

THE NETHERLANDS

By Harold R. Newman

In 2001, the Netherlands was a very important regional producer of natural gas and petroleum for the European market and played a major role as a transshipment center for mineral materials entering and leaving continental Europe. In terms of world production, however, it was a modest producer of metallic and nonmetallic minerals and mineral products.

In the first half of 2001, the Dutch economy, which has been expanding for the past 4 years, slowed significantly and ended with a growth of only 1.75% in the gross domestic product (GDP). The modest growth was driven chiefly by increases in consumption, exports of goods and services, and investment. Dutch exports (excluding energy) grew by 2.5% in 2001. Imports to the Netherlands rose by 3.25% in 2001. Industrial products accounted for 70% of exports and were produced in a broad range of sectors. A positive-balance-of-payments situation continued to be one of the strong features of the Dutch economy (Netherlands Foreign Trade Agency, 2002§¹).

Rotterdam, which was the world's largest container port and a major European transportation hub, and Amsterdam's Schiphol Airport, which was the fourth largest in Europe, remained extremely important as shipping and storage centers. In 2001, more than one-half the Netherlands's GDP, or about \$460 billion, was generated by activities outside the national borders (U.S. Department of Commerce, 2001§).

Production of mineral commodities generally remained the same or dropped slightly during 2001. The high cost of social benefits contributed to the production costs of Dutch products, thus making them less competitive on the world market. The only mining operations left in the Netherlands in 2001 were involved in the extraction of limestone, peat, salt, and sand and gravel. The metal processing sector relied almost exclusively on imported ores and concentrates and scrap (table 1).

Since the 1980s, the Government has reduced its role in the economy, and privatization has continued with little debate or opposition. Nevertheless, the Government continued to dominated the energy sector and played a large role in the aviation, chemicals, telecommunications, and transportation sectors (table 2).

Copper tube is a standard and widely used commodity for transporting water, gas, oil, and air in domestic and industrial systems. In 2001, HME Nederland was an established supplier of Securus® brand copper tubing worldwide and exported about 93% of its 16,000-metric-ton-per-year (t/yr) production. HME was one of the few companies that used the hydrostatic material extrusion process. In hydrostatic extrusion, a specially machined billet is surrounded by a film of oil so that there is no friction between it and the barrel and only low friction between the billet and the die. As the billet is forced through, the metal

retains its basic configuration and is not turned inside-out as in a standard extrusion process. The raw materials for production are copper scrap and cathode. The latter were supplied by Metallo-Chimique of Belgium and made up from 25% to 50% of the charge. Scrap includes revert plus granules and cable scrap (Karpel, 2001).

The Central Bank had plans to sell 300 metric tons (t) of gold, which was about one-third the nation's gold reserve. According to the timetable, 100 t was sold in 2000, and the remaining 200 t was to be sold between 2001 and 2005; the bank had sold 400 t in 1992 (Engineering and Mining Journal, 2000).

Corus Group closed its 900,000-t/yr rebar mill at the IJmuiden works. It also closed a blast furnace, although the No. 2 furnace at the plant will continue to operate to supply the sheet steel plant. Corus's strategy will be to concentrate on value-added products, such as the high-tech sheet that the plant produces (Metal Bulletin, 2001).

Owing to oversupply and falling prices, Akzo Nobel Salt BV was cutting capacity for its packaged salt in favor of its bulk grades. In place of the 200,000-t/yr packaged salt production at Hengelo, Akzo will increase the production of bulk salt to 2.1 million metric tons per year. About 95% of Akzo's sales to the chemical industry was for the production of chlorine; the other 5% was for the production of sodium sulfate, which is used in the manufacture of soap. Akzo also produced bulk salt at Delfzijl (Industrial Minerals, 2001).

BP Netherlands and ChevronTexaco Corp. announced that they would build and operate a 22.5-megawatt (MW) wind farm at their jointly owned Nerefco refinery near Rotterdam. The \$23 million project was due to begin operations midyear 2002. It will generate electricity equivalent to the consumption of 20,000 households per year. The project will consist of nine state-of-the-art wind turbines, each with a generating capacity of 2.5 MW. The area location is on the shoreline with exposure to strong and consistent winds and access to the national power grid. The Dutch Government has set a target to increase the amount of electricity generated from renewable sources to 5% by 2005 (BP Group, 2002§).

The Netherlands was active on the international energy supply scene in more than one respect. The country supplied energy to Europe by pipelines and other methods and served as the entrepôt for oil products for northwestern Europe.

After Nederlandse Aardolie Maatschappij BV (NAM) struck one of the largest gasfields in the world in the north of the Netherlands in 1959, the decision was made to begin drilling for natural gas and petroleum in the North Sea. Natural gas has become the most important mineral fuel produced in the Netherlands. The Groningen Gasfield at Slochteren is one of the world's largest producing natural gasfields.

NAM reported a discovery in the North Sea with estimated reserves of 11 billion cubic meters. The field, which was

¹References that include a section twist (§) are found in the Internet References Cited section.

located at a depth of 3,500 meters in the Rotiegend sandstone formation, is situated in the K15 block concession. The field was considered to be large enough to supply households in the four biggest Dutch cities with their natural gas requirements for 5 years (Alexander's Gas and Oil Connections, 2001).

References Cited

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- U.S. Department of Commerce, 2002, Netherlands country commercial guide, accessed March 26, 2002 at URL <http://www.usatrade.gov/website/ccg.nsf/CCGurl-NETHERLANDS2002-CH-1:005D01BZ>

Major Sources of Information

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2000 AD Haarlem, Netherlands
Ministry of Economic Affairs
2500 EC The Hague, Netherlands

TABLE 1
NETHERLANDS: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

| Commodity 2/ | 1997 | 1998 | 1999 | 2000 | 2001 e/ |
|--|----------------------------|--------------|--------------|--------------|--------------|
| METALS | | | | | |
| Aluminum metal: | | | | | |
| Primary | 231,800 | 264,000 e/ | 286,400 | 301,700 r/ | 294,100 3/ |
| Secondary | 150,400 | 102,000 | 88,000 r/ | 119,000 r/ | 120,000 |
| Cadmium metal, primary | 718 | 739 | 731 | 628 | 455 3/ |
| Iron and steel: | | | | | |
| Ore, sintered (from imported ore) | 4,250,000 e/ | 3,376,000 | 3,094,000 | 3,000,000 e/ | 3,000,000 |
| Metal: | | | | | |
| Pig iron, including blast-furnace ferroalloys (if any) | 5,804,000 | 5,561,000 | 5,307,000 | 4,969,000 | 5,305,000 3/ |
| Steel: | | | | | |
| Crude | 6,640,000 | 6,379,000 | 6,077,000 | 5,667,000 | 6,037,000 3/ |
| Semimanufactures | 5,175,000 | 4,964,000 | 4,786,000 r/ | 4,956,000 r/ | 5,335,000 3/ |
| Lead, metal, refined, secondary | 19,500 e/ | 13,200 | 19,900 | 22,200 r/ | 24,400 3/ |
| Zinc, metal, primary | 208,800 | 218,700 | 221,400 | 216,800 r/ | 204,800 3/ |
| INDUSTRIAL MINERALS | | | | | |
| Cement, hydraulic | thousand tons | 3,220 | 3,235 r/ | 3,480 r/ | 3,450 r/ |
| Magnesium compounds: e/ | | | | | |
| Chloride | | 25,000 | 25,000 | 23,000 | 25,000 |
| Oxide | | 10,000 | 10,000 | 10,000 | 10,000 |
| Nitrogen, N content of ammonia | thousand tons | 2,478 3/ | 2,350 e/ | 2,428 3/ | 2,543 3/ |
| Salt, all types e/ | do. | 5,500 | 5,500 | 5,000 | 5,000 |
| Sand, industrial e/ | do. | 24 | 14 | 15 | 15 |
| Sodium compounds, n.e.s.: e/ | | | | | |
| Carbonate, synthetic | | 400,000 | 400,000 | 350,000 | 350,000 |
| Sulfate: | | | | | |
| Natural | | 20,000 | 20,000 | 20,000 | 20,000 |
| Synthetic | | 15,000 | 15,000 | 15,000 | 15,000 |
| Sulfur: e/ | | | | | |
| Elemental byproduct: | | | | | |
| Of metallurgy | | 150,000 | 131,000 | 129,000 | 123,000 3/ |
| Of petroleum and natural gas | | 138,000 | 432,000 | 445,000 | 428,000 3/ |
| Total | | 288,000 | 563,000 | 574,000 | 551,000 3/ |
| Sulfuric acid, 100% H ₂ SO ₄ | | 1,250,000 | 1,250,000 | 1,000,000 | 1,000,000 |
| MINERAL FUELS AND RELATED MATERIALS | | | | | |
| Coke, metallurgical | | 2,800,000 e/ | 2,829,000 | 2,247,000 | 2,300,000 e/ |
| Gas: | | | | | |
| Manufactured e/ | million cubic meters | 10,000 | 10,000 | 10,000 | 10,000 |
| Natural: | | | | | |
| Gross | do. | 80,000 e/ | 76,331 | 68,528 | 69,180 r/ |
| Marketed | do. | 86,000 e/ | 75,201 | 67,228 | 68,157 r/ |
| Natural gas liquids e/ | thousand 42-gallon barrels | 170,000 | 170,000 | 160,000 | 170,000 |
| Petroleum: | | | | | |
| Crude | do. | 21,276 | 19,164 | 18,978 r/ | 17,633 r/ |
| Refinery products: | do. | | | | |
| Liquefied petroleum gas | do. | 36,000 r/ e/ | 34,561 r/ | 44,904 r/ | 42,711 r/ |
| Mineral jelly and wax | do. | 600 e/ | 936 | 927 r/ | 896 r/ |
| Gasoline, motor | do. | 75,000 e/ | 76,653 | 112,651 r/ | 121,669 r/ |
| Naphtha and white spirit | do. | 50,000 e/ | 45,960 | 77,537 r/ | 96,076 r/ |
| Kerosene and jet fuel | do. | 40,000 e/ | 50,808 | 55,816 | 59,888 r/ |
| Refinery gas | do. | 20,000 e/ | 11,858 | 11,480 | 10,486 r/ |
| Diesel oil | do. | 160,000 e/ | 159,100 | 161,733 r/ | 164,060 r/ |
| Residual fuel oil | do. | 85,000 e/ | 102,605 | 81,127 | 72,900 r/ |
| Bitumen | do. | 4,500 e/ | 4,499 | 4,260 | 4,130 r/ |
| Unspecified | do. | 25,000 e/ | 31,913 | 40,075 r/ | 41,349 r/ |
| Total | do. | 496,000 e/ | 518,893 r/ | 590,510 r/ | 614,165 r/ |

e/ Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. r/ Revised.

1/ Table includes data available through March 2002.

2/ In addition to the commodities listed, the Netherlands produced construction materials, such as sand and gravel, but output was not reported, and no basis exists to make reliable estimates of output.

3/ Reported figure.

TABLE 2
NETHERLANDS: STRUCTURE OF THE MINERAL INDUSTRY IN 2001

(Thousand metric tons unless otherwise specified)

| Commodity | | Major operating companies | Location of main facility | Annual capacity |
|--------------------------------|------------------------------|--|--|---|
| Aluminum | | | | |
| Primary | | Pechiney Nederland NV | Smelter at Vlissingen | 175 |
| Do. | | Corus Group | Smelter at Delfzijl | 100 |
| Secondary | | Alumax Recycling BV | Smelter at Kerkade | 50 |
| Cadmium | tons | Budelco BV (Australian Overseas Smelting Pty. Ltd, 50%; Kempensche Zinkmaatschappij Zincs de la Campine BV 50%) | Plant at Budel-Dorplein | 650 |
| Cement | | ENCI Nederland BV (Eerste Nederlandse Cement Industrie NV) | 10 plants at Maastricht | 2,700 |
| Do. | | Cementfabriek IJmuiden BV | Three plants at IJmuiden | 1,600 |
| Do. | | Cementfabriek Rozenburg BV | Two plants at Rozenburg | 920 |
| Lead | | Hollandse Metallurgische Industrie Billiton BV | Electrolytic plant at Arnhem | 35 |
| Do. | | Billiton Witmetaal BV | Electrolytic plant at Naarden | 6 |
| Limestone | | Ankerpoort NV (Lhoist SA, 100%) | Mines at Maastricht and Winterswijk | 600 |
| Magnesia | | Nedmag Industries Mining & Manufacturing BV | Mine and plant at Veendam | 150 |
| Do. | | MAF Magnesite BV | Plant at Schiedam | 40 |
| Nitrogen, N content of ammonia | | Hydro Agri BV | Plant at Shuiskil | 1,500 |
| Natural gas | million cubic meters per day | Nederlandse Aardolie Maatschappij BV (NAM) | Groningen, Leeuwarden, Assen, and other onshore gasfields and several offshore wells in the North Sea | 225 |
| Petroleum, crude | barrels per day | AMOCO, CONOCO, and UNOCAL | 766 wells (204 producing), including North Sea fields Haven, Helder, Helm, Hoorn, Kotter, Logger, and Rijn | 83,500 (63,000) |
| Do. | do. | Nederlandse Aardolie Maatschappij BV (NAM) | Onshore fields: Berkel, DeLier, Ijselmonde, Meerkapelle, Pernis, West, Pinacke, Rotterdam, Schoonebeck, Werkendam, and Zoetemeer | (20,500) |
| Refineries | | Six companies, of which the major ones are: Netherlands Refining Co. Shell Nederland Raffinaderij BV Esso Nederland BV Total Raffinaderij Nederland NV | Refinery at Rotterdam Refinery at Pernis Refinery at Rotterdam Refinery at Vlissingen | 1,230,500 (446,000) (374,000) (175,000) (150,000) |
| Salt | | Akzo Nobel Salt BV (Akzo Nobel BV, 100%) | Mines at: Hengelo Delfzijl | 4,100 (2,100) (2,000) |
| Sand, silica | | Lieben Minerals BV | Mines at South Limburg | 150 |
| Sodium: | | | | |
| Carbonate, synthetic | do. | do. | Plant at Delfzijl | 380 |
| Sulfate, synthetic | do. | do. | do. | 600 |
| Steel | | Corus Group | Plant at IJmuiden | 6,100 |
| Zinc | | Budel Zinc BV (Pasmenco Europe BV) | Plant at Budel-Dorplein | 215 |