



2014 Minerals Yearbook

IRELAND

THE MINERAL INDUSTRY OF IRELAND

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Ireland is part of the European Union (EU) and a member of the European Monetary Union, which uses the euro (EUR) as its official currency. In 2014, Ireland's nominal gross domestic product (GDP) was \$245.9 billion compared with \$232 billion (revised) in 2013, which was an increase of about 5.6%. The unemployment rate in Ireland decreased to 10.1% in January 2015 from 12.2% in January 2014—a decrease of 2.1% in 1 year (Central Statistics Office, 2015b; The World Bank, 2015).

In 2014, the total value of Ireland's exports was \$118.48 billion,¹ which was an increase of 2.5% compared with that of 2013. The most significant exports, by value, were industrial products (accounted for 91% of the value), agricultural produce (7.4%), and forestry and fishing products (0.8%), with the remainder being other unclassified exports. The value of Ireland's imports in 2014 was \$71.5 billion, which was an increase of 7.5% compared with that of 2013. Intra-EU trade accounted for 52% of Ireland's total exports, and the United States was the principal non-EU destination for products from Ireland, accounting for 23%. The most significant increase in imports was in machinery and transport equipment, which increased in value by 24%. By May 2014, the EU accounted for 62% of all imports, by value; of these, 29% originated from the United Kingdom. The United States accounted for 11% of Ireland's imports, and China, for 5%, by value (Central Statistics Office, 2015a).

Ireland was the principal zinc producer in the EU and was a major producer of lead in the world. Ireland was ranked 10th in the world (by tonnage of output) in the mine production of zinc and 12th in mine production of lead (table 1; Department of Communications, Energy and Natural Resources, 2014, p. 1; Guberman, 2016; Tolcin, 2016).

Minerals in the National Economy

According to an assessment report of the economic contribution of mineral exploration and mining in Ireland commissioned by Ireland's Department of Communications, Energy and Natural Resources in July 2013, the 2012 gross value-added contribution of the mining industry to Ireland's GDP was \$350 million, with economy-wide expenditures by the industry of \$1.03 billion. During the same period, Ireland employed 1,373 people directly in the mining industry, and the economy-wide employment supported by the industry was calculated to be 3,306 people (Indecon International Economic Consultants, 2013, p. 8–10, 50).

Production

In 2014, Ireland produced 1.951 million metric tons (Mt) of alumina, which was about the same as in 2013. Mine production

of lead decreased by about 4.7%, and zinc production decreased by 13.5%. These and other production data are in table 1.

Structure of the Mineral Industry

Although Ireland was a major producer of lead and zinc in the EU, the mining and mineral-processing industry contributed only a small percentage to the country's GDP. Companies in the mining sector were privately owned, although the Irish Government owned about 60% of all mineral deposits and reserved the right of 100% ownership of any existing gold and silver deposits. The Exploration and Mining Division of the Department of Communications, Energy and Natural Resources is responsible for both the technical management of the state mineral licensing and leasing system and for promoting the mineral industry (Department of Communications, Energy and Natural Resources, 2013).

In 2014, three mining projects were operating in Ireland: the Tara lead and zinc mine in Navan, Co. Meath; the Lisheen lead and zinc mine in Co. Tipperary; and the gypsum operation with adjacent mines in Drummond and Knocknacran in Co. Monaghan. The Tara lead and zinc mine was owned by Boliden Tara Mines Ltd. (a subsidiary of Boliden AB of Sweden) and was the leading zinc mine, by tonnage of production, in the EU. The Lisheen lead and zinc mine was owned by Vedanta Resources plc of the United Kingdom, and the Drummond and Knocknacran gypsum mines were owned by Irish Gypsum Ltd. (a subsidiary of Saint Gobain Group of France) (table 2; Department of Communications, Energy and Natural Resources, 2014).

CRH plc. was an international building materials conglomerate based in Dublin. The company owned three subsidiaries in Ireland that produced construction aggregates, cement, lime, and limestone for domestic consumption and export.

Premier Periclase Ltd. (wholly owned by RHI AG of Austria) produced seawater magnesia products at its plant in Drogheda, Co. Louth. Sandvik Hyperion AB of Sweden and Element Six Ltd. (100% owned by De Beers Group of Luxembourg) produced industrial diamond and industrial abrasives in Ireland. The country's major mineral industry facilities and their capacities are listed in table 2.

Commodity Review

Metals

Bauxite and Alumina.—In 2014, United Company RUSAL (RUSAL) of Russia stated that it was close to completing a project that would switch the main energy source at its alumina refinery in Ireland from heavy fuel oil to gas. The existing oil-fired boilers would be replaced with two steam generators capable of producing 300 metric tons per hour of high-pressure superheated steam. The steam generators were scheduled

¹Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US\$) at an average rate of EUR0.7527=US\$1.00.

to begin production in May; the savings were calculated to be \$12 per ton of production. RUSAL also reported that its alumina plant was producing at 98% of nameplate capacity, which was its historical maximum production. The refinery was located on Aughinish Island on the south side of the Shannon estuary, near Limerick City, and was operated by Aughinish Alumina plc. In June, the Russian News Agency TASS reported that RUSAL had pledged 75% of the plant's production to Glencore as collateral for alumina production supplies that were to be delivered from 2014 through 2016. This credit agreement included a \$400 million prepayment clause and was provided at the Libor rate plus 4.95% to be redeemed before the end of 2016 (Russian News Agency TASS, 2014; United Company RUSAL, 2014; 2015, p. 33).

Lead and Zinc.—In 2014, Boliden's Tara Mine had Joint Ore Reserves Committee (JORC)-classified ore reserves (proven and probable) of 13.1 Mt grading 7% zinc and 1.6% lead. The mine employed 667 people in 2014 (Boliden AB, 2014, p. 41; Department of Communications, Energy and Natural Resources, 2014, p. 1).

In 2013, Vedanta Resources plc (Vedanta), which owned the Lisheen Mine, stated that it had successfully enacted a plan to close the mine by 2014 or 2015; however, no further details were announced in 2014. Vedanta produced 1.32 Mt of ore grading 11.52% zinc and 1.6% lead. This produced 259,000 t of zinc concentrate with 53.6% zinc content and 23,000 metric tons (t) of lead concentrate with 61.1% lead content. The last resource and reserve statement issued by Vedanta, dated March 2014, stated that the remaining reserves amounted to 1.67 Mt grading 10.46% zinc and 1.72% lead, with additional resources of 2.07 Mt grading 14.26% zinc and 2.40% lead (Department of Communications, Energy and Natural Resources, 2014, p. 1; Vedanta Resources Plc., 2014, p. 53).

Industrial Minerals

Cement.—Irish Cement Ltd. (wholly owned by CRH plc.) had cement operations in Limerick and in Platin, Co. Meath. The plant in Limerick had a kiln with a capacity of 800,000 metric tons per year, and the plant in Platin had a capacity of 2.8 million metric tons per year (Irish Cement Ltd., 2014a, b).

Gypsum.—Irish Gypsum extracted gypsum from two sites in southern Co. Monaghan. The company stated that it had extracted more than 200,000 t of gypsum in 2013, and production remained about the same in 2014. The continuing inactivity of the construction sector in Ireland was the most probable cause for the decrease in gypsum production since 2012 (Department of Communications, Energy and Natural Resources, 2014, p. 1).

Magnesium Compounds (Magnesia).—Premier Periclase produced a range of crystal sinter magnesia products and a range of magnesium oxide and magnesium hydroxide products and suspensions at its plant in Drogheda (Premier Periclase Ltd., 2014).

Outlook

Ireland's economy increased by 5.6% in 2014 compared with that of 2013, and it was expected to continue to increase in 2015. The construction sector, however, is recovering slowly, and it is likely that this will affect the production of construction materials, such as cement and gypsum.

The projected closure of the Lisheen Mine would significantly reduce lead and zinc production in the country. Vedanta Resources had not issued any further statements about its plans for the mine other than those published in its 2013 annual report.

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TABLE 1
IRELAND: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

Commodity ²	2010	2011	2012	2013	2014	
METALS						
Alumina	1,864	1,926	1,927 ³	1,935 ³	1,951	
Lead:						
Mine output, Pb content	metric tons	39,100	50,700	47,000 ³	43,000 ³	41,000
Metal, refined, secondary ^c	do.	19,000	18,000	18,000	18,000	17,000
Silver, mine output, Ag content	kilograms	3,818	6,109	6,000	5,800 ^e	5,800 ^e
Zinc, mine output, Zn content	metric tons	342,500	344,000	337,500 ³	327,000 ³	283,000
INDUSTRIAL MINERALS						
Cement, hydraulic ^c		2,379	2,103	2,200	2,000	2,000
Gypsum ^c		300	300	300 ³	210 ³	210
Sand and gravel ^{e,4}		10,000	7,000	7,000	7,000	7,000
Stone and other quarry products, other ^{e,5}	metric tons	40,000	25,000	25,000	25,000	25,000
MINERAL FUELS AND RELATED MATERIALS						
Gas, natural, marketed	million cubic meters	402	356	350	459 ³	460 ^e
Peat: ^{e,6}						
For horticultural use		500	500	500	400	400
For fuel use, milled peat ⁷		4,991	3,707 ³	3,700	3,700	3,700
Total		5,500	4,200	4,200	4,100	4,100
Briquets		238	192 ³	190	190	190
Petroleum refinery products: ⁸						
Liquefied petroleum gas	thousand 42-gallon barrels	482	566	840	730 ^f	730 ^e
Naphtha ^c	do.	237 ³	144 ³	140	140	140 ^e
Gasoline, motor	do.	3,996	4,360	4,636	4,380 ^f	4,300 ^e
Distillate fuel oil	do.	9,616	9,481	8,906	8,395 ^f	8,400 ^e
Residual fuel oil	do.	8,154	8,991	6,205	6,200 ^f	6,200 ^e
Refinery fuel and losses	do.	980	752	750	750	750 ^e
Total ^c	do.	23,465	24,294	21,500 ^e	20,600 ^{e, f}	20,500 ^e

^cEstimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. ^fRevised. do. Ditto.

¹Table includes data available through July 7, 2015.

²In addition to the commodities listed, Ireland also produced lime, limestone, seawater magnesia, and significant quantities of synthetic diamond, but production is not quantitatively reported on a regular basis, and available information was inadequate to make reliable estimates of output.

³Reported figure.

⁴Excludes output by local authorities and road contractors.

⁵Includes clays for cement production, fire clay, granite, marble, rock sand, silica rock, and slate.

⁶Includes production by farmers and by the Bord Na Mona (Government Peat Board).

⁷Includes milled peat used for briquet production.

⁸From imported crude oil.

TABLE 2
IRELAND: STRUCTURE OF THE MINERAL INDUSTRY IN 2014

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facility	Annual capacity
Aggregates		Roadstone Wood Ltd. (CRH plc., 100%)	Tallaght, South Dublin	10,600
Alumina		Aughinish Alumina plc (United Company RUSAL, 100%)	Aughinish Island, Co. Limerick	1,990
Cement		Irish Cement Ltd. (CRH plc., 100%)	Plants in Limerick and Co. Meath	3,500
Diamond, industrial		Element Six Ltd. (De Beers Group, 100%)	Shannon, Co. Clare	NA
Gypsum		Irish Gypsum Ltd. (Saint Gobain Group 100%)	Mines in Drummond and Knocknacran, Co. Monaghan	NA
Lead-zinc, concentrate		Vedanta Lisheen Mining Ltd. (Vedanta Resources plc., 100%)	Lisheen Mine, Co. Tipperary	187
Do.		Boliden Tara Mines Ltd. (Boliden AB, 100%)	Tara Mine, Navan, Co. Meath	215
Lime		Clogrennane Lime Ltd. (CRH plc., 100%)	Plants in Co. Carlow and Co. Clare	500
Limestone		Roadstone Wood Ltd. (CRH plc., 100%)	Tallaght, South Dublin	NA
Magnesia		Premier Periclase Ltd. (RHI Group, 100%)	Drogheda, Co. Louth	73
Natural gas	million cubic meters	Kinsale Energy Ltd. [Petroliam Nasional Berhad (PETRONAS), 100%]	Kinsale Head field, Celtic Sea	2,100
Peat		Bord Na Mona (Government Peat Board)	Production mainly in the Midlands	4,200
Petroleum, refined	42-gallon barrels per day	ConocoPhillips Whitegate Refinery Ltd.	Whitegate, near Cork	71,000

Do. Ditto. NA Not available.