amounted to EUR1.0 billion (\$1.28 billion), which was a decrease of 11.3%, and made up 10.4% of total Croatian exports. Imports of chemicals and chemical products increased in value by 2.9% to EUR1.382 billion (\$1.765 billion); that of fabricated metal products, except machinery and equipment, by 9.7% to EUR568 million (\$725 million); that of coal and lignite, by 8.5% to EUR83.4 million (\$106.5 million); and that of metal ores, by 14.8% to EUR9.3 million (\$11.9 million). Imports of base metals decreased by 2.1% to EUR936 million (\$1.2 billion), and that of other nonmetallic mineral products, by 18.9% to EUR227.2 million (\$290.2 million) (Croatian Bureau of Statistics, 2013, p. 394, 396).

Production

In 2013, the production of most mineral commodities changed only slightly compared with their production levels in 2012. The production of steel recommenced after all but ceasing in 2012, and was on track to increase significantly in 2014 following the modernization at the ABS Sisak d.o.o. plant in Sisak and the sale and modernization of the Zeljezara plant in Split under new ownership (Agency for Investments and Competitiveness, 2013; Daskalovic, 2013a). Bentonite production was reported after 4 years of no production.

The mineral commodities for which output increased significantly in 2013 included rolled aluminum, for which output increased by 30%; crushed and brown stone, by 11%; clinker, by 11%; and hydraulic cement, by 8%. Gypsum and anhydrite output decreased by 37%; aluminum alloys, by 19%; ceramic clay, by 19%; sand and gravel, by 13%; and lime by 11%. Carbon black was not produced, as production had been halted in 2009 by Petrokemija d.d. because of the lack of consumer demand (Petrokemija d.d., 2014, p. 33). Mineral fuels, including natural gas and petroleum, were produced, but their output levels were not sufficient to wholly meet domestic fuel demand (Croatia.eu, 2013b; Honoré, 2014, p. 88). Natural gas production decreased by 8% compared with that of 2012, whereas crude petroleum output was unchanged (table 1).

¹Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US\$) at the rate of EUR0.783=US\$1.00.

Structure of the Mineral Industry

All mineral producers were wholly privately owned, except for mineral fuel producer INA-Industrija nafte d.d. (INA). INA was jointly owned by the Government (44.84% interest), Magyar Olaj-és Gázipari (MOL) Group of Hungary (49.08% interest), and others (6.08% interest) (INA-Industrija nafte d.d., 2013b). The leading mineral production companies were aluminum producers TLM-TVP d.o.o. and TLM-TPP d.o.o., each of which was owned by Fintrust Holding GmbH of Austria; iron and steel producers ABS Sisak d.o.o. (owned by Danieli Group of Italy), and Adria Steel Ltd. (owned by Techchom GmbH of Germany); and cement producers Cemex Hrvatska d.d. (owned by CEMEX S.A.B. de C.V. of Mexico) and Holcim (Hrvatska) d.o.o. (owned by Holcim Ltd. of Switzerland) (table 2).

Commodity Review

Metals

Aluminum.—TLM-TVP was a niche producer of aluminum rolled products and TLM-TPP was a niche producer of aluminum extrusion products. Both companies were spun off in 2009 by their owner Fintrust Holding from the previously state-owned metal-producing conglomerate TLM-Tvornica Lakih Metala, which had a long history of producing and processing aluminum products and was privatized in 2007. TLM-TVP operated the aluminum rolled-product plant in Sibenik in southern Croatia with a capacity of 70,000 metric tons per year (t/yr) of hot- and cold-rolled goods, such as hot-rolled strips, cold-rolled sheets and strips, circles, and thin strips as well as aluminum foil for the construction, packaging, and distribution industries. TLM-TPP produced standard tubes, bars, and profiles, and its aluminum extrusion plant in Sibenik had a capacity of 10,000 t/yr (Fintrust Holding GmbH, 2013).

Ivanal d.o.o. operated an aluminum diecasting plant in Sibenik that had a capacity of 3,000 t/yr and employed 90 employees. The installed capacity included 3,000 t/yr of hydrated alumina and 3,000 t/yr of aluminum. Ivanal's annual output varied between 1,200 and 2,000 t. The main consumers of its hydrated alumina included the automotive industry (60%), home appliance manufacturers (30%), and furniture makers (10%). Although relatively small-sized, the company exported its niche product to ContiTech Vibration Control GmbH of Germany for end use by major European automobile manufacturers in Germany and France (Ivanal d.o.o., 2014).

Iron and Steel.—ABS Sisak (formerly known as CMC Sisak d.d.) was acquired by the Danieli Group of Italy from Commercial Metals Co. (CMC) for about \$30.4 million in 2012. ABS Sisak began production at the Sisak plant following modernization and installation of new equipment in April (Brnic, 2014). The European Bank for Reconstruction and Development provided a loan of EUR50 million (\$64 million) to Danieli in order to restart production in Sisak (European Bank for Reconstruction and Development, 2013). Danieli reported that it would initially produce 4,000 metric tons per month (t/mo) for

export to markets in Europe and aimed to increase production to 27,000 t/mo within 15 months (Agency for Investments and Competitiveness, 2013).

In January, Adria Steel announced that it started testing a steel production unit at the Zeljezara Split d.d. steel works, which had lain idle for 4 years. The steel mill was expected to begin regular production in late 2013 following the examination of all machinery and equipment and after all necessary permits were obtained (Daskalovic, 2013a). Adria Celik had acquired Zeljezara Split in 2011. In July, German group Techcom announced that it had become the sole owner of Adria Steel by acquiring the remaining 50% stake of the company from Croatia-based C.I.O.S. (Daskalovic, 2013c).

Industrial Minerals

Cement.—Despite an increase in overall production, 2013 was a year of operational loss for the Croatian cement sector because of lower demand in the country and the broader Balkan region. According to estimates by global cement producer CEMEX, total cement consumption in Croatia and its neighboring countries of Bosnia and Herzegovina and Montenegro decreased by 4.1% to reach 2.9 million metric tons in 2013 (CEMEX S.A.B. de C.V., 2014, p. 72).

Cemex Hrvatska was the largest cement producer in Croatia based on its installed capacity of 2.6 Mt/yr. The company's three cement plants were located in Sveti Juraj, Sveti Kajo, and Kolovoz on the Dalmatian coast. As of December, Cemex Hrvatska had only the largest of these plants was in operation to control inventory levels (CEMEX S.A.B. de C.V., 2014, p. 72).

Holcim (Hrvatska) announced in October that it would implement a new operational plan to bring the company back to profitability by 2015. The weakness of the Croatian construction market in the aftermath of the 2008 economic crisis had resulted in a 50% drop in cement sales since 2008. Holcim operated at a loss for the fifth year in a row as a result (Daskalovic, 2013e).

Nexe Grupa d.d., which was another significant producer of cement and other building materials in Croatia, declared bankruptcy in February (Global Cement, 2013). HeidelbergCement AG of Germany, which had heretofore supplied the Croatian market with cement that HeidelbergCement produced in Bosnia and Herzegovina, expressed potential interest in acquiring Nexe Grupa's Nasicecement cement plant in Nasice, which had a capacity of 1 Mt/yr. With this acquisition, HeidelbergCement would be able to expand its cement and concrete operations in the broader Balkan region (HeidelbergCement AG, 2013; Daskalovic, 2013d). In August, Viadukt, a Croatian construction company, and its partners announced that they also planned to make a bid for Nasicecement as well as the Nexe Grupa (Daskalovic, 2013b).

Mineral Fuels

In 2011 (the latest year for which data were available), Croatia's total primary energy supply was provided by petroleum (43%), followed by natural gas (30%), coal (8%), and hydropower (5%). Almost one-half of Croatia's electricity production came from hydropower plants. The country was dependent on energy imports for more than 50% of its needs, although domestic production of natural gas provided most of the gas it consumed (Croatia.eu, 2013b; Honoré, 2014, p. 88).

Natural Gas and Petroleum.—Croatia's hydrocarbon production did not significantly change in 2013. The oilfields in the regions of Slavonia and Podravina provided 20% to 25% of domestic demand, whereas the production of natural gas covered about 75% (Croatia.eu, 2013b; Honoré, 2014, p. 88).

All offshore exploration and production activities in Croatia continued to be undertaken by INA, although this could change in 2014 with the upcoming tender for hydrocarbon exploration in Croatia's territorial waters in the Adriatic Sea. A medium-sized European oil and gas company, INA has been jointly owned by the MOL Group of Hungary and the Government since its privatization in 2003 through a public procurement process. The company continued to be the subject of a long-running dispute between the Government of Croatia and the Government of Hungary, which was a partial owner of the MOL Group, concerning control of the management of INA, its sales performance, its gas business, and the current status of modernization of the two petroleum refineries in Rijeka and Sisak. In October, the Government of Croatia announced a public tender for consultants that would conduct disputeresolution negotiations between other INA shareholders, MOL, and itself. On November 8, the MOL board of directors authorized preparations for the sale of the company's stake in INA and instructed MOL management to conclude an agreement with the Government of Croatia. On November 26, however, MOL filed a request for arbitration proceedings at the International Center for Settlement of Investment Disputes, claiming that the Government had breached its obligations regarding the company's investments in INA (Balasz, 2013; Macesic and Manovelo, 2013a).

INA was involved in petroleum refining and petroleum products distribution as well as in natural gas and petroleum exploration and production. Its hydrocarbon exploration and production activities were conducted both offshore in the Adriatic Sea and onshore in the Pannonian basin. In 2013, the company reported onshore reserves of 174 million barrels (Mbbl) of oil equivalent and onshore production of 25,300 barrels per day (bbl/d) of oil equivalent. Its offshore reserves were 34.1 Mbbl of oil equivalent, and its offshore production amounted to 11,900 bbl/d. INA's total production in 2013 was 8,608 bbl/d of crude oil, 2,635 bbl/d of condensate, and 26,198 bbl/d of natural gas. In terms of exploration activities, the company dug seven new exploration wells-five onshore and two offshore. INA reported that four of the five onshore wells had yielded positive results. Through INAgip (a joint-venture company formed with Eni S.p.A. of Italy), INA also began preparations for the drilling and development of the Ika J gasfield. INA's total export sales increased by 5% in 2013 (INA-Industrija nafte d.d., 2013a; 2014, p. 17).

In September, Spectrum Geo Ltd. of Norway commenced a two-dimensional (2–D) seismic survey of Croatia's territorial waters in the Adriatic Sea in preparation for the first offshore licensing round to be held in April 2014. Spectrum completed the survey on January 19, 2014, which provided for the first

time approximately 15,000 kilometers of current long-offset 2-D data offshore Croatia. The company and the Ministry of the Economy announced that the collected data pointed to prospective hydrocarbon deposits in Croatian waters and would be used to define blocks for the public call for tenders. Based on the survey, Spectrum Geo Ltd. estimated that Croatia could have offshore reserves of 3 billion barrels of crude oil, which would be the second highest reserves among European countries after Norway (MacDowall, 2014; Spectrum Geo Ltd., 2014; U.S. Energy Information Administration, 2014). Croatia was also involved in the planning of two future

natural gas pipeline projects-the South Stream and the Southern Gas Corridor projects, which would transport gas to European markets from Russia and Azerbaijan, respectively. In January, Gazprom of Russia signed an Action Plan with the Croatian natural gas transmission system operator Plinacro d.o.o to implement the South Stream project in Croatia between 2013 and 2016. The signed document envisaged setting up a joint company in the second half of the year that would build the gas branch in the country. Gazprom also planned to build a 500-megawattcapacity powerplant in Osijek in eastern Croatia in cooperation with the local utility company Hrvatska Elektropriveda d.d. (Gazprom, 2013; Kuzmanovic and Shiryaevskaya, 2013). In December, the Government of Azerbaijan signed a memorandum of understanding on future gas supplies to Albania, Croatia, and Montenegro through the Southern Gas Corridor. The pipeline would transport natural gas from the Shah Deniz field in the Caspian Sea to Europe. The authorization of the Shah Deniz-2 project transitioned the project from the planning stage to the implementation stage (Alivev, 2013).

Outlook

Croatia is expected to remain a modest producer of mineral commodities in the near future, although increases in industrial mineral output could materialize as the modernization of and investment into the country's cement and steel producers continue. Mineral fuels are expected to remain the most economically significant output of the Croatian mineral sector. Although the country will most likely remain heavily dependent on imports of mineral fuels, exploration and extraction of prospective reserves of crude petroleum and natural gas in the Adriatic Sea have the potential to turn the country into a significant regional energy producer. This possibility hinges on whether the upcoming tender for hydrocarbon exploration in Croatian waters attracts sufficient interest from major multinational energy companies. If successful, the tender could yield significant new investment in the country's energy sector and could eventually lessen Croatia's dependence on mineral fuel imports to meet its energy needs. The planned liquefied natural gas (LNG) terminal on the island of Krk is likely to generate additional demand for perlite to be used in insulation for cryogenic tanks. The country's booming tourism industry is expected to get an additional boost from EU accession through the arrival of more European tourists. In turn, increased tourism activity in Croatia is projected to lead to increased growth in new construction and renovation of hotels, which would further increase demand for industrial minerals used by the construction sector (Lismore-Scott, 2013). The country's membership in the EU is also expected to increase domestic production and exports through unrestricted access to the large European market and trade with other EU member states. Challenges will persist in the short-run, however, especially given the country's loss of preferential export status to the Central European Free Trade Agreement (CEFTA) region following its EU accession, which has already subtracted from the country's economic growth (World Bank, The, 2014b).

References Cited

Agency for Investments and Competitiveness [Croatia], 2013, ABS Sisak d.o.o. started new production in the Zeljezara Sisak: Agency for Investments and Competitiveness, April 13. (Accessed July 31, 2014, at http://www.aik-invest.hr/ en/abs-sisak-d-o-o-started-new-production-in-the-zeljezara-sisak/.)

Aliyev, Seymur, 2013, Azerbaijan signs MoU on gas supplies to Albania, Croatia, and Montenegro: Trend.az, December 17. (Accessed December 10, 2014, at http://en.trend.az/business/energy/2222427.html.)

Balasz, Edith, 2013, MOL seeks arbitration over INA as dispute escalates: Bloomberg L.P., November 26. (Accessed August 1, 2014, at http://www.bloomberg.com/news/2013-11-26/mol-seeks-arbitration-over-inaas-dispute-escalates.html.)

Brnic, Mary, 2014, Iron and steel plant plans to increase production in Sisak, announces employment: Poslovni Dnevnik, January 9. (Accessed July 31, 2014, at http://www.poslovni.hr/domace-kompanije/zeljezarasplit-planira-rast-proizvodnje-od-200-posto-u-sisku-najavljujuzaposljavanja-260665.)

CEMEX S.A.B. de C.V., 2014, Form 20–F—Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934: U.S. Securities and Exchange Commission, April 17, 223 p. (Accessed December 12, 2014, at http://www.sec.gov/Archives/edgar/data/1076378/000119312514163484/ d710878d20f.htm.)

- Croatia.eu, 2013a, Adriatic Sea and islands: Croatia.eu. (Accessed December 31, 2014, at http://www.croatia.eu/article.php?lang=2&id=11.)
- Croatia.eu, 2013b, Branches of the economy: Croatia.eu. (Accessed December 31, 2014, at http://www.croatia.eu/article.php?lang=2&id=32.)
- Croatia.eu, 2013c, Croatia in brief: Croatia.eu. (Accessed December 31, 2014, at http://www.croatia.eu/article.php?lang=2&id=6.)
- Croatian Bureau of Statistics, 2013, Statistical yearbook of the Republic of Croatia: Zagreb, Croatia, Croatian Bureau of Statistics, December, 585 p.

Croatian Bureau of Statistics, 2014, Statistical yearbook of the Republic of Croatia: Zagreb, Croatia, Croatian Bureau of Statistics, December, 601 p.

Croatian Hydrocarbon Agency, 2014a, 1st offshore license round: Croatian Hydrocarbon Agency. (Accessed November 11, 2014, at http://www.azu.hr/ en-us/1st-Offshore-License-Round.)

Croatian Hydrocarbon Agency, 2014b, About us: Croatian Hydrocarbon Agency. (Accessed July 30, 2014, at http://www.azu.hr/en-us/About-us.)

Daskalovic, Djordje, 2013a, Croatia's Adria Celik testing steel production unit: SeeNews, January 11. (Accessed July 31, 2014, at http://wire.seenews.com/ news/croatia-s-adria-celik-testing-steel-production-unit-327471.)

Daskalovic, Djordje, 2013b, Croatia's Viadukt, partners interested in investing in Nexe Grupa, Nasicecement: SeeNews, August 6. (Accessed September 22, 2014, at http://wire.seenews.com/news/heidelbergcementeyes-croatian-cement-maker-nasicecement-368187.)

Daskalovic, Djordje, 2013c, Germany's Techcom takes full control of Croatia's Adria Celik, Adria Zeljezara: SeeNews, July 4. (Accessed July 31, 2014, at http://wire.seenews.com/news/germanys-techcom-takes-full-control-of-croatias-adria-celik-adria-zeljezara-363722.)

Daskalovic, Djordje, 2013d, HeidelbergCement eyes Croatian cement maker Nasicecement: SeeNews, July 26. (Accessed July 31, 2014, at http://wire.seenews.com/news/heidelbergcement-eyes-croatian-cementmaker-nasicecement-368187.)

Daskalovic, Djordje, 2013e, Holcim Croatia eyes return to profitability in 2015: SeeNews, September 23. (Accessed July 31, 2014, at http://wire.seenews.com/news/holcim-croatia-eyes-return-to-profitabilityin-2015-385059.)

Energy and Mining Directorate [Croatia], 2013, Mining department: Energy and Mining Directorate. (Accessed July 28, 2014, at http://kenny2.bnet.hr/ mingorp.hr/defaulteng.aspx?id=27.) European Bank for Reconstruction and Development, 2013, EBRD loan to restore and modernise steel production in Croatia: European Bank for Reconstruction and Development, March 18. (Accessed July 31, 2014, at http://www.ebrd.com/news/2013/ebrd-loan-to-restore-and-modernise-steel-production-in-croatia.html.)

European Bank for Reconstruction and Development, 2014, Country assessments—Croatia: European Bank for Reconstruction and Development Transition Report 2013, May 14. (Accessed December 12, 2014, at http://tr.ebrd.com/tr13/index.php/en/country-assessments/1/croatia.)

European Commission, 2013, Enlargement—Detailed country information— Croatia: European Commission. (Accessed July 25, 2014, at http://ec.europa.eu/enlargement/countries/detailed-country-information/ croatia/index_en.htm.)

Fintrust Holding GmbH, 2013, Current investments: Fintrust Holding GmbH. (Accessed July 31, 2014, at http://www.fintrust.com/current-investments/ industry/.)

Gazprom, 2013, Joint company for South Stream gas branch construction to Croatia to be set up in second half of 2013: Gazprom, January 17. (Accessed December 12, 2014, at http://www.gazprom.com/press/news/2013/january/ article154317/.)

Global Cement, 2013, Nexe Grupa files for pre-bankruptcy settlement: Global Cement, February 27. (Accessed July 31, 2014, at http://www.globalcement.com/news/item/1469-nexe-grupa-files-for-prebankruptcy-settlement.)

HeidelbergCement AG, 2013, HeidelbergCement in Croatia: HeidelbergCement AG. (Accessed December 12, 2014, at http://www.heidelbergcement.com/hr/en/ country/home.htm.)

Honoré, Anouk, 2014, Outlook for natural gas demand in Europe: Oxford, United Kingdom, The Oxford Institute for Energy Studies, June, 174 p.

INA-Industrija nafte d.d., 2013a, Activities in Croatia—Activities in 2013: INA-Industrija nafte d.d. (Accessed July 30, 2014, at http://www.ina.hr/ default.aspx?id=5533.)

- INA-Industrija nafte d.d., 2013b, INA at a Glance: INA-Industrija nafte d.d. (Accessed July 30, 2014, at http://www.ina.hr/default.aspx?id=6446.)
- INA-Industrija nafte d.d., 2014, INA annual report 2013: INA-Industrija nafte d.d., 94 p. (Accessed July 30, 2014, at http://www.ina.hr/UserDocsImages/ eng_GI%20objava.pdf.)

Ivanal d.o.o, 2014, Company profile: Ivanal d.o.o. (Accessed July 31, 2014, at http://www.ivanal.hr/general-info.php.)

Kuzmanovic, Jasmina, and Shiryaevskaya, Anna, 2013, Gazprom plans expansion in Croatia with pipe, power plant: Bloomberg L.P., January 17. (Accessed December 12, 2014, at http://www.bloomberg.com/news/2013-01-17/ gazprom-plans-expansion-in-croatia-with-pipeline-power-plant.html.)

Lismore-Scott, Siobhan, 2013, Croatian EU membership brings new opportunities for industrial minerals sector: Industrial Minerals, June 20. (Accessed December 10, 2014, at http://www.indmin.com/Article/3221371/ Croatian-EU-membership-brings-new-opportunities-for-IM-sector.html.)

MacDowall, Andrew, 2014, Croatian oil & gas—An Adriatic game-changer?: The Financial Times [London, United Kingdom], May 5. (Accessed August 1, 2014, via http://blogs.ft.com/beyond-brics/2014/05/05/ croatias-hydrocarbon-tender-an-adriatic-game-changer/.)

Macesic, Miran, and Manovelo, Ivana, 2013a, Government announces resolution process for INA-MOL dispute: International Law Office, October 14. (Accessed December 11, 2014, at http://www.internationallawoffice.com/ newsletters/Detail.aspx?g=7a8e1efc-91fa-4c04-be23-9a3abdd4678b.)

Macesic, Miran, and Manovelo, Ivana, 2013b, New hydrocarbon exploration and exploitation regime, September 9. (Accessed July 29, 2014, at http://www.internationallawoffice.com/Newsletters/Detail.aspx?g=65ec6c35ae40-43a8-bbdb-75f58c505d43&redir=1.)

Macesic, Miroljub, 2011, Mining Act changes help to return control to the state: International Law Office, September 19. (Accessed July 28, 2014, at http://www.internationallawoffice.com/newsletters/detail.aspx?g=c4f5ef91-4305-4463-96ee-4c3c887b58e3.)

Petrokemija d.d., 2014, Petrokemija annual report 2013: Petrokemija d.d., April, 37 p. (Accessed July 31, 2014, at http://en.petrokemija.hr/portals/0/Financije/ AnnualReportPetrokemijaGroupAUDITED2013.pdf.)

Santic, Petra, 2013, Challenges to the mining law reform in Croatia: Schonherr Attorneys at Law. (Accessed July 29, 2014, at http://roadmap2013.schoenherr.eu/ mining-law-reform-in-croatia/.)

Spectrum Geo Ltd., 2014, Spectrum completes Croatia 2D multi-client seismic; precursor to 1st offshore licensing round: Spectrum Group, January 21. (Accessed September 15, 2014, at http://www.spectrumasa.com/news/spectrum-completescroatia-2d-multi-client-seismic-precursor-to-1st-offshore-licensing-round.)

- U.S. Department of State, 2014, 2014 investment climate statement—Croatia: U.S. Department of State, April, 20. (Accessed July 31, 2014, at http://www.state.gov/documents/organization/227152.pdf.)
- U.S. Energy Information Administration, 2014, International energy statistics— Proven petroleum reserves by country: U.S. Energy Information Administration. (Accessed September 22, 2014, via http://www.eia.gov/countries/.)
- Vidan, Hrvoje, 2013, Croatia adopts the Strategic Investments Act: Lexology, November 28. (Accessed December 12, 2014, at http://www.lexology.com/ library/detail.aspx?g=f55b2daf -32bd-4884-8f13-193f0a6bc8b2.)
- World Bank, The, 2014a, Data by country—Croatia: The World Bank. (Accessed December 12, 2014, at http://data.worldbank.org/country/croatia.)
- World Bank, The, 2014b, World Bank Group—Croatia partnership—Country program snapshot: The World Bank, April, 31 p. (Accessed July 30, 2014, at http://www.worldbank.org/content/dam/Worldbank/document/eca/ Croatia-Snapshot.pdf.)

TABLE 1 CROATIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity		2009	2010	2011	2012	2013
METALS						
Aluminum:						
Alloys		24,738 ^r	20,974 ^r	36,988 ^r	41,772 ^r	33,692
Semimanufactures: ^e						
Rolled		50,000	50,000	60,000	69,924 ^{r, 2}	90,629 ²
Extruded		6,000	6,000	8,000	8,000	8,000
Total ³		56,000	56,000	68,000	77,900 r	98,600
Steel:						
Crude, from electric furnaces ^e		43,000 r	95,000	96,000 ^r	1,000 r	28,000
Semimanufactures, hot rolled ^e		51,583 ^{r, 2}	93.000 r	100.000	1.000 r	28,000
INDUSTRIAL MINE	RALS	,	,	,	-,	,
Cement:						
Portland cement	thousand metric tons	2,838	2,682	2,577	2,154	2,333
Other hydraulic cement	do.	81	93	105	100	103
Total hydraulic cement ³	do.	2.919	2,775	2.681	2.255	2,436
Clinker	do.	2.439	2.116	2.072	1,999	2.210
Clays:		,	, -	, · ·	<u>-</u>	3
Bentonite		r	r	r	r	24,129
Ceramic clay		120,901 r	97,237 ^r	67,914 ^r	86,303 ^r	69,619
Gypsum and anhydrite, crude		221,888	197,606 r	167,518 ^r	182,557	114,450
Lime	thousand metric tons	350	240 r	254 ^r	207 r	185
Nitrogen, N content of ammonia	do.	309 r	361 ^r	368 r	342 ^r	343
Pumice and related materials, volcanic tuff ^e	do.	15	15	15	20	20
Salt, all sources		57,186 ^r	66,835 ^r	55,963 ^r	46,000 ^r	42,502
Sand and gravel, excluding glass sand ^e	thousand metric tons	3,250	3,500	4,000	3,683 ^r	3,199
Silica sand (quartz, quartzite, glass sand)		278,231	240,919	227,437	106,276 ^r	102,070
Stone:						
Crushed and brown	thousand metric tons	17,652	13,270	13,033	11,152 ^r	12,409
Dimension stone		1,400,000 ^e	1,200,000 ^e	1,400,000 ^e	1,028,230 r	973,784
Sulfur, byproduct of petroleum		10,315	6,834	7,254	17,411 ^r	15,902
MINERAL FUELS AND RELAT	ED MATERIALS					
Carbon black		3,976				
Natural gas, gross production	million cubic meters	2,705	2,727	1,872 ^r	2,013	1,862
Petroleum:						
Crude, gross weight, includes condensate	thousand 42-gallon barrels	5,758 ^r	5,344 ^r	4,929 ^r	4,605 r	4,605
Refinery products:						
Distillate fuel oil	do.	11,100 ^r	9,750 ^r	8,437 ^r	13,790 ^r	13,800 °
Residual fuel oil	do.	7,100 ^r	5,788 ^r	4,868 ^r	3,363 r	3,400 °
Jet fuel	do.	752 r	752 r	942 r	776 ^r	780 0
Liquefied petroleum gases	do.	3,434 r	2,854 r	2,482 r	1,865 r	1,900 °
Motor gasoline	do.	12,070 r	10,940 r	8,710 r	10,841 r	10,900
Other products	do.	5,658	5,256	5,400 °	5,600 °	5,700 °
Total	do.	40,114 ^r	35,340 ^r	30,839 ^r	36,235 ^r	36,500 °

^eEstimated; estimated data are rounded to no more than three significant digits. ^rRevised. do. Ditto. -- Zero.

¹Table includes data available through August 1, 2014.

²Reported figure.

³Data may not add to totals shown because of independent rounding.

TABLE 2 CROATIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2013

(Thousand metric tons unless otherwise specified)

		Major operating companies		Annual
Commo	odity	and major equity owners	Location of main facilities	capacity
Aluminum, semimanufa	actures	TLM-TVP d.o.o. (Fintrust Holding GmbH,	Sibenik	70
		100%)		
Do.		do.	do.	10
Do.		Top-Tvornica Olovni Proizvoda Aluminijskih d.d.	Sveta Nedjelja	NA
Do.		Ivanal d.o.o.	Sibenik	3
Carbon black	metric tons	Petrokemija d.d.	Kutina	32,000
Cement		Cemex Hrvatska d.d. (CEMEX S.A.B.	Plants at Sveti Juraj, Sveti Kajo,	2,600
		de C.V., 100%)	and Kolovoz	
Do.		Holcim (Hrvatska) d.o.o.	Plant at Koromacno	1,000
		(Holcim Ltd., 100%)		
Do.		Calucem d.o.o (CALUCEM Group)	Plant at Pula	NA
Do.		Tvornica Cementa Umag d.o.o.	Cement plant at Umag	350
		(Istramineral Umag d.o.o., 100%)		
Do.		Nasicecement d.d. (Nexe Grupa d.d.)	Nasice	680
Natural gas	million cubic meters	INA-Industrija nafte d.d. (MOL Group, 49.08%;	Natural gasfields at Molve,	3,000
		Government, 44.84%; others, 6.08%)	offshore platforms in the Adriatic Sea,	
			and other locations	
Petroleum:				
Crude	thousand 42-gallon	do.	Oilfields at Kalinovac, Sandrovac, Struzec,	15 ^e
	barrels per day		Zutica, and other locations	
Refined		do.	Refinery at Rijeka (Urinj)	4,500
Do.		do.	Refinery at Sisak	2,250
Salt	metric tons	Solana Pag d.d.	Pag Island (marine salt)	15,000
Do.		Small producers	Ston, Nin	5,000
Steel, crude		ABS Sisak d.o.o. (Danieli Group, 100%)	Plant at Sisak	324
Do.		Adria Steel Ltd. (Techcom GmbH, 100%)	Plant at Split	50 ⁻¹

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

¹Previously known as Zeljezara Split d.d. Stopped production in 2009. Production resumed in 2013.