



2015 Minerals Yearbook

IRELAND [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF IRELAND

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In 2015, Ireland's nominal gross domestic product (GDP) was \$238 billion compared with a revised \$210 billion in 2014,¹ which was a net increase of about 13.5%. The unemployment rate in Ireland had decreased to 8.6% in January 2016 from 10.1% in January 2015, or by 1.5%, and the country's inflation rate was close to 0%. The Government's budget deficit for 2015 amounted to 2.3% of the GDP, and the national debt was equivalent to 93.8% of the GDP. Ireland ranked 17th in the EU in terms of GDP (following Hungary), and the output value of Ireland's industrial sector accounted for 24.9% of the GDP (Central Statistics Office, 2016 a, c; U.S. Central Intelligence Agency, 2016).

In 2015, Ireland produced 24% of Europe's zinc mine output and 1.7% of the world's zinc mine output, making Ireland the 2d-ranked producer of mined zinc in Europe and the 11th-ranked producer in the world. Ireland also was a significant producer of mined lead, accounting for 7% of Europe's lead mine output and 0.7% of the world's lead mine output, making Ireland the 5th-ranked producer of mined lead in Europe and the 16th-ranked producer in the world (tables 1, 2; Department of Communications, Energy and Natural Resources, 2016, p. 25).

In 2015, the value of Ireland's total exports was \$124.3 billion, which was an increase of 20.9% compared with that of 2014. The most significant exports in terms of value were chemicals and related products (which accounted for an estimated 57% of total exports), machinery and transport equipment (16%), and miscellaneous manufactured items (13%). Metalliferous ores and metal scrap accounted for 0.6% of all Ireland's exports. Intra-EU trade accounted for 52% of Ireland's total exports, with 13.9% going to the United Kingdom. In January 2016, the United States was the principal destination for Ireland's exports outside of the EU, accounting for 24.4%. The value of Ireland's total imports in 2015 was \$75.6 billion, which was an increase of 11.8% compared with that of 2014. The most significant imports, by value, were machinery and transport equipment, which accounted for an estimated 32% of the country's total imports. The EU supplied 60% of Ireland's total imports, by value, of which 26% originated in the United Kingdom. In January 2015, the United States supplied 15% of Ireland's imports, in terms of value, and China, 6% (Central Statistics Office, 2016b, p. 14, 17, 19, 26, 28, 30, 31, 33).

Minerals in the National Economy

In 2015, there were two operating mining projects in Ireland; they were the Tara lead and zinc mine in Navan, Co. Meath, and the gypsum operation with adjacent mines at Knocknacran and Drummond, Co. Monaghan. The Tara lead and zinc mine was owned by Boliden Tara Mines Ltd. (a subsidiary of Boliden AB

¹Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US\$) at an annual average exchange rate of EUR0.9009=US\$1.00 for 2014.

of Sweden) and was a leading zinc mine, by quantity of production, in the EU. The Drummond and Knocknacran gypsum mines in Co. Monaghan were owned by Irish Gypsum Ltd. (a subsidiary of Saint Gobain Group of France) (table 2; Department of Communications, Energy and Natural Resources, 2016, p. 25).

Zinc and lead remained the principal commodities for which there was exploration in Ireland, although there were companies that were investing in prospecting and exploration for barite, copper, diamond, fluorite, gem minerals, gold, iron, lithium, molybdenum, platinum-group metals, silver, and tungsten. In total, 500 prospecting licenses had been granted in Ireland to 41 different corporate entities. Approximately 25% of Ireland's total land mass was under license. In 2015, corporations invested about \$16.6 million in exploration and conducted about 48,000 meters of drilling on prospecting license areas. Since February 2015, 44 licenses had been returned to the Government by nine corporations. In particular, three junior explorers—Emerald Zinc Ltd., Grosvenor Exploration and Mining Services (Ire) Ltd., and Westcork Copper Mining Co. Ltd.—relinquished all their license holdings (Department of Communications, Energy and Natural Resources, 2016, p. 26).

According to the 2013 report titled "Assessment of Economic Contribution of Mineral Exploration and Mining in Ireland," which was commissioned by Ireland's Department of Communications, Energy and Natural Resources, the gross value added contribution of the mining industry to Ireland's GDP in 2012 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. iv–vi, 50).

Production

In 2015, Ireland's alumina production increased by 1.6% as the alumina refinery owned by United Company RUSAL of Russia in Aughinish continued to produce at near capacity. Lead mine output and zinc mine output, however, decreased by 24% and 17%, respectively, owing in large part to the closure of the Lisheen Mine in December 2015. Consequently, estimated silver production decreased by about 8%, as silver is a byproduct of lead and zinc mining. Gypsum production increased by about 43%. These and other production data are in table 1.

Structure of the Mineral Industry

Although Ireland was a significant 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 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 was responsible for both the technical management of the country's mineral licensing and leasing system and for promoting the mineral industry (Department of Communications, Energy and Natural Resources, 2013).

The Drummond and Knocknacran gypsum mines in Co. Monaghan were owned by Irish Gypsum (table 2; Department of Communications, Energy and Natural Resources, 2016). CRH plc., an international building materials conglomerate based in Dublin, owned three subsidiaries in Ireland that produced construction aggregates, cement, lime, and limestone for domestic consumption and export (table 2). Premier Periclase Ltd. (owned by RHI Group 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 major mineral industry facilities and their capacities are listed in table 2 (Premier Periclase Ltd., 2016).

Commodity Review

Metals

Bauxite and Alumina.—RUSAL reported that the output of its alumina plant was at close to total capacity—1,990,000 metric tons per year (t/yr)—and had produced at its historical maximum level in 2015. The refinery was located on Aughinish Island on the south side of the Shannon estuary near Limerick City and operated by Aughinish Alumina plc. In June, the TASS news agency reported that RUSAL had pledged 75% of the plant's production as collateral for alumina production supplies from Glencore plc of Switzerland, to be delivered in the 2014–16 time period. This credit agreement included a \$400 million prepayment clause and was provided at the London Interbank Offered Rate (Libor) plus 4.95% to be redeemed before the end of 2016 (TASS Russian News Agency, 2014; United Company RUSAL, 2016, p. 23, 46).

Lead and Zinc.—In December, Boliden's Tara project had Joint Ore Reserves Committee (JORC)-classified reserves (proven and probable) of 17 million metric tons (Mt) grading 6.3% zinc and 1.5% lead. The mine employed 586 people in 2015 (Department of Communications, Energy and Natural Resources, 2016, p. 25).

In December, Vedanta Resources plc ceased operations at its Lisheen Mine. The company stated that it was working with the Tipperary County Council, the Irish Environmental Protection Agency, and the Government's exploration and mining division to ensure the orderly closure of the mine. Since 1999 (the year when the mine began operating), the Lisheen operation had produced 22 Mt of ore grading about 11.5% zinc and 2% lead (Department of Communications, Energy and Natural Resources, 2016, p. 25).

Industrial Minerals

Cement.—Irish Cement Ltd. (wholly owned by CRH) had cement operations in Limerick, Co. Limerick, and in Platin, Co. Meath. The plant in Limerick had a kiln that had a capacity

of 800,000 t/yr, and the plant in Platin had a capacity of 2.8 million metric tons per year (Irish Cement Ltd., 2016a, b).

Gypsum.—Irish Gypsum extracted gypsum from two sites in southern Co. Monaghan. The company reported that it had extracted more than 300,000 metric tons of gypsum in 2015. Activity in the construction sector in Ireland had increased, and that increased activity was the most probable impetus for the increase in gypsum production (Department of Communications, Energy and Natural Resources, 2016, p. 25).

Outlook

Ireland's economy grew at an estimated rate of 7% in 2015 and was expected to continue to grow in 2016. The construction sector began recovering, and it is likely that this will affect the economy in general, as much of the upcoming public investment is likely to be in public works projects. The closure of the Lisheen Mine decreased the production of zinc and lead in the country significantly; however, companies have expressed interest in prospecting and exploring for lead and zinc in Ireland and have acquired licenses. What investments will result from these projects will depend on their economic viability.

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TABLE 1
IRELAND: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

Commodity ²	2011	2012	2013	2014	2015	
METALS						
Alumina	1,926	1,927	1,935	1,951	1,983	
Lead:						
Mine output, Pb content	metric tons	50,700 ^e	47,000	43,000	41,000 ^e	31,000 ^e
Metal, refined, secondary ^e	do.	18,000	18,000	18,000	17,000	17,000
Silver, mine output, Ag content	kilograms	6,109	6,000	5,800	5,200 ^r	4,800 ^e
Zinc, mine output, Zn content	metric tons	344,000 ^e	337,500	327,000	283,000 ^e	236,000 ^e
INDUSTRIAL MINERALS						
Cement, hydraulic		2,103	1,198 ^{r, e}	2,000 ^e	2,100 ^{r, e}	2,100 ^e
Gypsum		300 ^e	300	210	210 ^e	300 ^e
Sand and gravel: ^{e, 3}		7,000	7,000	7,000	7,000	7,000
Stone and other quarry products, other ^{e, 4}	metric tons	25,000	25,000	25,000	25,000	25,000
MINERAL FUELS AND RELATED MATERIALS						
Gas, natural, marketed ^e	million cubic meters	339 ^r	224 ^r	339 ^r	152 ^r	152
Peat: ^{e, 5}						
For horticultural use ^e		500	500	400	400	400
For fuel use, milled peat ⁶		3,707	3,700 ^e	3,700 ^e	3,700 ^e	3,700 ^e
Total ^e		4,210 ^r	4,200	4,100	4,100	4,100
Briquets		192	190 ^e	190 ^e	190 ^e	190 ^e
Petroleum refinery products:⁷						
Liquefied petroleum gas	thousand 42-gallon barrels	566	840	730	730 ^e	730 ^e
Naphtha	do.	144	140 ^e	140 ^e	140 ^e	140 ^e
Gasoline, motor	do.	4,360	4,636	4,380	4,300 ^e	4,300 ^e
Distillate fuel oil	do.	9,481	8,906	8,395	8,400 ^e	8,400 ^e
Residual fuel oil	do.	8,991	6,205	6,200	6,200 ^e	6,200 ^e
Refinery fuel and losses	do.	752	750	750 ^e	750 ^e	750 ^e
Total	do.	24,294	21,500 ^{r, e}	20,600 ^{r, e}	20,500 ^e	20,500 ^e

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

¹Table includes data available through July 1, 2016.

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

³Does not include output by local authorities and road contractors.

⁴Includes clays for cement production, fire clay, granite, marble, rock sand, silica rock, and slate.

⁵Includes production by farmers and by the Bord Na Mona (Government Peat Board).

⁶Includes milled peat used for briquet production.

⁷From imported crude petroleum.

TABLE 2
IRELAND: STRUCTURE OF THE MINERAL INDUSTRY IN 2015

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facility	Annual capacity
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
Do.	Sandvik Hyperion AB (Sandvik AB, 100%)	Dublin	NA
Gypsum	Irish Gypsum Ltd. (Saint Gobain Group, 100%)	Mines in Knocknacran and Drummond, Co. Monaghan	NA
Lead-zinc, concentrate	Vedanta Lisheen Mining Ltd. (Vedanta Resources plc., 100%)	Lisheen Mine, Co. Tipperary ¹	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 Igas Energy Plc.	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 ConocoPhillips Whitegate Refinery Ltd.	Whitegate, near Cork	71,000
Sand and gravel and crushed stone	Roadstone Wood Ltd. (CRH plc., 100%)	Tallaght, South Dublin	10,600

Do. Ditto. NA Not available.

¹Mine stopped production at the end of November 2015