



2016 Minerals Yearbook

THE NETHERLANDS [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF THE NETHERLANDS

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The mineral industry of the Netherlands comprised processing of metals, extraction of natural gas and crude petroleum, and mining of industrial minerals, such as salt. The Netherlands was the second-ranked producer of natural gas and a significant producer of cadmium, lead, pig iron, steel, and zinc in Europe. In 2016, the country was globally the 9th-ranked producer of cadmium (not including the United States) and the 14th-ranked producer of nitrogen (N content of ammonia), accounting for 2.6% and 1.6% of world output, respectively (table 1; Ministry of Economic Affairs, 2017, p. 9–10; U.S. Commercial Service, 2017; Apodaca, 2018; Tolcin, 2018).

Minerals in the National Economy

The real gross domestic product (GDP) of the Netherlands increased by 2.2% in 2016; the nominal GDP was \$761.2 billion.¹ Industry and mining and quarrying accounted for 15.2% and 1.4% of the gross value added, respectively. In 2016, mining and quarrying output decreased by 3.7%, whereas those of energy and water, refined fuels and chemicals, and base metals and products increased by 5.3%, 5.0%, and 0.9%, respectively (Statistics Netherlands, 2017a, b; 2018a).

The Netherlands was a significant participant in global trade. In 2016, iron and steel made up 2.2% of the country's total exports of \$460.5 billion; manufactured metals, 1.9%; nonferrous metals, 1.2%; metalliferous ores and metal scrap, 0.9%; nonmetallic mineral products, 0.6%; and fertilizers, 0.4%. Of total imports of \$403.8 billion in 2016, petroleum products accounted for 12.1%; iron and steel, 2.3%; manufactured metals, 2.0%; natural gas, 1.8%; and nonferrous metals, 1.4%. The Netherlands ceased being a net gas exporter in December 2015 (Statistics Netherlands, 2018b).

Production

In 2016, the production of aluminum in the Netherlands increased by an estimated 47% owing to the continued rampup of the Delfzijl smelter since its restart in 2015. Refined lead production increased by 3%. The production of crude petroleum decreased by a reported 31.4%; condensate, by 29.3%; semimanufactured steel products, by 5.1%; natural gas, by 3.6%; and smelted zinc, by 3.4% (table 1).

Structure of the Mineral Industry

The mineral industry of the Netherlands was largely privately owned. The Government held ownership stakes in a few mineral-related companies that were involved in either mineral exploration or distribution, including N.V. Nederlandse Gasunie and GasTerra (natural gas), Ultra-Centrifuge Nederlands N.V. (uranium), and Energie Beheer Nederland B.V. (natural gas and

energy). Table 2 is a list of the major mineral industry facilities in the Netherlands (Ministry of Finance, 2017, p. 41, 105).

Commodity Review

Metals

Aluminum.—Klesch Aluminum Delfzijl BV (ALDEL)'s aluminum smelter in Delfzijl continued to operate at about 70% of its capacity of 150,000 metric tons per year after re-starting operations in March 2015. ALDEL's leading customer for its aluminum output and leading supplier of alumina was Noble Group Ltd. of Singapore, which was also its tolling company (American Metal Market Daily, 2017, p. 9–10).

Iron and Steel.—Tata Steel Europe Ltd., which was a subsidiary of Tata Steel Group of India, achieved its highest-ever total hot-strip mill output at its IJmuiden steel plant at 5.22 million metric tons (Mt) in fiscal year 2015 (the latest year for which detailed data were available). The company's direct sheet plant also produced its highest ever output at 1.31 Mt, exceeding its nameplate capacity of 1.3 million metric tons per year (Tata Steel, 2015, p. 107).

Zinc.—Nyrstar NV (Nyrstar) of Switzerland produced 283,000 metric tons (t) of zinc metal and 342,000 t of sulfuric acid at its Budel smelter in 2016. Budel's feedstock primarily consisted of high-grade sulfide concentrates, zinc oxides, and secondary feeds. The smelter ceased sourcing from the Century Mine in Australia in late 2015 after the mine reached the end of its life. The company subsequently began sourcing from another supplier and also invested to resolve a possible bottleneck in its supply chain, expanding the types and grades of concentrates the smelter could process (Nyrstar NV, 2017).

Industrial Minerals

Salt.—In 2016, rock salt production decreased by 1.7% to 6.6 Mt. As of January 1, 2017, 16 production licenses were in force in northern and eastern Netherlands. The application for an exploration license in Barradeel-Oost by Frisia Zout BV, submitted in 2015, was still pending (Ministry of Economic Affairs, 2017, p. 57–59).

Mineral Fuels

Natural Gas and Petroleum.—Production of natural gas and crude petroleum continued to decrease in the Netherlands in 2016. The decrease in total natural gas output was largely due to the reduction in output at the Groningen field. The decrease in crude petroleum output offshore was largely a result of lower production at the Q13 Amstel field. The decrease in crude petroleum output onshore was caused by technical problems with transportation of injection water at the Schoonebeek field (Ministry of Economic Affairs, 2017, p. 46–51).

¹Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US\$) at an average rate of EUR0.923=US\$1.00 for 2016.

Outlook

The Netherlands is expected to remain a significant producer of cadmium and nitrogen globally. Natural gas is expected to remain the most important mineral produced in the country, though output is projected to continue to decrease owing to the gradual depletion of the currently producing gasfields. Aluminum output is expected to increase with the ramping up of production in the country's sole primary aluminum smelter in Delfzijl. Mining of metal ores in general is likely to remain nonexistent.

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TABLE 1
NETHERLANDS: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons, gross weight, unless otherwise noted)

Commodity ²	2012	2013	2014	2015	2016
METALS					
Aluminum metal, primary	110,000	50,000	--	75,000 ^e	110,000 ^e
Cadmium, refinery production, primary, metal ^e	560	610	620 ^r	620 ^r	630
Iron and steel:					
Pig iron, including blast-furnace	5,917 ^r	5,681 ^r	5,868	6,050	6,092
Raw steel	6,879 ^r	6,713 ^r	6,964	6,995	6,917
Products, semimanufactured	6,418 ^r	6,370 ^r	6,657 ^r	6,814 ^r	6,465
Lead, refinery production, secondary	27,000	27,000	31,000	32,000	33,000
Zinc, smelter production, primary	260,000 ^r	284,000 ^r	291,000 ^r	293,000 ^r	283,000
INDUSTRIAL MINERALS					
Cement, hydraulic	1,940 ^r	2,050 ^r	2,610 ^r	2,260 ^r	2,260 ^e
Nitrogen, N content, ammonia	2,170,000 ^r	2,270,000 ^r	2,160,000 ^r	2,280,000 ^r	2,300,000
Salt, rock	6,547	6,518	6,485	6,743	6,625
Sulfur, byproduct, S content:					
Metals ^e	118,000	121,000	120,000	120,000	120,000
Petroleum ^e	450,000	430,000	590,000 ^r	540,000 ^r	410,000
MINERAL FUELS AND RELATED MINERALS					
Natural gas, dry basis	73,806 ^r	80,048 ^r	65,954 ^r	49,690 ^r	47,900
Petroleum:					
Crude	8,321 ^r	8,265 ^r	11,378 ^r	10,416 ^r	7,141
Condensate	3,019	3,334	3,126	3,346	2,365
Refinery production:					
Diesel	149,600 ^r	151,100 ^r	154,500 ^r	166,800 ^r	167,000 ^e
Gasoline	59,300 ^r	53,900 ^r	54,000 ^r	46,000 ^r	50,000 ^e
Kerosene, including jet fuel	56,700 ^r	54,400 ^r	64,000 ^r	64,000 ^r	64,000 ^e
Liquefied petroleum gas	17,100 ^r	16,500 ^r	18,900 ^r	20,100 ^r	20,000 ^e
Naphtha	63,500	62,800	58,700	72,400	73,000 ^e
Natural gas liquids	3,700	4,100	3,800	4,200	4,000 ^e
Residential fuel oil	60,300 ^r	58,300 ^r	58,700 ^r	60,500 ^r	61,000 ^e
Total	410,200 ^r	401,100 ^r	412,600 ^r	434,000 ^r	439,000 ^e

^eEstimated. ^rRevised. do. Ditto. -- Zero.

¹Table includes data available through February 19, 2018. All data are reported unless otherwise noted. Estimated data are rounded to no more than three significant digits; may not add to totals shown.

²In addition to the commodities listed, magnesium compounds, secondary aluminum, sodium compounds, and construction materials, such as limestone, peat, and sand and gravel may have been produced in the Netherlands, but available information was inadequate to make reliable estimates of output.

TABLE 2
NETHERLANDS: STRUCTURE OF THE MINERAL INDUSTRY IN 2016

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Aluminum:				
Primary		Klesch Aluminum Delfzijl BV (Klesch and Co. Ltd., 100%)	Smelter at Delfzijl	150
Secondary		Alumax Recycling BV	Smelter at Kerkade	50
Do.		Zeeland Aluminium Co. BV (ZALCO) (UTB Holding B.V., 100%)	Plant at Flushing (Vlissingen)	230
Cadmium	metric tons	Nyrstar NV	Plant at Budel	650
Calcium carbonate, ground		Omya Netherlands BV	Plant at Moerdijk	500
Cement		Eerste Nederlandse Cement Industrie NV (HeidelbergCement Group, 100%)	Plants at IJmuiden, Maastricht, and Rotterdam	2,900
Do.		Orcem BV (Ecochem Materials, Ltd., 100%)	Plant in Moerdijk	350
Iron and steel, steel		Tata Steel Europe Ltd. (Tata Steel Group)	Plant at IJmuiden	7,500
Magnesia		Nedmag Industries Mining & Manufacturing BV	Plant at Veendam	130
Do.		MAF Magnesite BV	Plant at Schiedam	40
Natural gas	million cubic meters	Nederlandse Aardolie Maatschappij BV (NAM) (Exxon Mobil Corp., 50%, and Royal Dutch Shell plc., 50%)	Groningen, Leeuwarden, Assen, and other onshore gasfields and several offshore wells in the North Sea	50,000
Petroleum:				
Crude	42-gallon barrels per day	Dana Petroleum Netherlands BV	F02a and P11b fields	4,600
Do.	do.	Nederlandse Aardolie Maatschappij BV (NAM) (Exxon Mobil Corp., 50%, and Royal Dutch Shell plc., 50%)	Onshore fields: Botlek, Rijswijk, Schoonebeek	3,100
Do.	do.	ENGIE NL	F03b and Q13a fields	8,900
Do.	do.	Petrogas E & P Netherlands BV	P09c and Q01 fields	2,100
Do.	do.	TAQA Energy BV	P15a and P15b fields	1,100
Refined	do.	Shell Nederland Raffinaderij BV	Pernis	416,000
Do.	do.	BP Raffinaderij Rotterdam B.V.	Rotterdam	400,000
Do.	do.	Esso Nederland (ExxonMobil, 100%)	Botlek	195,000
Do.	do.	Zeeland Refinery NV (Total Nederland NV, 55%, and LUKOIL, 45%)	Vlissingen	149,000
Do.	do.	Gunvor Petroleum Ltd. (Gunvor Group, 100%)	Rotterdam	88,000
Do.	do.	Koch HC Partnership (Koch Group, 100%)	do.	80,000
Salt		Akzo Nobel Salt BV (Akzo Nobel NV, 100%)	Mines in Adolf van Nassau	3,100
Do.		do.	Mines in Twent-Rijn	2,500
Do.		Frisia Zout BV	Barradeel and Barradeel II Mines	1,000
Do.		Nedmag Industries Mining & Manufacturing BV	Veendam Mine	300
Sand, silica		Sigrano Nederland NV (Sibelco Group)	Mines and plants at Heerlin and Maastricht	500
Do.		Lieben Minerals BV	Mines at South Limburg	150
Sodium:				
Carbonate, synthetic		Brunner Mond Group BV	Plant at Delfzijl	380
Sulfate, synthetic		do.	do.	600
Stone, limestone		Ankerpoort NV (Lhoist SA, 100%)	Mines at Maastricht and Winterswijk	600
Zinc		Nyrstar NV	Plant at Budel	290

Do., do. Ditto.