

2017–2018 Minerals Yearbook

IRELAND

THE MINERAL INDUSTRY OF IRELAND

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Note: In this chapter, information for 2017 is followed by information for 2018.

In 2017, Ireland's economy was supported by low inflation, a strong export sector, and employment that continued to increase and was forecast to do so through 2019. The real gross domestic product (GDP) increased by 7.8%, and the nominal GDP was \$321.8 billion. The unemployment rate in Ireland decreased to 6.1% in January 2018 from 7.4% in January 2017. In 2017, Ireland was a leading producer of peat, ranking third in the world, with about 11% of world production (Central Statistics Office, 2018b, d; Brioché, 2019).

The value of Ireland's exports in 2017 increased by 2.9% compared with that of 2016, to \$132.3 billion.¹ The exports that showed the highest increases in terms of value were medical and pharmaceutical products (17%), and food and live animals (12%). The value of Ireland's imports increased by 4% compared with that of 2016, to \$83 billion, which was the highest annual total on record. The most significant increases in Irish imports in terms of value were in mineral fuels, lubricants and related materials (24%) and chemicals and related products (16%). Ireland's leading export partners were the United States (which received about 27.2% of the country's total exports), the United Kingdom (11.8%), and Belgium (10.9%); and the leading import partners were the United Kingdom (which supplied about 22.5% of the country's total imports), the United States (20.3%), and France (12.5%). The United Kingdom was in the process of withdrawing from the European Union ("Brexit"), which would result in changes to international taxation policies that could affect Ireland's revenues and international trade in coming years (Central Statistics Office, 2018b, c).

Minerals in the National Economy

In 2017, the mining and quarrying sector accounted for 0.6% of the total net sales value of products compared with 0.4% in 2016, and basic metals and fabricated metal products, machinery, and equipment accounted for 5.1% of the total net sales value of products compared with 4.6% in 2016. By the end of 2017, 611 prospecting licenses, 6 state mining licenses, and 10 state mining leases were active for commodities such as base metals, barite, gold, silver, platinum-group elements (PGEs), and rare-earth elements (REEs). A prospecting license typically covers about 35 square kilometers (Central Statistics Office, 2018a; Department of Communications, Climate Action and Environment, 2018, p. iii, 7).

Government Policies and Programs

On July 26, a new law was enacted, the Minerals Development Act 2017 (2017 Act). The 2017 Act, which is a consolidation of

previous legislation, repealed certain provisions of the Minerals Company Act 1941 to 1950, the Minerals Development Acts 1940 to 1999, and other laws dating from 1940 through 2006. The 2017 Act regulates exploration and mining of Ireland's mineral resources as well as mine closure and includes provisions that address associated social and environmental effects of these activities (Geoscience Ireland, 2017).

Production

In 2017, the most significant decreases in mineral production were reported for that of gypsum, which decreased by 20%; lead (Pb content of mine output), 13%; and zinc (Zn content of mine output), 12%. The most significant production increases were reported in the production of silver (Ag content of mine output), 24%; naphtha, 23%; lime, 20%; peat (for fuel use), 15%, and liquefied petroleum gas, 14%. These and other production data are in table 1.

Structure of the Mineral Industry

In 2017, lead and zinc were mined at the Tara Mine in Navan, County (Co.) Meath. The mine, which was owned and operated by Boliden Tara Mines Ltd. of Sweden, also produced silver and was the eighth-ranked zinc mine in the world in terms of output. Another zinc mine, the Galmoy Mine in Galmoy, Co. Kilkenny, ceased production in October 2012. In 2017, the mine was sold to the Tipperary-based company AQS Environmental Solutions and was set to reopen for zinc extraction after the operator, Shanon Resources Ltd., received permission to recommence underground mining. The country's major mineral facilities and their annual capacities are listed in table 2 (O'Connor, 2018).

Commodity Review

Metals

Lead and Zinc.—In January, Boliden reported positive results of exploration at the Tara Mine, identifying new mineralization with an estimated mineral resource of 13 million metric tons (Mt) of zinc. Owing to the new discovery, the company planned to invest \$47.7 million (44 million euros) in the Tara Mine—\$35.8 million (33 million euro) to expand the mine's tailings dam and \$11.9 million (11 million euro) to construct an exploration drift to the new deposit. Operations at the Tara Mine were expected to end in 2020, but owing to new reserves and investments, its mine life would be extended until 2026. In 2017, 2.3 Mt of ore was processed into metallic mineral concentrates containing zinc, lead, and silver (Kilian, 2017; Boliden Group, 2018, 2019a).

¹Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US\$) at an average annual exchange rate of EUR0.923=US\$1.00 for 2017.

Natural Gas.—On July 12, the Canada Pension Plan Investment Board (CPPIB) and Vermilion Energy Inc. announced that Shell Exploration Co. B.V. of the Netherlands had reached agreement with the CPPIB to sell its Shell E&P Ireland Ltd. (SEPI) shares in the Corrib gas field. The acquisition had an effective date of January 1, 2017, and was expected to be made final in the middle of the 2018. After the acquisition, the Corrib gas field partners were CPPIB, 45%; Statoil Exploration Ireland Ltd., 36.5%; and Vermilion Energy Ireland Ltd., 18.5%. Production at Corrib commenced on December 30, 2015, and by the end of June 2016, production reached full gross plant capacity of about 9.9 million cubic meters per day of natural gas. At peak production, Corrib could account for 95% of Ireland's gas production and supply about 60% of Ireland's gas consumption (Raidió Teilifís Éireann, 2017a; Vermilion Energy Inc., 2017, 2018a).

MINERAL INDUSTRY HIGHLIGHTS IN 2018

In 2018, Ireland's real GDP increased by 6.7%, and the nominal GDP was \$368.5 billion. The unemployment rate in Ireland decreased to 5.3% in January 2019 from 6% (revised) in January 2018. The total value of Ireland's exports in 2018 was \$166.1 billion,² and the total value of Ireland's imports was \$106.3 billion. Ireland's leading export partners were the United States (which received 27.8% of Ireland's exports), Belgium (13.1%), and the United Kingdom (11.4%); the leading import partners included the United Kingdom (which supplied 21.9% of Ireland's imports), the United States (17.5%), and France (12.6%) (Central Statistics Office, 2019b; 2019c, p. 14, 24–29; 2019d).

The mining and quarrying sector accounted for 0.6% of Ireland's total net sales value of products, the same as in 2017. In 2018, 120 prospecting licenses were granted compared with 104 in 2017. By the end of the year, 614 prospecting licenses, 6 state mining licenses, and 10 state mining leases were active. In 2018, the most significant decreases were reported in the production of naphtha, by 63%; lead (refinery), and peat (briquets), 14% each; and silver (Ag content of mine output), 13%. The most significant production increase was in the production of liquefied petroleum gas, by 18%. Data on mineral production are in table 1 (table 1; Central Statistics Office, 2019a; Department of Communications, Climate Action and Environment, 2019a, p. iii, 32).

In 2018, Boliden reported that 2.2 Mt of ore from the Tara Mine was processed into concentrates containing lead, silver, and zinc. This amount of processed ore was a decrease of 4.8% compared with that of 2017. Owing to lower milled volumes, silver and lead production decreased; however, the higher zinc grade resulted in an 0.9% increase in zinc production. Based on the continuous drilling of the Tara Deep mineralization at the Tara Mine, the mineral resource at this location was estimated to be 18 Mt, which was 5 Mt more than the estimate reported in 2017 (Boliden Group, 2019a, p. 51, 57; 2019b).

²Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US\$) at an average annual exchange rate of EUR0.848=US\$1.00 for 2018.

On May 15, Statoil's name was changed to Equinor Exploration Ireland Ltd. (Equinor). The acquisition of Shell Exploration's shares in the Corrib natural gas project by the CPPIB through its wholly owned subsidiary Nephin Energy Holdings Ltd. (NEHL) was completed on November 30, 2018. In December, Vermilion Energy Ireland increased its ownership share by 1.5% to 20%, NEHL (CPPIB) decreased its share to 43.5%, and Equinor (formerly Statoil) retained its 36.5% share. In October, after a steady decline in production, Corrib operated at 82% of its full capacity (Gas Networks Ireland, 2018, p. 2; Royal Dutch Shell plc, 2018; Vermilion Energy Inc., 2018b; Department of Communications, Climate Action and Environment, 2019b; Equinor ASA, 2019, p. 7; Royal Dutch Shell plc, 2019).

Outlook

Ireland's diverse geology continue to make the country attractive for long-term investors (such as the CPPIB, which was continuing to further its strategy of investing in high-quality natural resources) and for exploration for mineral resources, including antimony, barite, calcite, copper, fluor spar, gemstones, gold, gypsum, iron ore, molybdenum, platinum-group metals, REEs, and silver. From 2016 to 2018, the value of the mining and quarrying sector had increased by 27.2%, and the Government of Ireland continues to work actively to attract investments in its mineral industry as planned in the 2017 Act. Zinc and lead likely will remain the principal minerals for exploration. The lifespan of the Tara zinc and lead mine was previously estimated to be to 2020, but owing to newly identified mineral resources, Boliden is planning to expand the tailings dam, and production could continue through 2026 (Raidió Teilifís Éireann, 2017b; Central Statistics Office, 2019a).

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TABLE 1
IRELAND: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons, gross weight, unless otherwise specified)

Commodity ²	2014	2015	2016	2017	2018
METALS					
Alumina	1,951	1,983 ^r	1,967 ^r	1,937	1,874
Lead:					
Mine, Pb content metric tons	40,500	31,300	19,600	17,083	16,712
Refinery, secondary do.	17,200	17,200	18,000	17,500	15,000
Silver, mine, Ag content kilograms	6,436 ^r	3,770	1,080	1,340	1,160
Zinc, mine, Zn content metric tons	282,600	236,300	147,800	130,580	131,742
INDUSTRIAL MINERALS					
Cement, hydraulic ^c	2,000 ^r	2,500	2,500	2,500	2,500
Gypsum, mine ^c	210	250	250	200	200
Lime ^c	270	260	250	300	300
MINERAL FUELS AND RELATED MATERIALS					
Natural gas, marketable million cubic meters	152	132	2,999	3,090 ^e	3,000 ^e
Peat:					
Briquets	207 ^r	148	183	170	146
Fuel use	3,546 ^r	3,138	2,779	3,185	3,463
Petroleum, refinery:					
Distillate fuel oil thousand 42-gallon barrels	8,109	8,777	8,275	8,594	7,838
Gasoline, motor do.	4,130	5,143	4,709	4,690	5,115
Liquefied petroleum gas do.	697	545	499	570	675
Naphtha do.	140	247	646	797	297
Residual fuel oil do.	6,045	7,772	7,122	7,364	6,898
Refinery gains and losses do.	750	710	630	587	572
Total do.	19,900	23,200	21,900	22,600	21,400

^cEstimated. ^rRevised. do. Ditto.

¹Table includes data available through July 8, 2019. All data are reported unless otherwise noted. Totals and estimated data are rounded to no more than three significant digits; may not add to totals shown.

²In addition to the commodities listed, limestone, seawater magnesia, and significant quantities of synthetic diamond may have been produced, but available information was inadequate to make reliable estimates of output.

TABLE 2
IRELAND: STRUCTURE OF THE MINERAL INDUSTRY IN 2018

(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 Co. Limerick and Co. Meath	3,500
Diamond, industrial	Element Six Ltd. (De Beers, 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	Boliden Tara Mines Ltd. (Boliden AB, 100%)	Tara Mine, Navan, Co. Meath	215
Do.	Galmoy Mines Ltd. ¹ (AQS Environmental Solutions, 100%)	Galmoy Mine, Co. Kilkenny	NA
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	200
Do.	do. Nephin Energy Holdings Ltd., 43.5%; Equinor Exploration Ireland Ltd., ² 36.5%; Vermilion Energy Ireland Ltd., 20%	Corrib gas field, located off the coast of Co. Mayo	3,600
Peat	Bord Na Mona (Government Peat Board)	Production mainly in the Midlands	4,200
Petroleum, refined	thousand 42-gallon barrels Irving Oil Whitegate Holdings Ltd. (Irving Oil Ltd., 100%)	Whitegate, Co. Cork	26,000
Silver	kilograms Boliden Tara Mines Ltd. (Boliden AB, 100%)	Tara Mine, Navan, Co. Meath	1,400
Do., do. Ditto. NA Not available.			

¹Not in operation since 2012. Set to reopen, pending permission to recommence underground mining.

²In May 2018, the company changed its name from Statoil Exploration Ireland Ltd. to Equinor Exploration Ireland Ltd.